



Driven To Lead: Gendered Differences in Leadership Competencies Among NCAA Athletes

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Intercollegiate athletics offers a valuable environment for college athletes' leadership development, yet gender disparities remain in leadership roles. While women's participation in college sports has grown significantly since the passing of Title IX, women still hold only 25% of NCAA leadership positions (e.g. athletic directors, commissioners and representatives of the NCAA). Using Leadership Identity Developmental Model (LID) this study explored leadership competencies among NCAA men and women athletes, focusing on key differences and their implications. A total of 232 athletes (61.7% women, 38.3% men) from all divisions completed surveys using the Leadership Learning Agility Scale (LLAS) and the Student Leadership Behavior Scale (SLBS). Results showed women athletes scored significantly higher in six of nine leadership competencies than their men counterparts. These findings underscore the need for gender-specific leadership programming designed to build confidence and prepare women athletes to pursue and succeed in future leadership roles within and beyond the athletic context. Tailored initiatives can help athletic departments promote more inclusive leadership development. Future research should examine the long-term and use qualitative research methods to explore the impacts of such targeted efforts.

Keywords: leadership development, gender, college athletes, leadership competencies



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Intercollegiate athletics offers a unique opportunity for athletes to pursue their sport and education simultaneously. Since 1972, Title IX has paved the way for women to gain access to the same educational opportunities as their men counterparts (Staurowsky et al., 2022). Title IX is an educational amendment that prohibits discrimination based on sex in any education programs and federally funded activities (U.S.D.E., n.d.). Recent expansions of Title IX now also prohibit discrimination based on sex, offering protections for women and trans individuals (U.S.D.E., n.d.). In 1972, there were 29,977 women competing in college sports (Staurowsky et al., 2022). By 2022, that number had grown to 215,486 (Staurowsky et al., 2022). However, this growth in participation has not translated into equivalent gains in leadership representation (Evans & Pfister, 2021). Although exact data on changes in intercollegiate athletics since Title IX is limited, the number of women serving as athletic director of an NCAA institution increased from 211 in 2012 to 276 in 2024 (NCAA, 2024). According to NCAA data, women currently hold approximately 25% of head coaching and athletic director roles, and about 30% of conference commissioner positions (NCAA, 2022). Additionally, according to the most recent TIDES report from 2021-2022, women athletic directors in Division I represented only 15%, and 25% at the Division II and III levels combined (TIDES, 2022). Moreover, women holding leadership positions at the NCAA national office is around 42% (TIDES, 2022).

The introduction of Title IX and its implementation in higher education institutions was integral for supporting women's access to participation in sport. Despite the progress made in access to participation and representation among athletes in sport, a gap still remains in representation at the leadership level within college sports. Moving forward, developing strong leaders can support improved hiring of women in leadership roles to provide a critical support for equity and representation needed in the persistently male-dominated field of sport (Staurowsky, 2022).

Participation in sports, particularly over longer periods of times, has been found to improve the development of leadership skills, increasing the likelihood of women being represented in formal leadership roles (Sharrow et al., 2024). Although efforts have been made within collegiate athletics to promote women in leadership roles, persistent disparities raise critical questions regarding the effectiveness of leadership development for female college athletes, both within sport contexts and in broader societal setting. Specifically, women represent almost 47% of the overall U.S. workforce, but only 29% of total chief executives are women (Catalyst, 2025). Therefore, examining the leadership competencies developed through participation in college athletics, can help assess how effectively women college athletes are being prepared for roles beyond athletics. This study provides insight into whether women athletes are developing the leadership competencies and skills needed to help close the gender gap in leadership across various fields.

Participation in college athletics has been shown to enhance leadership development and support athletes' transition into life beyond sport (Coffin et al., 2021; Gelllock et al., 2019; Hoffman 2020; Hoffman et al., 2013; Lewis, 2023; Rubin & Nwosu, 2021). Yet, leadership development is not a one-size-fits-all process. It is shaped by a combination of personal desire, social environment, and access to opportunities (Astin, 2014). While many athletes gain leadership competencies through their time

on a team, not all are equally prepared or confident in applying those skills outside sport (Komives et al., 2006). Women athletes in particular often demonstrate strong potential but lower self-efficacy in leadership roles (Debebe et al., 2016; Weight et al., 2020), and many do not feel fully supported in co-educational leadership development settings (Debebe, 2011; Ely et al., 2011). Having a supportive structure and environment can make a positive impact on self-efficacy and its correlation to the successful performance (Weight et al., 2020). Past research has found women tend to thrive in leadership environments where they can share experiences and develop without the pressures of gender comparisons (Smith & Hardin, 2018).

Intercollegiate athletic participation supports college athletes in developing their leadership skills through relationships with coaches, interaction with peers, and experimental learning opportunities (Hoffman et al., 2013). In addition to what is learned organically through sport, participation in structured leadership programming has shown a positive impact on athletes' personal and career readiness (Rubin & Nwosu, 2021). While some athletic departments offer formal leadership development opportunities for college athletes, others lack the resources to do so (Jolly et al., 2023). As a result, leadership competencies may develop unevenly, leading to athletes to feel not fully equipped to apply these skills beyond sport (Dugan & Komives, 2007). This highlights the need for development opportunities that reflect the diverse leadership journeys of college athletes, offering programming that is inclusive, accessible, and tailored to different populations.

