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An Exploration of Factors Impacting First-Generation College Athlete Retention at Small Colleges and Universities

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An Exploration of Factors Impacting First-Generation College Athlete Retention at Small Colleges and Universities

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Retention is an increasing area of concern for higher education institutions as enrollments continue to decrease. This is especially germane for small colleges and universities given their lower enrollments and limited resources. First-generation students and college athletes are populations with enhanced susceptibility to attrition due to additional challenges and burdens placed upon them as they navigate the college environment. Therefore, there is a need to understand the factors influencing retention among those at the intersection of these student demographics. The purpose of this study is to examine the association of individual (gender, race, and academic performance) and athletic (financial aid, sport type, and competition level) factors with first-generation college athlete retention (n = 11,047) at small colleges and universities. Binary logistic regression analysis suggests significant relationships between first-generation college athlete retention and gender, race, academic performance, financial aid, and competition level. These results provide new theoretical understandings of college student retention through the examination of first-generation college athletes as a unique population. Our findings also offer practical recommendations for higher education institutions, particularly small colleges and universities, seeking to enhance retention.

Keywords: first-generation students, college athletes, retention, small colleges and universities, NAIA

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College student retention has been a long-standing concern among higher education administrators and researchers (Burke, 2019). The financial success of colleges and universities is perhaps more reliant on enhancing retention rates than at any other time in history. Since peaking at 21 million in 2010, college student enrollments have decreased each subsequent year. Enrollment figures in 2023 were almost 10% below the high-water mark set in 2010 (Hanson, 2024). Changing demographics in the United States further compound this issue, with a predicted "enrollment cliff" beginning in 2025 potentially leading to an additional 15% decrease in higher education enrollments by 2030 (Schroeder, 2021). This indicates colleges and universities are competing for increasingly smaller populations of incoming students, thereby heightening the importance of retention among students who do enroll.

As higher education institutions develop strategies and programs to increase retention, it is imperative to focus on student demographics particularly susceptible to leaving before graduating. Two populations of college students acutely vulnerable to attrition are first-generation students and college athletes. First-generation students account for over 40% of the current college student population (Startz, 2022). Yet, these students face unique challenges within higher education since they are often the first in their families to navigate the complex collegiate environment. This results in first-generation students being more than twice as likely to leave higher education within three years after enrollment compared to their non-first-generation peers (Cataldi et al., 2018).

College athletes also face unique challenges as they navigate their collegiate experience. They must balance the stresses of their dual identities as both a student and an athlete during their time in college by meeting the same academic demands as other students while dedicating numerous hours each week to their sport (Simons et al., 2007). Recent changes to athletic association bylaws, such as the loosening of transfer portal restrictions and the advent of name, image, and likeness (NIL) opportunities, have created additional challenges for institutions seeking to retain athletes throughout their collegiate career (Nakos, 2024).

Student retention is vital to all higher education institutions. However, it is perhaps even more critical to the success of small colleges and universities, defined as higher education institutions with less than 3,000 students (Carnegie Classification of Institutions of Higher Education, n.d.), due to the lower enrollments and limited resources at these institutions. The National Association of Intercollege Athletics (NAIA) is an athletic association governing body focused primarily on athletic competition at almost 250 small colleges and universities across the United States. Schools competing within the NAIA traditionally have smaller enrollments and budgets than comparable institutions in other college athletic associations. For example, the median enrollment at an NAIA institution is approximately 1,000 students, which is about 40% less than a National Collegiate Athletic Association (NCAA) Division III institution (NAIA, n.d.a). Furthermore, there are considerable resource gaps between NAIA and NCAA Division III schools. The median NAIA institution has an athletic department operating budget and institutional endowment that are almost 50% and 70% less, respectively, than its NCAA Division III counterpart (NAIA, n.d.a).

These enrollment and financial resource comparisons help position the NAIA as an organization comprised of small colleges and universities where the criticality of student retention is amplified given the changing and challenging enrollment dynamics in higher education. Yet, these institutions are largely ignored within retention studies focused on vulnerable student populations. Much of the research devoted to first-generation student retention has been conducted at institutions with large enrollments (e.g., Latino et al., 2020;

Stewart et al., 2015; Swecker et al., 2013) and almost all college athlete retention research has focused on those competing at NCAA institutions (e.g., LeCrom et al., 2009; Johnson et al., 2013). However, there is scant research on retention at NAIA schools (see Moleski et al., 2023 for a notable exception). Furthermore, there is an absence of retention research that centers on the intersection of first-generation students and college athletes as a demographic uniquely susceptible to retention and persistence challenges.

Therefore, the purpose of this study is to explore factors influencing first-generation college athlete (FGCA) retention at small colleges and universities. We utilized data collected through the NAIA Return on Athletics initiative to explore the relationship of individual and athletic factors with the likelihood of FGCA retention using binary logistic regression analysis. Through this research, we provide an enhanced understanding of individuals who must meet the dual demands of being both a first-generation student and a college athlete during a time of upheaval within higher education and college athletics. Our results offer theoretical and practical implications for higher education administrators to consider as they seek to improve retention strategies that will assist FGCAs with persistence to graduation at their institution.