Although leadership development in women has been explored (e.g., Bilimoria & Liang, 2012; Debebe et al., 2016), less is known about how gender influences the leadership experiences and competencies of college athletes specifically. This gap is particularly notable given the structured, high-pressure, and often gendered context of NCAA athletics (NCAA, 2022). While women now comprise nearly half of all NCAA athletes, their representation in leadership across college sport and other professional sectors remains disproportionately low (Catalyst, 2025; NCAA, 2022). Understanding how leadership competencies differ across genders in this context is essential not only for addressing disparities within intercollegiate athletics, but also for informing broader efforts to cultivate equitable leadership pipelines across various industries and organizational settings.

Studies have shown women benefit most from leadership programming that considers their unique experiences and provides space for self-reflection, confidence-building, and skill application (Bilimoria & Liang, 2012; Debebe, 2011). When programs are tailored to women and offered in gender-specific formats (e.g. women only training (WOT)), participants report increased self-awareness, stronger belief in their leadership abilities, and greater willingness to act on the skills they've developed (Debebe, 2021). Additionally, literature suggests men are often socialized to demonstrate more assertive and dominant leadership behaviors, while women are more likely to engage in relational and collaborative leadership, sometimes adapting their approach to avoid being labeled as aggressive (Debebe, 2011; Yukl, 2012). These findings underscore the importance of creating leadership development opportunities that allow women to grow authentically, free from the pressures of conforming to masculine norms.

Given the growing number of both women and men college athletes across NCAA divisions, it is essential to understand how leadership competencies are formed and expressed by each group. Therefore, the purpose of this study was to examine the leadership competencies of women and men college athletes and identify the differences, if any exist. The findings aim to support coaches and athletic administrators in developing leadership initiatives that are not only holistic but also responsive to the needs of all college athletes.

Literature Review

Leadership Identity Development Model

Since the early 2000s, leadership research has focused on expanding research on leadership and leadership development (Gardner et al., 2020). Specifically, research has focused on college students' social identity and leadership development (Day et al., 2013; Jones & Abes, 2013; Lord & Hall, 2005). Psychological, sociological, and human ecology are the most critical components that affect identity development (Bronfenbrenner, 1992; Erikson, 1968). Since leadership is socially constructed (Grint, 2005), leadership and human development are highly intertwined, emphasizing the need to focus on learning and development theory (Owen, 2021). Therefore, this study utilized the Leadership Identity Development (LID) model to explain how gender, athletic participation, and social development affect the leadership development of women college athletes. The LID model posits itself between the life experiences of college students and their social identity (Komives et al., 2005, 2006). Specifically, the LID is relevant for understanding college athletes' leadership development, focusing on the role of social context (i.e., being a part of the team) and the experiences college athletes face while developing into a leader. Being a part of a sports team offers athletes a unique opportunity to engage with and develop their understanding of leadership, aligning with the LID model. College athletes often navigate team dynamics as part of an ongoing process of learning and internalizing leadership roles (Komives et al., 2006).

College athletes experience a developmental journey that involves taking on leadership roles across their teams, academic settings, and social circles (Weight et al., 2020). The LID model accounts for this progression, from initial awareness of leadership to taking on roles such as team captain. Stepping into these roles provides athletes with opportunities to grow as leaders (Rubin & Nwosu, 2021). The model also highlights the influence of social context, making it particularly useful for examining how gendered expectations in sport influence leadership development. For instance, women may face barriers to leadership early in their athletic careers, that can delay or alter how they come to see themselves as leaders (Debebe, 2011; Komives et al., 2006).

Komives et al. (2006) LID model includes six stages that influence leadership development: 1) awareness, 2) exploration/engagement, 3) leader identified, 4) leadership differentiated, 5) generativity, and 6) integration/synthesis. See Table 1 for a comprehensive description.

Table 1
Leadership Identity Development Model (LID)

Stages of the Leadership Identity Development Model		
Dependent on view of self and others		Description
Stages		
Stage One	<i>Awareness</i>	The initial recognition that there are leaders external to oneself, such as a nation's president, a religious figure, a parent, or a teacher, typically occurs in early childhood.
Stage Two	<i>Exploration/Engagement</i>	A phase of active participation in group activities and experiences, such as being part of a sports team, religious group, or scouts, typically occurs throughout childhood. This period is crucial for learning how to interact and engage with others.
Stage Three	<i>Leader Identified</i>	When an individual perceives leadership as the actions taken by the appointed leader of a group, this reflects an understanding of the hierarchical nature of relationships within groups. Students typically develop this perspective during high school and early college. This viewpoint is the prevailing narrative about leadership in the United States.

Key Transition

The transition from viewing leadership as centered on a single person and specific roles (e.g., leaders do leadership) to seeing it as an interdependent and collaborative process among people is often referred to as a key transition. What prompts this shift? It can occur when an individual undertakes a task too complex for one person to handle alone, realizing the need to depend on others to achieve goals. For instance, while handling an entire group presentation solo might be feasible in some cases, organizing a weeklong series of homecoming events typically requires collaboration. Learning about leadership, such as studying leadership theories and becoming familiar with relevant terms and concepts, can also help individuals progress to more advanced stages.

Independent on view of self and with others		
Stage Four	<i>Leadership Differentiated</i>	The development of one's perspective to recognize leadership as non-positional and as a shared process within a group.
Stage Five	<i>Generativity</i>	An individual becomes dedicated to fostering leadership in others and develops a passion for issues or group goals they wish to impact.
Stage Six	<i>Integration/Synthesis</i>	A stage reached by relatively few individuals involves recognizing one's ability to lead in various contexts and embracing their identity as a leader without needing a formal position. At this stage, leadership identity becomes an essential part of one's self.

Note. Adapted from Komives et al. (2016) and Owen (2021)

The model emphasizes that leadership development is a gradual process shaped by personal experiences and social context. When applied to college athletes, the model helps explain how they evolve into leaders both in and out of their sport. This growth involves self-awareness, confidence (efficacy), goal setting, and understanding how external influences such as teams, organizations, and peer groups influence leadership development.

College athletes rely on their beliefs, self-efficacy, and personal capacities to learn how to lead (Dugan & Komives, 2007). With adequate social and structural support, they begin to see themselves as capable leaders. While progression through the early stages is often influenced by external factors, the transition beyond stage three becomes more internal and self-directed, though still rooted in relational awareness (Owen, 2021). Athletes commonly move through these stages both on and off the field. They may first see themselves as followers before choosing to grow into leadership roles and take on greater responsibility (Komives et al., 2006; Owen, 2021). Coaches and athletic administrators often play a key role in shaping athletes' leadership understanding and development (Cotterill et al., 2022). By modeling supportive, inclusive, and effective leadership behaviors, they can help athletes build self-efficacy and confidence. Additionally, structured leadership programming that is consistently supported and reinforced by athletic departments can further enhance athletes' leadership growth.

Below is a breakdown of each stage in the LID model and how it applies to leadership development in college athletes. The first stage, awareness, involves recognizing leadership in others, often coaches or team captains. The second stage, exploration/engagement, marks the beginning of active participation, such as leading small team tasks or initiating discussions. This phase is where foundational leadership skills begin to take shape. In the third stage, leader identified, athletes begin to associate leadership with specific roles and responsibilities, becoming more intentional in their development. In stage four of the LID model, leadership differentiation, college athletes often begin to take initiative by resolving conflicts or offering solutions, even without holding formal leadership titles (e.g., team captain). In stage five, they mentor younger teammates, share personal experiences, or lead by example. By stage six, athletes may fully embody leadership, demonstrating confidence and influence without needing an official leadership role.

While this progression outlines a potential path of development, not all college athletes will reach the final stage. Many rely on the support of coaches, teammates, and structured environments. Leadership programming can play a critical role in helping athletes advance through these stages. The LID model's emphasis on social context and gender is likely a significant factor in how athletes experience leadership development. Women in sport, for example, may face structural barriers or internalized beliefs that slow their progression toward integrated leadership identity (Debebe, 2011; Komives et al., 2006). As a result, the LID model provides a valuable framework for examining how gender influences leadership development in athletic settings.

College Athletes Leadership Development

Leadership development is integrated into participation in intercollegiate athletics, as college athletes communicate with others on the team, their coaches, and peers across other sports and build rapport (Hoffman et al., 2013). However, a lot of the ability to develop as an effective leader is connected to the personal experiences and background of the athlete (Rubin & Nwosu, 2021). Lord and Hall (2005) emphasized the ability of an athlete to develop as a leader is linked to their traits and ability to act on them. Dugan (2017) found college students can be very effective leaders. However, they often do not have high efficacy for leadership, and they are less likely to act on their leadership skills (Rubin & Nwosu, 2021). Participation in intercollegiate athletics benefits those athletes and helps them to come out of their “shells” to become better leaders (Rubin & Nwosu, 2021). The team setting serves as a fertile ground for informal leadership development, where athletes learn to manage relationships, respond to challenges, and support teammates. However, the structure of these teams, including gendered expectations of captains or role models, can influence how leadership behaviors are expressed and perceived (Bandura & Kavussanu, 2018; Blanton et al., 2019).

Despite the informal leadership growth that can occur within team environments, the transition from athlete to post-collegiate leader is often difficult. Many college athletes struggle to carry forward the skills gained through sport because of challenges with identity development after graduation (Stokowski et al., 2019). Still, participation in college athletics provides important experience that can promote leadership, such as learning to work through differences and unite around shared goals (Loughead & Hardy, 2005). Athletes in formal leadership roles (e.g., team captains, seniors) often gain a developmental edge, as these positions offer consistent, visible opportunities to lead (Rubin & Nwosu, 2022). However, without intentional support or programming, these experiences may not translate into long-term leadership growth. For example, assigned leadership can also create tension within the team, as it gives individuals the power to influence teammates in negative ways (Feltz et al., 2011). Cotterill et al. (2022) suggest less structured leadership models within teams can improve player satisfaction and team performance. This highlights the potential of leadership development efforts that help college athletes intentionally build on their sport-based skills and prepare for life beyond college athletics. While programming is available within the athletic departments to assist college athletes in their leadership development, the budget and resources available for each school are different, limiting some athletes (Lewis, 2023). Additionally, the time constraints placed on college athletes to balance athletics, academics, and social life limit them from dedicating additional time to their personal development and preparation for their future careers (Stokowski et al., 2019). This makes early and integrated leadership programming particularly important. When athletes receive leadership development across their collegiate experience, it can support their progression through identity stages and improve post-graduation outcomes (Rubin & Nwosu, 2021). Leadership programming previously implemented by various institutions includes leadership academies (Rubin & Nwosu, 2021), the NCAA Challen-

ing Athletes' Minds for Personal Success (CHAMPS)/Life Skills program (2014), the NCAA Leadership Forum (established in 1997 and hosted annually), Growing Leaders partnership program with athletic departments, and other initiatives developed in-house by individual universities (e.g., University of North Carolina – Chapel Hill, Georgia Institute of Technology, University of Central Florida; Brougham et al., 2023). Furthermore, institutional differences in funding, staffing, and departmental priorities often result in unequal access to leadership development opportunities across NCAA divisions (Jolly et al., 2023). This variability means many athletes, especially women, may not receive the structured leadership support needed to complement their on-field experiences (Jolly et al., 2024; Weight et al., 2020).