Background on NAIA

The NAIA has a storied history of service to college athletes and innovation within intercollegiate athletics. The organization was formed in 1952 and a year later became the first collegiate athletics association to offer membership to historically Black institutions. In 1980, it became the first college athletics governing body to sponsor women's sports championships (NAIA, n.d.b). The NAIA showed further innovation in college athletics when it amended its bylaws in October 2020 to be the first intercollegiate athletic association that allowed athletes to profit from the commercial use of their NIL.

As of the 2022-2023 academic year, the NAIA organized 28 different championship events for approximately 83,000 athletes competing at about 250 institutions across 21 conferences spread throughout the United States (NAIA, n.d.b). The makeup of the NAIA differs from NCAA divisions in a few crucial aspects. As mentioned previously, NAIA institutions tend to have smaller enrollments and be less resourced than their NCAA counterparts. Additionally, the NAIA includes predominantly private, faith-based institutions. In total, only about 20% of NAIA member institutions are public schools (NAIA, n.d.c). Finally, athletes tend to account for a larger proportion of the overall student population at NAIA institutions relative to those in the NCAA. Athletes compose approximately 25% of the entire study body population at NAIA institutions compared to athlete proportions relative to the overall student body of 5%, 11%, and 17% for NCAA Division I, Division II, and Division III institutions, respectively (NAIA, n.d.d; NCAA, 2023). This final data point particularly highlights the importance of athletes at NAIA institutions and, hence, the need to explore factors impacting the retention of athletes at these institutions.

Literature Review

Theoretical Framework

This study utilized established theoretical frameworks on student retention from Tinto (1993) and Chen (2008) to guide the selection of variables. Tinto's (1993) model of institutional departure applied longitudinal data to examine factors influencing a college student's decision to

leave an institution over time. This model provided an understanding of student persistence (or lack of it) by examining key factors before and after entry into higher education. Prior to enrollment, several individual attributes, including a student's socioeconomic background and academic preparation, are critical to understanding the likelihood of retention. After enrollment, social integration and academic performance are salient factors that impact a student's decision to remain or depart from an institution. Tinto (1993) also emphasized the connection between these pre-entry and post-entry factors. For example, socioeconomic background could influence an individual's academic and social experiences in college. Due to its comprehensive approach, Tinto's (1993) model of institutional departure has received wide usage in empirical studies as a framework for analyzing and predicting student retention (Braxton & Lien, 2000).

Chen's (2008) conceptual model on financial aid and student dropout in higher education also proffers individual and institutional factors contribute to student retention or dropout decisions. This includes individual factors such as gender and racial or ethnic background. However, Chen (2008) additionally incorporates the impact of financial aid assistance on student persistence. Hence, this model offers a conceptual framework that extends prior research (e.g., Tinto, 1993) on student retention. It also provides an understanding of the complex dynamics between a student's unique individual factors (e.g., socioeconomic background, academic preparedness, and personal characteristics), an institution's contribution to student retention (e.g., quality of academic support, campus environment, and administrative policies), and the role of financial assistance with retention. The inclusion of financial assistance within a first-generation student retention model is particularly apt given the perilous economic situations of many first-generation students (Startz, 2022) and the assumption that financial aid has an outsized effect on persistence for those from low-income backgrounds (Chen, 2008). Furthermore, Chen's (2008) retention model has received usage from prior studies focused on retention among athletes at small colleges and universities (Moleski et al., 2023).

These theoretical frameworks position retention as an outcome related to the interplay between a variety of individual, institutional, and financial components. Therefore, our examination of FGCA retention must consider multiple factors exerting influence on decisions to persist at an institution. We draw upon the work of Tinto (1993) and Chen (2008) to outline a set of individual factors, representing a student's unique demographic background and academic preparedness, that may influence FGCA retention. We also utilize Chen's (2008) framework to inform our selection of financial aid as an important variable to consider within our model. Finally, we explore additional athletic participation variables as potentially significant influencers of FGCA retention at small colleges and universities.

Individual Factors

We operationalized three individual factors for this study to examine the influence of demographics and academic aptitude on FGCA retention. These include gender, race, and academic performance. The following sections provide relevant literature on these characteristics to develop hypotheses regarding their association with FGCA retention.

Gender and Retention. Prior research provides somewhat conflicting evidence regarding the impact of gender on retention. Studies focused on retention among more general college student populations have mostly suggested gender is an insignificant factor in predicting retention. For example, Millea et al. (2018) and Wohlgemuth et al. (2007) each conducted longitudinal studies on retention and graduation rates at large, diverse universities. Both studies

reported females were not significantly more likely to retain year-over-year compared to males, although Wohlgemuth et al. (2007) did find a higher six-year graduation rate among females.

In contrast, studies focused on gender differences in retention among college athletes and first-generation students have mostly revealed higher retention rates for females. LeCrom et al. (2009) indicated significantly higher retention among female college athletes compared to male college athletes among a large cross-section of NCAA Division I athletes competing in a mid-major conference. Similar results were reported in a descriptive study of NAIA athletes, with females retaining at a 7% higher rate than males (Cocco et al., 2022a). This trend appears to persist throughout the collegiate career of athletes, with Staurowsky et al. (2020) finding female athletes tend to exhibit higher graduation rates than males.