Gender Differences in Leadership Development

A growing body of literature has focused on leadership development programming and gender (Acker, 2006; Debebe et al., 2016; Ely & Padavic, 2007, Harris & Brison, 2024). Research has shown college-aged women and men develop differently, often having different approaches to socialization and holding distinct beliefs and expectations about leadership (Acker, 2006; Debebe et al., 2016). These differences suggest leadership development should be evaluated not only by general traits but through observable competencies (e.g., initiative taking, feedback-seeking, support behaviors), which reflect how athletes lead in practice. Dugan & Komives (2007) found women have a higher capacity for leadership but lower efficacy (or belief) that they can be effective leaders. For example, Fuller et al. (2018) found women college athletes view themselves as leaders who are driven by a desire to make positive change in their community or society, while also emphasizing the importance of self-reflection. This emphasizes the need to develop programming specifically for women to teach them how to utilize their leadership skills and do it with confidence (Owen, 2021).

Despite the wide variance in leadership programming currently available, Debebe et al. (2016) found women are not entirely comfortable sharing their lived experiences in mixed-sex programming, avoiding topics that affect their leadership development as women. Tudor and Ridpath (2019) found gender significantly affects motivation towards academics and sports while in college, specifically women are more motivated towards academics, while men are highly motivated toward their athletic achievements. The type of sport those respective college athletes participate in could impact their motivation toward academics/athletics. For example, if a male athlete participates in football or basketball, he is more likely to have higher aspirations to turn professional rather than think about other professional careers post-graduation (Ridpath, 2007; Stokowski et al., 2019).

Gender, athletic identity, and sport affect athletes' ability to transition beyond the field/court and prepare for their career. Research suggests implementing women's specific leadership programming makes women more comfortable and allows them to be fully open about women's experiences, feel more relaxed, and lead to positive leadership development within the organization (Debebe et al., 2016). Smith & Hardin (2018) found many athletes struggle with the transition out of sport; however,

having somebody relatable (e.g., a former women college athlete or women athletic administrator) can make the process more positive and supportive. Therefore, an ability to explore the possibilities of having examples in front of women athletes, specifically with high leadership competencies, may allow women college athletes to apply the leadership skills learned through sport to their lives. This connection is especially important, as previous research has shown that without role models or tailored support, women may underutilize or undervalue the leadership skills they have gained during their athletic careers (Smith & Hardin, 2018). Creating intentional pathways for leadership application beyond sport may enhance long-term confidence and post-sport identity formation. The purpose of this study was to explore the distinct leadership competencies of women and men college athletes and identify where the difference lies. While existing studies have examined leadership development in college athletes and gender more broadly, few have compared men and women athletes' leadership competencies using validated constructs in the context of NCAA athletics. This study addresses that gap by examining where significant differences may exist and how these insights can inform more inclusive leadership programming. Two research questions guided this study:

- RQ1. What critical leadership competencies are exhibited by women and men NCAA college athletes?
- RQ2. Is there a significant difference in leadership competencies between women and men college athletes?

Method

Participants

Current NCAA college athletes ($n = 232$) across all three divisions with variety of plans for post-graduation (or expiration of eligibility) completed the survey. More than half of the participants identified as a woman (61.7%, $n = 150$). Majority of the participants self-identified as white (80.7%, $n = 196$), 9.1% identified as Black or African American. Other races including Asian, American Indian or Alaska Native, and "other" were less than 10%. More than half of the participants were Division II college athletes (60.1%, $n = 148$), 25.1% were Division I athletes ($n = 61$), and only 14% were Division III athletes ($n = 34$). Participants' plans for after graduation or completion of eligibility included playing their sport professionally, 13.8% ($n = 32$), and an almost equal representation of going to graduate school (36.2%, $n = 84$) or finding a job in their major field (39.7%, $n = 92$). Less than 5% identified they planned to find a job outside of their major, other, or not sure yet about their future plans.

Research Design

A quantitative, non-experimental research design was used to collect the study's data. Data collection utilized a survey approach as it allowed for an easy and quick data collection method with extensive data (Creswell & Creswell, 2018). The sur-

vey was conducted using Qualtrics online survey platform because it enabled the researchers to reach potential participants across the United States and college athletes at various institutions. Qualtrics software allows for simplicity of use for the participants, is inexpensive, and comprehensive way to collect the data (Douglas et al., 2023).

Procedures

After Institutional Review Board (IRB) approval was received, researchers recruited current NCAA college athletes using purposeful and snowball sampling to participate in the survey (Creswell & Creswell, 2018). The purposive sampling allowed researchers to select participants based on the specific criteria chosen for the study (Creswell & Creswell, 2018). The criteria included: current NCAA collegiate athletes across all member institutions (Division I, Division II, Division III). The primary investigator (PI) reached out to all NCAA member institutions. Emails were sent to the athletic administrators (e.g. Assistant Athletic Director, Senior Woman Administrator, or Student-Athlete Development Specialist) that included the purpose of the study and the link to the survey, to be shared with their respective college athletes. The athletic administrator either accepted or declined to participate in the research study. Once accepted, they distributed the survey on the researcher's behalf by simply forwarding the email with the purpose of the study, detailed explanation of the study, and a survey link.