Studies examining the impact of first-generation student gender on retention are less prevalent, but there is some evidence corroborating the results found among studies involving college athletes. Latino et al. (2020) looked at first-to-second-year retention among first-generation Hispanic students at a single postsecondary institution. They found significant differences in retention rates between genders, with female first-generation student retention outpacing their male counterparts by about 8%. Additionally, Cocco et al. (2022b) found female FGCAs had a 6% higher retention rate than male FGCAs at NAIA institutions, although inferential analyses were not conducted to determine if this difference was statistically significant. Given the evidence regarding gender differences in retention among college athletes and first-generation students, we propose the following hypothesis:

Hypothesis 1 (H_1): There is a significant positive association between female FGCAs and retention at small colleges and universities.

Race and Retention. The relationship between race and retention has received substantial attention across studies focused on college athletes, first-generation students, and general college student populations. The findings from these studies are clear and consistent: traditionally underrepresented racial groups in higher education suffer from lower retention rates compared to their White peers. An abundance of research in this area has focused on the experiences of Black college athletes in NCAA Division I programs. These studies have indicated Black college athletes post lower persistence and graduation rates compared to those of other races (e.g., Baker & Hawkins, 2016; Comeaux & Harrison, 2007; Johnson et al., 2013). Baker and Hawkins (2016) and Comeaux and Harrison (2007) highlight the numerous challenges faced by Black college athletes as they navigate the academic environment while competing in revenue-generating sports at predominantly White institutions. Additionally, Johnson et al. (2013) reported Black athletes are almost three times less likely to persist from their first-to-second-year in college compared to their White peers.

Swecker et al. (2013) reported similar findings regarding the relationship between race and retention when focusing on first-generation college students. They found White first-generation students displayed a significantly higher likelihood of first-to-second-year retention compared to first-generation students of other races. Wohlgemuth et al. (2007) found students from underrepresented racial groups were significantly less likely to retain and graduate compared to White students, with the difference in retention rates between these two groups concerningly growing in each academic year that students were tracked. As these studies show, there is robust evidence of retention challenges faced in higher education settings by underrepresented students, leading to lower retention rates compared to White students. Therefore, we offer the following hypothesis:

Hypothesis 2 (H_2): There is a significant negative association between FGCAs from underrepresented races and retention at small colleges and universities.

Academic Performance and Retention. Academic performance has significantly predicted retention across a variety of research settings within higher education. There is evidence of positive relationships between a student's high school academic aptitude, measured through grade point average (GPA) and/or standardized test scores, and the likelihood of retention throughout their time in college (Millea et al., 2018; Wohlgemuth et al., 2007). Once a student enters a higher education setting, their academic performance while in college has also been shown to possess a strong correlation with retention and graduation rates (Chen, 2012; Millea et al., 2018).

These findings extend to studies that focus specifically on first-generation students and college athletes. Latino et al. (2020) found high school GPA was among a handful of significant predictors of first-year retention among Hispanic first-generation college students. Swecker et al. (2013) suggested that academic advising can have a significant influence on first-generation student retention. For college athletes, academic performance in high school and during their first year in college have shown to be strong indicators of retention. An athlete's first-year GPA in college can be a significant indicator of their likelihood to persist throughout their college experience (Brecht & Burnett, 2019). Johnson et al. (2013) revealed significant correlations with first-year retention when examining a college athlete's standardized test scores, high school GPA, and high school rank. In the same manner, relatively lower high school GPAs and standardized test scores are among several significant factors contributing to lower retention and graduation rates among college athletes (Horton, 2015; Kulics et al 2015).

Given the strong connections between academic performance and the likelihood of retention among first-generation students and college athletes, we propose our final hypothesis regarding the influence of individual factors on the likelihood of FGCA retention:

Hypothesis 3 (H_3): There is a significant positive association between FGCA academic performance and retention at small colleges and universities.

Athletic Factors

In addition to individual factors, we also considered the association between three athletic factors and the likelihood of FGCA retention. These factors represent potential influences from a student's institution and athletic participation status, and include financial aid received, sport type (individual or team sport), and whether the athlete competed at a varsity or junior varsity level. The following sections provide a review of the literature on these factors to develop hypotheses regarding their relationship with FGCA retention.

Financial Aid and Retention. As tuition rates across the country continue to rise (Kerr & Wood, 2023), financial aid has become increasingly important for college students seeking to persist to graduation. Schools competing within the NAIA offer four distinct types of institutional (i.e., non-federal) financial aid to athletes to help deter the cost of attendance: academic, athletic, need-based, and work-study. An examination of prior research reveals established positive relationships between the amount of financial aid awarded and student retention (Chen, 2008). Several studies have noted the significant positive influence of need-based and work-study financial assistance on retention since these aid types are most common

among low-income students who might otherwise struggle to meet the financial obligations associated with college enrollment (Boatman & Long, 2016; Wohlgemuth et al., 2007). These findings are particularly salient in the context of the current research given the increased likelihood of first-generation students coming from lower-income households (Startz, 2022). Furthermore, Kuh et al. (2008) indicated that merit-based aid in the form of academic scholarships has a significant positive impact on retention. This is notable given this type of financial aid is most common among students at private institutions (Hussar et al., 2020), which is the institutional designation for over 80% of NAIA schools (NAIA, n.d.c).

Research focused on first-generation students and college athletes also suggests significant positive influences of financial aid on retention. Millea et al. (2018) reported a large effect of athletic scholarships on first-year retention among students at a midsized public university. Similarly, Latino et al. (2020) indicated a statistically significant difference in retention among first-generation students who received financial aid compared to those who did not. Given these findings, we posit the following hypothesis:

Hypothesis 4 (H_4): There is a significant positive association between financial aid received and FGCA retention at small colleges and universities.

Sport Type and Retention. There is a relative lack of previous research regarding the influence of an athlete's sport type (team sport or individual sport) on their likelihood of retention. LeCrom et al. (2009) provided an initial exploration of this topic in a sample of athletes within a single NCAA Division I mid-major conference. Interestingly, they reported team sport athletes received substantially more financial aid compared to individual sport athletes, yet individual sport athletes retained at a significantly higher level. These results seem to contradict findings regarding the positive association between financial aid and college athlete retention (e.g., Millea et al., 2018). However, LeCrom et al. (2009) did mention the interaction between retention and sport type produced a small effect size and accounted for a minimal amount of variance in their model, making these findings somewhat inconclusive.

Moleski et al. (2023) also included sport type as one of many predictor variables in a model examining retention and graduation among NAIA athletes competing in a single conference. Their results suggested no significant differences between individual and team sport athletes regarding the likelihood of retention or graduation during the 2019-2020 academic year. Although minimal research exists regarding the influence of sport type on college athlete retention, the studies that have provided this examination (LeCrom et al., 2009; Moleski et al., 2023) suggest inconclusive or insignificant results. Therefore, we offer the following hypothesis:

Hypothesis 5 (H_5): There is not a significant association between FGCA sport type and retention at small colleges and universities.

Competition Level and Retention. Finally, the impact of competition level (varsity vs. junior varsity roster status) on retention has also received scant attention in prior literature. This is likely a function of most college athlete retention research prioritizing those competing at NCAA institutions (e.g., Johnson et al., 2013; LeCrom et al., 2009), which have abandoned almost all junior varsity programs since lifting the freshman participation restriction in 1972 (Zagoria, 2020). Conversely, NAIA institutions maintain a robust junior varsity competition system, with almost 38% of NAIA sport programs sponsoring a junior varsity squad in 2021-2022, which is a considerable increase from the prior academic year (Cocco et al., 2023).

Therefore, the competition level of an NAIA athlete becomes a salient factor to consider in our retention model.

Although not a direct parallel to the current study, Johnson et al. (2013) did find playing time was a significant predictor of NCAA Division I athlete retention, with those playing in more than two-thirds of total team games being almost twice as likely to retain than those playing in less than one-third of total team contests. In a more apt comparison, Moleski et al. (2023) found varsity athletes competing at the NAIA level were more than twice as likely to retain at their current institution compared to non-varsity athletes. These findings suggest playing and competing at a higher level significantly influences the retention of college athletes. Hence, we offer our final hypothesis:

Hypothesis 6 (H_6): There is a significant positive association between FGCA competition level and retention at small colleges and universities.

Method

Sample and Data Collection Procedure

The sample for this study comprised FGCAs at NAIA institutions tracked across the 2020-2021 and 2021-2022 academic years. Data utilized in this research came from a larger data collection and analysis effort pioneered by the NAIA known as the Return on Athletics (ROA) initiative. This initiative began in 2018 as a means of collecting annual data from member institutions on athlete enrollment, retention, financial aid, sport revenues, and sport expenses to help members maximize business outcomes and make informed data-driven decisions with a focus on athlete success and financial viability (NAIA, n.d.e). The NAIA granted data access and permission to utilize this data in academic research as part of a broader research and analytics partnership with this study's primary author. The ROA initiative utilizes a standardized template for data collection from each institution, thereby ensuring data consistency across academic years.

The final sample for this research consisted of 11,047 FGCAs competing at NAIA institutions during the 2020-2021 academic year, which represents approximately 10% of the overall NAIA athlete population. These individuals spanned 27 sport programs, including men's, women's, and mixed-gender sports, and represented 240 unique NAIA institutions across the United States. Football was the sport with the highest representation of FGCAs (19% of all football athletes), while men's and women's swimming and diving both contained less than 1% of FGCAs. Individual and athletic attributes were extracted from the larger ROA dataset. These FGCAs were then queried in the 2021-2022 ROA dataset to examine whether they were retained at their institution from the previous academic year.

Variables

The dependent variable in this analysis represented an FGCAs retention status from the 2020-2021 to 2021-2022 academic year. Retention status was coded as a binary variable, where 0 indicated an FGCA was not retained at the same institution from 2020-2021 to 2021-2022 and 1 indicated the FGCA was retained at the same institution. The definition provided to NAIA institutions within the ROA data collection procedure for a first-generation student is "a person whose parents or guardian did not complete a four-year college degree" (NAIA, n.d.f, p.2).