To achieve the desired number of participants, snowball sampling was also utilized. Snowball sampling allowed the recruitment of a more significant number of college athletes. Researchers used their personal connections, sharing criteria of the study and inviting individuals who fit the inclusion criteria to participate in the study (Creswell & Creswell, 2018). The investigators also asked college athletes to reach out to their friends and college athletes at other institutions.

Research Instrument

The research instrument included demographic questions as well as the Leadership Learning Agility Scale (LLAS; Boulard-van Dam et al., 2022) and the Student Leadership Behavior Scale (SLBS; Kimura et al., 2022). The demographic questions included thirteen primary questions such as gender, race, NCAA division, sport, and classification in school.

Boulard-van Dam et al. (2022) created the Leadership Learning Agility Scale (LLAS), which assesses learning agility through factors like achievement motivation, extraversion, and conscientiousness. The scale is comprised of 18 items and three dimensions (i.e., developing leadership, seeking feedback, and systematic development) and is measured on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." The LLAS has demonstrated reliability with Cronbach's alpha values between 0.81 and 0.89. Originally designed for workplace use, the scale was adapted for college athletes. Although the LLAS was originally developed for professional workplace settings, its core constructs, including leadership capacity and seeking feedback, are highly relevant to the context of college athletics and lead-

ership. College athletes are continually required to adapt to new challenges, work as part of a team, focus on teamwork dynamics, receive feedback from coaches and teammates, and engage in ongoing personal development (Rubin & Nwosu, 2021; Weight et al., 2020). These experiences align closely with the LLAS constructs of developing leadership, seeking feedback, and developing systematically (Bouland-van Dam et al., 2022). To fit the college athlete population, the wording of the scale was adjusted to reflect sport-specific language without altering the underlying constructs. For instance, the item “I put effort in getting better in influencing others to reach our project goals” was revised to “I put effort in getting better in influencing others to reach our team goals.” The adjusted scale has been previously used in the exploration of leadership competencies of international and domestic college athletes, making it valid to use with the current population (Jolly et al., 2023).

Kimura et al. (2022) developed the Student Leadership Behavior Scale (SLBS), which evaluates students’ leadership behaviors. This scale includes 30 items grouped into six leadership constructs: taking initiative and modeling the way, challenging the process, sharing goals, managing goals and tasks, task-oriented support, and people-oriented support. Each item is rated on a 5-point Likert scale from “strongly disagree” to “strongly agree.” The SLBS has shown reliability, with Cronbach’s alpha values ranging from 0.74 to 0.84. Similar to the LLAS, the SLBS was also modified to meet the needs of college athletes. Therefore, the survey focused on the nine main leadership factors: 1) developing leadership, 2) seeking feedback, 3) developing systematically, 4) taking initiative and modeling the way, 5) challenging the process, 6) sharing goals, 7) managing goals and tasks, 8) task-oriented support, 9) people-oriented support.

Results

This study aimed to identify the distinct leadership competencies of women and men college athletes and identify if and where difference exist. Collecting and analyzing descriptive statistics and running a one-way MANOVA allowed us to answer the research questions. By utilizing the descriptive statistics collected from the NCAA college athlete participants ($n = 232$), the data identified the number of women and men participants, their race, division of participation, and plans after graduation (Table 2).

The first RQ focused on the critical leadership competencies of women and men college athletes. The findings of the study included a significant difference between men’s and women’s leadership competencies. To answer the research question, frequencies and a one-way MANOVA were used. Before conducting a one-way MANOVA analysis, the internal reliability of the survey responses related to leadership factors was assessed using Cronbach’s alpha (α). The internal reliability of the 48 survey items (leadership constructs) was found to be excellent, with an overall α of .97. Specifically, Leadership Learning Agility Scale (LLAS) Factor 1: developing leadership had an α of .91, and Factor 2: seeking feedback had an α of .93, both indicating excellent reliability levels. The LLAS Factor 3 and all the Student Leadership

Table 2

Descriptive Frequencies and Percentages by Gender, Race, NCAA Division, and Graduation Plans

	<i>n</i>	%
Gender		
Men	93	38.3%
Women	150	61.7%
Race		
White	196	80.7%
Black or African American	22	9.1%
American Indian or Alaska Native	1	0.4%
Asian	5	2.1%
Other	17	7.0%
NCAA Classification		
Division I	61	25.1%
Division II	148	60.9%
Division III	34	14.0%
Plans After Graduation (Completion of Eligibility)		
Playing my sport professionally	32	13.8%
Graduate school	84	36.2%
Finding a job in my major field	92	39.7%
Finding a job in another field	11	4.7%
Not sure yet	10	4.3%
Other	3	1.3%

Behavior Scale (SLBS) Factors, also demonstrated good internal reliability, all with α values above .80.