FGCAs who graduated at the end of the 2020-2021 academic year were not included in retention calculations for this study.

The independent variables used in this study comprised three individual factors (gender, race, and academic performance) and three athletic factors (financial aid, sport type, and competition level). All three individual factor variables were coded as binary variables for this analysis. Gender was coded as 0 for male FGCAs and 1 for female FGCAs. Race was coded as 0 for FGCAs who identified as White and 1 for FGCAs identified as another race (Black or African American, Hispanic or Latino, Asian, American Indian or Alaskan Native, or an individual that identifies as multiracial). Academic performance was coded based on whether the FGCA received an exemption (half or full) from NAIA scholarship limits based on their academic scores. For freshman enrolling at an NAIA institution, their aid is at least partially exempted from NAIA scholarship limits if they meet one of the following criteria: a minimum score of 1130 on the SAT or 23 on the ACT; a cumulative high school GPA of 3.50 or above; or if their GPA ranks in the top 25% of their high school graduating class. For athletes continuing at an NAIA institution (sophomores, juniors, seniors, and graduate students), their aid is at least partially exempted from NAIA scholarship limits if they have a cumulative college GPA of at least 3.30 or if they are in the top 25% of their class at their institution (NAIA, n.d.f). For this study, FGCAs that received at least a partial exemption based on their academics were coded as 1 for academic performance and those that did not receive any exemption based on their academic performance were coded as 0.

For athletic factors, financial aid represented the lone continuous independent variable. Financial aid was measured as an FGCAs cost of attendance discount rate. This represents the rate (expressed in percentage terms, ranging from 0% to 100%) that an athlete's cost of attendance at an institution is discounted by their financial aid awards. The cost of attendance is the summation of all tuition, room, and board expenses. NAIA institutions can offer an athlete financial assistance in the form of academic, athletic, need-based, and work-study aid. The equation for calculating an athlete's cost of attendance discount is: *[1-((Tuition + Room + Board) – Financial Aid) / (Tuition + Room + Board)] x 100%* (NAIA, n.d.f). The remaining athletic-related independent variables were binary-coded. Sport type represented whether an FGCA was involved in an individual sport (coded as 0; e.g., tennis, golf, cross-country) or a team sport (coded as 1; e.g., football, basketball, softball, volleyball). Finally, the competition level was coded as 1 for those who competed at a varsity level and 0 for those who competed at a junior varsity level. Table 1 presents a summary of each variable utilized in this analysis:

Data Analysis

Given the nature of our dependent variable, we used binary logistic regression to examine the associations between each independent variable and FGCA retention status at NAIA institutions. We interpreted the results from our binary logistic regression analysis as odds ratios, which represent the probability of the dependent variable (FGCA retention) occurring based on unit changes in each independent variable. An odds ratio greater than one indicates a positive relationship, meaning an increase in the independent variable is associated with a higher probability of FGCA retention. An odds ratio of less than one indicates a negative relationship, whereby an increase in the independent variable is associated with a lower probability of FGCA retention. An odds ratio of one would indicate no association between the independent variable and FGCA retention. All analyses conducted for this study were performed using IBM SPSS software (Version 29.0.2.0).

Table 1

Description of Variables

Variable	Description
Dependent Variable	
Retention	0 = Not retained at the same institution from 2020-2021 to 2021-2022 1 = Retained at the same institution from 2020-2021 to 2021-2022
Individual Independent Variables	
Gender	0 = Male 1 = Female
Race	0 = White 1 = Non-White (Black or African American, Hispanic or Latino, Asian, American Indian, Alaskan Native, or multiracial)
Academic Performance	0 = Did not receive full or partial academic exemption from scholarship limits 1 = Received either full or partial academic exemption from scholarship limits
Athletic Independent Variables	
Financial Aid	Cost of attendance discount rate, calculated as: [1 - ((Tuition + Room + Board) - Financial Aid) / (Tuition + Room + Board)] x 100%
Sport Type	0 = Individual sport (e.g., golf, tennis, cross country) 1 = Team sport (e.g., basketball, football, soccer)
Competition Level	0 = Competes at junior varsity level 1 = Competes at varsity level

Results

Prior to conducting the binary logistic regression analysis, all data were extracted from ROA data sources and merged in an Excel file. Data were cleaned and dichotomous variables were coded according to the schema presented in Table 1. The financial aid variable (cost of attendance discount rate) was checked for normality via inspection of a histogram plot, skewness, and kurtosis statistics. The histogram plot revealed a relatively normal distribution, and skewness (-0.26) and kurtosis (-0.32) statistics were each below an absolute value of 3.0, suggesting a normal data distribution (Hu & Bentler, 1999).

Table 2 presents descriptive statistics for all variables included in the analysis. From the total sample of 11,047 FGCAs, 6,908 (62.53%) were retained at the same NAIA institution from 2020-2021 to 2021-2022. The majority of FGCAs in the sample were male (n = 6,266; 56.72%) and the plurality identified their race as White (n = 4,788; 43.34%). Less than half of FGCAs received an academic exemption (n = 4,141; 37.49%), although the average cost of attendance discount was 62.44% (SD = 21.90%). Most FGCAs in the sample participated in a team sport (n = 7,854; 71.10%) and competed at a varsity level (n = 7,558; 68.42%).

Table 2
Descriptive Statistics for FGCA Retention (n = 11,047)

	n	Percent
Retained		
Yes	6,908	62.53%
No	4,139	37.47%
Gender		
Male	6,266	56.72%
Female	4,781	43.28%
Race		
White	4,788	43.34%
Black or African American	1,472	13.32%
Hispanic/Latino	1,033	9.35%
Other	3,754	33.98%
Academic Performance		
No Academic Exemption	6,906	62.51%
Received Academic Exemption	4,141	37.49%
Sport Type		
Individual Sport	3,193	28.90%
Team Sport	7,854	71.10%
Competition Level		
Junior Varsity	3,489	31.58%
Varsity	7,558	68.42%
Cost of Attendance Discount		
Mean	62.44%	
SD	21.90%	
Median	62.82%	
Min	0.00%	
Max	100.00%	

Note: SD = standard deviation; Min = minimum; Max = maximum

Binary logistic regression results are reported in Table 3. Results indicated that FGCA gender (β = 0.06, $p < .05$), race (β = -0.24, $p < .01$), academic performance (β = 0.10, $p < .05$), financial aid (β = 0.64, $p < .01$), and competition level (β = 0.38, $p < .01$) were all significantly associated with FGCA retention. Sport type (β = -0.05, $p = .29$) was the only independent variable not significantly associated with FGCA retention. An interpretation of odds ratios associated with statistically significant predictor variables reveals that female FGCAs are 6% more likely to retain than male FGCAs. Furthermore, FGCAs that identify with a racial minority group are 21% less likely to retain than those identifying as white. FGCAs that have a relatively high level of academic performance, evidenced through a partial or full academic exemption to NAIA scholarship limits, were 10% more likely to retain than those not qualifying for an academic exemption. A 10% increase in financial aid (cost of attendance discount rate) was associated with a 9% higher likelihood of FGCA retention. Finally, FGCAs competing at a varsity level in their sport were 45% more likely to retain than FGCAs competing at the junior varsity level.

Table 3
Binary Logistic Regression Results for FGCA Retention

Variable	β	SE	Exp(β)	95% CI for Exp(β)	
Gender	0.06*	0.01	1.06	1.05	1.07
Race	-0.24*	0.04	0.79	0.73	0.85
Academic Performance	0.10*	0.04	1.10	1.02	1.20
Financial Aid	0.64*	0.09	1.90	1.59	2.27
Sport Type	-0.05	0.04	0.96	0.88	1.04
Competition Level	0.38*	0.04	1.45	1.34	1.58
Constant	0.13	0.09			
n	11,047				
χ^2	217.303**				
Hosmer and Lemeshow	10.991				
% Correctly Predicted	55.70%				

Note: * = p < .05; SE = standard error; CI = confidence interval

Discussion

The purpose of this study was to analyze the association between individual and athletic factors with FGCA retention at small colleges and universities competing within the NAIA. Our findings contribute new knowledge on college athlete and first-generation student retention given its unique concentration on the intersection of these two identities. Examining this population is vital due to the retention challenges faced by first-generation students (Cataldi et al., 2018) and the additional burdens placed upon college athletes (Simons et al., 2007). Furthermore, this study is timely given the growing importance of retention at higher education institutions due to likely enrollment declines over the next decade (Schroeder, 2021). The following sections discuss findings regarding relationships between individual and athletic factors with FGCA retention.

Individual Factors

Hypothesis 1. Results provided support for H1, which posited there is a significant positive association between female FGCAs and retention at small colleges and universities. Specifically, female FGCAs were 6% more likely to retain compared to male FGCAs, holding all else constant. This significant relationship between gender and retention supports attributes of established theory on the topic (Chen, 2008, 2012). It also aligns with prior research indicating female college athletes (LeCrom et al., 2009) and female first-generation students (Latino et al., 2020) are significantly more likely to retain compared to their male peers.

Given the current study's focus on small colleges and universities, it is notable that this result mimics findings from previous research examining college athletes attending NCAA Division I institutions (e.g., LeCrom et al., 2009) where athletics tends to play a larger role in shaping an athlete's identity (Huml, 2018). This suggests female athletes at all collegiate divisions are perhaps more prepared than men to meet the demands associated with being a college athlete and persist at their institution, even when faced with additional challenges related to being a first-generation college student. It also suggests females may be more successful at

socially integrating into campus life, which is a key factor in establishing student persistence (Tinto, 1993). Future research could explore the characteristics, motivations, or support systems that enable this outcome.