A one-way MANOVA was utilized to determine the critical leadership constructs exhibited by the college athletes and find if there was a difference between women and men athletes. The results revealed that six out of nine factors were significantly different between women and men athletes. The factors that were found to be significantly different were: 1) developing leadership, which emphasizes that women college athletes are more likely to engage in leadership development (Lars-son et al., 2016); 2) seeking feedback factors explained that women are more likely to look for feedback from others and consider it (De Meuse, 2017); 3) developing systematically showed that women are more likely to engage in the development programming on their own (Nijs et al., 2014); 4) taking initiative and modeling the way showed that women are more likely to step into leadership roles and taking charge (Kimura et al., 2022); 5) task-oriented support, women were more likely to focus on the task at hand until they archive the setup result (Kimura et al., 2022); lastly, 6) people-oriented support indicated women college athletes are more focused on developing relationships with people surrounding them and work towards a team goal (Kimura et al., 2022). The rest of the factors: challenging the process, sharing goals, and managing goals and tasks were not significantly different between the women and men athletes.

A one-way MANOVA aided in answering the second RQ and seeing if there is a difference in leadership constructs of men and women college athletes. Welch's one-way MANOVA was used to answer RQ2 due to the robustness against the unbalanced sample size of women ($n = 150$) and men ($n = 93$) in this study. More specifically, assumptions of normality and homogeneity of variances were assessed using Levene's test, violation of homogeneity of variances was observed, therefore Welch's MANOVA was used as an alternative to traditional MANOVA. The results of Welch's test for each separate factor and the descriptive means are demonstrated in Table 3, respectively. Factors 1, 2, 3, 4, 8, and 9 found a statistically significant difference in mean scores. Starting with factor 1: developing leadership $F(1, 213) = 11.67, p < .001$ between women ($M = 4.29, SD = 0.60$) and men ($M = 3.97, SD = 0.96$). There is a statistically significant difference in the mean scores of factor 2: seeking feedback $F(1, 179) = 18.69, p < .001$, between women and men. Women ($M = 4.54, SD = 0.57$) scored significantly higher than men ($M = 4.13, SD = 0.94$). Factor 3: developing systematically was significantly different, $F(1, 213) = 11.67, p < .001$, women ($M = 4.20, SD = 0.68$) and men ($M = 3.87, SD = 0.91$). Factor 4: taking initiative and modeling the way significantly differed between the groups, $F(1, 166) = 6.73, p = .010$. Women ($M = 4.33, SD = 0.57$) scored significantly higher than men ($M = 4.09, SD = 0.84$). Factor 8: task-oriented support was significantly higher in women than men, $F(1, 166) = 5.48, p = .021$, with women ($M = 4.41, SD = 0.59$) and men ($M = 4.18, SD = 0.86$). Lastly, factor 9: people-oriented support was statistically significant, $F(1, 162) = 8.45, p = .004$, women ($M = 4.49, SD = 0.55$) scoring higher than men ($M = 4.23, SD = 0.83$). The rest of the factors were not significantly different.

Table 3.*Summary of One-Way MANOVA Welch's Test*

	df	F	p	Women		Men			
				n	M	SD	n	M	SD
Leadership Learning Agility Scale (LLAS)									
Factor 1: developing leadership	184	11.45	<.001*	196	4.29	.60	126	3.97	.96
Factor 2: seeking feedback	179	18.69	<.001*	195	4.54	.57	124	4.13	.94
Factor 3: developing systematically	213	11.67	<.001*	196	4.20	.68	126	3.87	.91
Student Leadership Behavior Scale (SLBS)									
Factor 4: taking initiative and modeling the way	166	6.73	.010*	164	4.33	.57	106	4.09	.84
Factor 5: challenging the process	171	.385	.536	164	4.26	.59	106	4.22	.84
Factor 6: sharing goals	185	2.26	.134	164	4.26	.68	105	4.11	.84
Factor 7: managing goals and tasks	198	.883	.349	164	4.10	.71	105	4.01	.83
Factor 8: task-oriented support	166	5.45	.021*	163	4.41	.59	105	4.18	.86
Factor 9: people-oriented support	162	8.45	.004*	163	4.50	.55	105	4.23	.83

Note. F = F-ratio, df = degrees of freedom, p = significance level, n = number, M = mean, SD = standard deviation.

Discussion

The findings revealed significant differences between men and women leadership competencies in six out of nine factors: developing leadership, seeking feedback, developing systematically, taking initiative and modeling the way, task-oriented support, and people-oriented support. These results support a growing body of literature indicating college athletes acquire leadership competencies through participation in sport (Hoffman et al., 2013; Rubin & Nwosu, 2021), but they also extend

prior research by offering empirical evidence that women are demonstrating a wider range of behavioral leadership skills than traditionally assumed.

The findings align with previous research on leadership and gender differences, suggesting men and women college athletes differ in their leadership development (Debebe et al., 2016). These differences could be attributed to varying experiences within their athletic careers and differing perspectives on leadership. Gender and athletic participation significantly influence the leadership development of college athletes (Komives et al., 2006). Starting with awareness, exploration, and identification of leadership stages, college athletes are often culturally conditioned to view leaders as predominantly men due to the association of leadership with traditionally masculine qualities (Ely et al., 2011). Moreover, the underrepresentation of women in leadership roles, such as head coaches and athletic administrators within intercollegiate athletics, may impact how women approach leadership overall (Ely et al., 2011; Komives et al., 2016; TIDES, 2022). This underrepresentation highlights the persistent gender disparities in sport leadership and raises important questions about whether current collegiate athletic experiences are effectively preparing women for advancement into these roles, or into leadership positions beyond sports. While efforts to promote women in leadership are ongoing, the findings of this study point to a continued need for more focused and intentional development opportunities.