Hypothesis 2. Results supported H2, which stated there is a significant negative association between FGCAs from underrepresented races and retention at small colleges and universities. Findings showed FGCAs from races that are traditionally underrepresented in higher education were 21% less likely to retain than FGCAs who identified their race as White, all else held constant. The non-White FGCA group comprised several different races, but the largest subset was those who identified as Black or African American (n = 1,472; 23.5% of underrepresented race group). This proportion is likely even higher based on Black or African American FGCAs who identified as multiracial. This finding corroborates prior research suggesting lower retention among Black or African American college athletes (Johnson et al., 2013), first-generation students (Swecker et al., 2013), and general student populations (Wohlgemuth et al., 2007) in higher education. These same retention challenges are incurred, and potentially exacerbated, for individuals facing the dual demands of competing as a college athlete and navigating college experiences as a first-generation student.

There are several factors underlying this troubling finding. A central pillar in Tinto's (1993) model of institutional departure is the need for academic and social integration for a student to persist at a higher education institution. Comeaux and Harrison (2007) suggest Black male college athletes often report lower levels of academic support and positive faculty interactions compared to their White peers. This hinders their ability to achieve academic integration and marginalizes Black male college athletes within the educational environment. Furthermore, Baker and Hawkins (2016) identified institutional practices that prioritize athletic, rather than academic or social, achievement for Black male athletes at NCAA Division I institutions. These systemic issues likely contribute to the continued findings suggesting those from underrepresented races face greater retention challenges than White college students.

Hypothesis 3. Results also supported the final individual factor hypothesis (H3), which suggested a significant positive association between FGCA academic performance and retention at small colleges and universities. Specifically, FGCAs with higher levels of academic performance, measured as their ability to receive an academic exemption to NAIA scholarship limits, were 10% more likely to retain than FGCAs not meeting academic exemption standards. Tinto (1993) suggested academic performance before and after enrollment in higher education were salient determinants of retention. Findings from the current study corroborate this notion, as academic exemptions for NAIA athletes can account for both their academic performance in high school and during college. These results are unsurprising given prior research on both first-generation students and college athletes consistently demonstrating strong linkages between academic performance and retention (e.g., Brecht & Burnett, 2019; Johnson et al., 2013; Latino et al., 2020; Millea et al., 2018). Additionally, higher levels of academic performance while in higher education can significantly predict a student's ability to persist throughout their college experience to graduation (Chen, 2012).

Although this result is unsurprising, it still can provide meaningful insight within the context of the current study. Academic success can be more challenging for FGCAs compared to other students given the extra time burdens placed on college athletes and the non-traditional life circumstances often associated with first-generation students. Therefore, higher education institutions should be cognizant of the need to assist FGCAs with academic integration and success (Tinto, 1993). This could mean providing specialized academic support resources, such

as structuring academic tutoring sessions around the time constraints faced by FGCAs, offering academic support in a more flexible online environment, and providing FGCAs with resources to help them understand how to navigate the higher education environment since parental guidance on the topic may be unavailable to them.

Athletic Factors

Hypothesis 4. Results supported H4, which hypothesized a significant positive association between financial aid received, measured as the cost of attendance discount, and FGCA retention at small colleges and universities. Each additional 10% discount on the cost of attendance through financial aid awards was associated with a further 9% increase in FGCA retention, all else held constant. Chen's (2008) model on financial aid and student dropout in higher education emphasizes the critical relationship between financial aid and retention. These results underscore the importance of financial aid when focusing on FGCAs at small colleges and universities. Furthermore, the impact of financial aid assistance on FGCA retention corresponds to prior retention studies focused solely on first-generation students (Latino et al., 2020) and college athletes (Millea et al., 2018). Therefore, financial aid maintains a significant positive relationship with retention when examining the intersectionality of these identities.

It is interesting to note the average cost of attendance discount (62.44%) provided to FGCAs at NAIA institutions. Further analysis reveals that FGCAs receive similar amounts of financial aid compared to their non-first-generation peers, but the dispersal of that aid is quite different in terms of financial aid type (Cocco et al., 2022b). Although academic aid amounts are relatively similar, FGCAs receive substantially less athletic aid than their non-first-generation counterparts, which indicates NAIA institutions rely considerably more on need-based and work-study aid to supplement FGCA financial aid packages. The use of need-based aid makes sense given the greater propensity for first-generation students to come from lower-income households (Startz, 2022). The use of work-study aid can also be beneficial by promoting a student's involvement with the institution through employment (Chen, 2012). In this manner, NAIA institutions are creative in their use of financial aid types to provide equivalent amounts of tuition assistance across college athlete demographics. However, it is also important for institutions to consider the potential negative ramifications of providing substantially more athletic aid to one subgroup compared to another. College athletes may place heightened importance on receiving an athletic scholarship compared to other forms of financial aid (Czekanski & Barnhill, 2015). Therefore, athletic departments should monitor levels of various financial aid disbursements as they seek to provide all athletes with an equivalent sense of athletic identity.