Representation and following a leader who sets an example play a critical role in leadership development, especially during the early stages of the LID model, when athletes are forming their initial awareness and engagement with leadership. Seeing individuals in leadership roles who share similar attributes can strongly influence how women athletes begin to view themselves as potential leaders. Visibility of women in leadership positions has potential to boost confidence and self-efficacy among women athletes (Smith & Hardin, 2018). Increasing this representation can have lasting benefits, encouraging more women to pursue leadership roles and equipping them with the confidence needed to step into these positions.

Additionally, findings align with earlier work that highlights women's strengths in collaborative and relational leadership (Debebe et al., 2016; Ely et al., 2011), yet they also challenge persistent assumptions in leadership literature that men tend to dominate in task-oriented or assertive behaviors (Yukl, 2012). Contrary to this view, women college athletes in this study scored higher than men in competencies tied to both interpersonal and structured leadership, suggesting women may be exhibiting a more holistic leadership profile. These results advance the literature by shifting the focus from trait-based or self-perception models to behavioral competencies that reflect leadership in practice. As a result, women are often more intentional in seeking growth opportunities, pursuing feedback, and developing both task-oriented and relational skills to build a well-rounded leadership profile. This intentional focus helps them prepare more fully for leadership roles that demand both strategic execution and strong interpersonal connection.

While previous leadership research in sport has often focused on coaches, athletic directors, or professional athletes (e.g., Feltz et al., 2011; Gellock et al., 2019; Jowett et al., 2024), this study centers on the leadership competencies of current col-

lege athletes. This is especially important given the developmental nature of college sport and the expectations that athletes will transition into post-sport careers with applicable leadership skills. Women athletes' higher scores across multiple competencies suggest they are actively developing behaviors aligned with later stages of leadership identity development (Komives et al., 2006). This stands in contrast to previous findings indicating women in sport often lack leadership confidence or receive insufficient support (Debebe, 2011).

On the other hand, no significant differences were observed between men and women in challenging the process, sharing goals, and managing goals and tasks. This lack of difference suggests gender does not play a significant role in these areas, as goal setting and task management are often structured at the team level in collegiate sports. Participation in college athletics allows athletes to be part of something larger than themselves, fostering personal relationships and working toward collective goals while setting aside individual differences (Jolly et al., 2024). Both men and women appear similarly driven by their athletic identity rather than their gender (Stokowski et al., 2019).

Another contribution of this study is the reinforcement of the need for contextual and demographically sensitive leadership programming. While some institutions have robust programming in place (Rubin & Nwosu, 2021), many lack the resources to support tailored developmental efforts (Jolly et al., 2023). This study's findings affirm a one-size-fits-all approach may be inadequate. Leadership training for athletes should consider gender, sport type, team culture, and the developmental stage of the athlete (Cotterill et al., 2022).

Women athletes may benefit most from leadership programs created specifically for them, where they can share experiences and build leadership identity without the pressure of social comparison (Damon et al., 2024; Debebe, 2011; Owen, 2021). Their tendency to seek feedback often reflects a desire for growth and guidance, which supports ongoing skill development (De Meuse, 2017). In male-dominated spaces like college athletics, seeking feedback provides women with valuable clarity, helps them refine their behavior, and builds the self-confidence needed to navigate and succeed in leadership roles (De Meuse, 2017). Mentorship also plays a key role, particularly when mentors share similar identities, contributing positively to leadership outcomes (Smith & Hardin, 2018). Women are more likely to seek feedback frequently, show greater openness to evaluation, and act on suggested changes (Damon et al., 2024). In this study, women athletes demonstrated a strong preference to balance task focus with relationship-building, both of which can enhance leadership effectiveness.

They also scored higher than men in developing systematically, showing a greater tendency to engage in structured programming aimed at improving their skills and reaching personal goals (Lord & Hall, 2005). Previous research has found women to be more focused on community-impact, leading by example, and self-reflective practices which could be leveraged in creating structured programming (Fuller et al., 2018). Women were also more likely to take initiative and model leadership behaviors, which aligns with previous research linking women to transformational and col-

laborative leadership styles (Hsu et al., 2022). Their stronger academic motivation, often connected to long-term personal development and career preparation, further supports these patterns (Tudor & Ridpath, 2019).

Beyond individual behaviors, this study highlights how leadership is influenced by social context and interaction. Women athletes frequently reported leading by example, seeking feedback, and supporting teammates, behaviors that reflect leadership as a relational and experience-based process. These findings support the need for leadership development approaches that recognize the influence of social dynamics rather than focusing solely on individual traits (Crozier et al., 2017). Women athletes' leadership development is often shaped early by their exposure, or lack thereof, to women in leadership roles (Smith & Hardin, 2018). Seeing leaders who share similar traits (e.g., gender, race) helps athletes form a stronger connection and belief that leadership roles are attainable. This process reflects the social construction of leadership, emphasizing how leadership understanding develops through observation and social context rather than solely through individual traits.

Furthermore, this study contributes to the growing body of literature on the socially constructed nature of leadership (Ferkins et al., 2018). Findings suggest leadership is socially constructed among athletes, particularly through behavioral modeling and experiential learning. Women athletes' tendencies to seek feedback, initiate growth opportunities, and support teammates indicate an advanced awareness of leadership as a relational process, a finding that aligns with calls for more socially constructed, observer-centric approaches to leadership development (Billsberry et al., 2018; Whales et al., 2022). This may point to a shift in how leadership is recognized and practiced among the next generation of sport professionals.

Finally, this research has practical implications for athletic departments and sport administrators. By identifying measurable behavioral competencies for gender-based differences, institutions can design leadership initiatives that enhance existing strengths and address potential gaps. Resources might be best invested in peer-led mentoring programs, feedback-rich environments, and reflective spaces that empower athletes to lead authentically, both on and off the field. While some institutions offer leadership programming, a major limitation remains the lack of consistent resources to support structured, gender-responsive initiatives. National programs (i.e., NCAA Women's Leadership Symposium, Women Leaders in Sport) provide valuable mentorship, skill development, and networking opportunities tailored to women in athletics, but their reach is limited due to eligibility requirements and accessibility challenges (WLS, 2024).

To improve implementation, existing NCAA resources could be leveraged to create more accessible, sustainable leadership pathways. For example, findings from this study could inform the integration of structured, gender-specific leadership programming into Student-Athlete Advisory Committees (SAAC), which are already housed within athletic departments. Additionally, conference-level initiatives could help standardize and expand leadership development efforts across institutions, offering shared resources and consistent programming regardless of division or location.

Beyond NCAA or conference-led efforts, athletic departments could launch in-house women's leadership programs that go beyond SAAC. For instance, a Power 4 university in the Southeast has developed EMPOWER Women's Leadership Academy program offers a unique model focused on professionalism, self-leadership, and community engagement for women college athletes (Stokowski et al., 2025). The central focus of the program is career readiness of women college athletes, as it exposes them to guest speakers, who have paved the way for themselves in the male-dominated fields, and how to effectively transition to various career post-collegiate career (Stokowski et al., 2025). This type of program enhances leadership capacity and contributes to personal growth of women college athletes, while also preparing them for life beyond sport.

The NCAA, conferences and outside organizations could also consider offering grant funding or incentives for universities that implement leadership programming designed around the specific competencies identified in this and other studies. Finally, collaboration among scholars, coaches, and college athletes could help ensure these programs remain research-informed, stakeholder-driven, and adaptable to evolving needs and best practices.

The findings of this study highlight significant gender differences in leadership development among college athletes. While the leadership competencies identified in this study offer valuable insights, they alone may not be enough to close the gender gap in sport or professional leadership roles. As a result, institutions may need to adopt more intentional, comprehensive leadership development models that are specifically tailored to the experiences and aspirations of women college athletes. However, further research is warranted to explore these differences in greater depth. For example, future studies should examine how life experiences, gender, and the specific challenges faced by women athletes shape leadership development.

Creating leadership programming tailored to the unique needs of women and men, including emotional support structures, leadership role modeling, and confidence-building strategies, could enhance long-term leadership development outcomes. Establishing mentorship environments where women athletes can receive guidance from leaders with similar traits and experiences may further enhance their leadership identity (Smith & Hardin, 2018). Longitudinal studies would also be valuable to track the evolution of leadership competencies from the collegiate athletic experiences into post-sport careers. Additionally, future research could investigate how sport type (team vs. individual sports, revenue vs. non-revenue sports) or NCAA division impacts leadership development trajectories. Comparative qualitative studies, such as interviews or focus groups with former athletes, could offer deeper insights into how gendered experiences influence leadership identity formation over time. Finally, such efforts could improve women representation in athletic administration and coaching within intercollegiate athletics.

Limitations and Conclusions

Like many studies, this research has limitations that should be considered when interpreting the findings. It should be noted that conducting research through

an online survey can result in a smaller sample size (Creswell & Creswell, 2018). Although this study met its target number of participants, sample size remains a potential limitation. Another limitation is the potential for response bias. Since the survey included statements about leadership, participants responded based on their personal beliefs and perceptions. As a result, self-reported bias may have influenced the findings, with participants possibly overestimating or underestimating their own leadership competencies (Komives et al., 2016).

Due to the quantitative design of the study, the results did not provide in-depth insight into the differences between demonstrated leadership behaviors and athletes' perceptions of their leadership competencies. Future research could explore how gender influences the development of these competencies and preparation for life after sports. It may also be valuable to examine variable such as year in school and type of sport (e.g. revenue vs. non-revenue, team sport vs. individual), as these factors could impact leadership development. According to the LID model, athletes may reach later stages of leadership over time, suggesting earlier exposure or longer involvement in team environments may shape how they understand and exhibit leadership.

This study examined leadership development among college athletes, with a focus on both women and men. The findings contribute to the growing literature on college athletes' leadership, offering practical insights for future programming. While existing research continues to expand in this area, relatively little has focused specifically on women college athletes. The results of this study highlight the need for leadership programs tailored to women, creating space for them to share experiences, build confidence, and connect with role models who reflect their identities (Smith & Hardin, 2018).

Targeted programming can help prepare women athletes for leadership roles both within sports and beyond. Focusing on gender-specific needs and strengthening the leadership traits identified in this study can improve outcomes for women athletes. Leadership opportunities not only build skills but also boost confidence and self-esteem, which are crucial for life after sport.

Although some institutions offer leadership development programs for athletes, most are broad and not tailored to specific populations (Jolly et al., 2024; Lewis, 2023). These findings support the need for gender-specific programming. Athletic departments and coaches should consider mentorship programs that pair women athletes with women administrators, creating opportunities for learning, networking, and gaining insights into leadership pathways within collegiate athletics.

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