Hypothesis 5. Results supported H5, which posited a non-significant association between FGCA sport type and retention at small colleges and universities. Sport type was the only independent variable to not show a significant association with FGCA retention. Although prior research on this topic is relatively sparse, findings from the current study add to the notion that the impact of sport type, measured as team or individual sport participation, on retention is either inconclusive (LeCrom et al., 2009) or not significant (Moleski et al., 2023). These findings provide a positive indication that individual sport programs can build supportive communities to aid with athlete retention. This is significant as prior research has suggested individual sport athletes are more disposed to feelings of anxiety and depression due to the isolating effect of individualized competition (Pluhar et al., 2019). Feelings of isolation could complicate retention efforts, especially for first-generation students who need to rely on support communities to

successfully navigate their college experience given the absence of parents or guardians who can offer guidance through shared experiences. Yet, our results suggest that FGCAs at NAIA institutions feel a similar sense of support from their sport program communities regardless of sport type. It is encouraging to note that FGCAs in individual sports (e.g., golf, tennis, cross country) are not at a higher risk of attrition relative to those in football, basketball, softball, or other team sport programs.

Hypothesis 6. Finally, results also supported H6, which suggested there was a significant positive association between FGCA competition level and retention at small colleges and universities. Specifically, FGCAs competing at the varsity level were nearly 50% more likely to retain compared to FGCAs on a junior varsity roster, all else held constant. These results corroborate findings from Moleski et al. (2023) but at a smaller magnitude. Their findings suggested varsity athletes were more than twice as likely to retain compared to their junior varsity peers. This would indicate that varsity competition, although still an important determinant of retention for FGCAs, is not as critical of a retention factor compared to the overall athlete population within the NAIA. This may suggest that FGCAs prioritize outcomes from higher education differently than their non-first-generation peers. For example, perhaps FGCAs place more importance on obtaining a degree rather than competing at the varsity level during their collegiate career. This could result from their desire to become the first person in their immediate family to graduate from college and could explain the different magnitudes of association between varsity competition and retention for FGCAs compared to continuing-generation college athletes.

Although there is less impact of varsity status on FGCA retention compared to the overall college athlete population, these results may cause concern for administrators focused on athlete retention. There is considerable overlap between NAIA sport programs with a high degree of junior varsity competition (football, men's and women's basketball, men's and women's soccer) and sports with a relatively large concentration of FGCAs (Cocco et al., 2022b; Cocco et al., 2023). Therefore, FGCAs are still susceptible to retention challenges created by a desire to compete at a varsity level. Athletic department personnel must recognize this issue and develop strategies for promoting FGCA retention while competing at a junior varsity level. This could include communication with FGCAs about pathways and timelines for promotion to varsity squads. It could also include specific support services for FGCAs as they matriculate through the early years of their collegiate athletic experience, which is the most likely time for them to be placed on a junior varsity team.

Theoretical Implications

The theoretical contributions of our research stem from two unique focuses underlying this study. First, this study centers on the intersection of two demographics with distinctive retention challenges in higher education: college athletes and first-generation students. Although prior research has explored these populations separately, the current study explores how factors influence retention among individuals who maintain these identities simultaneously. Second, this research adds to the growing, but relatively sparse, literature on athlete retention at small colleges and universities. Hence, this study offers unique theoretical contributions to the discourse on college student retention at a time when higher education institutions are troubled by declining enrollments (Hanson, 2024).

Prior student retention models employing frameworks conceptualized by Tinto (1993) and Chen (2008) have examined retention among broad populations of college athletes (e.g.,

Moleski et al., 2023), first-generation college students (e.g., Stewart et al., 2013), and general college student bodies (e.g., Wohlgemuth et al., 2007). Our research extends the concept of college student retention through a more microscopic focus on factors influencing retention among individuals who navigate their collegiate experience as both an athlete and a first-generation student. We intentionally center this research on FGCAs due to the importance of this population within higher education. First-generation students account for over 40% of current college students (Startz, 2022) and athletes make up sizeable portions of student bodies, especially at lower levels of intercollegiate athletics (NAIA, n.d.d; NCAA, 2023). This study develops needed knowledge on factors influencing the retention of these populations. Some findings corroborate those from prior research, including the significant correlations of race, academic performance, and financial aid with retention. However, other results offer enhanced areas of understanding regarding college student retention.

One such finding is the non-significant difference in FGCA retention between team sport and individual sport athletes. Although individual sports may seem isolating for athletes, our results suggest FGCAs can find strong communities within these sport programs to help mitigate potential retention risks. Additionally, varsity competition status was a significant determinant of FGCA retention, although at a lower magnitude than the general athlete population at the NAIA level (Moleski et al., 2023). This indicates an opportunity to explore differences in the perception of varsity-level competition between first-generation and continuing-generation college athletes. These explorations may develop further evidence of the mechanisms FGCAs utilize to balance their roles as both a first-generation student and a college athlete.

Finally, prior studies have provided mixed results regarding the influence of gender on retention. Some have revealed a significant relationship (e.g., LeCrom et al., 2009; Latino et al., 2020) while others suggested no significant association (e.g., Johnson et al., 2013; Millea et al., 2018). Our findings indicated FGCA gender did significantly influence retention, with females having a 6% higher likelihood of retention compared to males, all else held constant. This could indicate female FGCAs at small colleges and universities are more closely aligned with their first-generation identity (Latino et al., 2020) than their athlete identity (Johnson et al., 2013). If so, this may predict significantly higher retention rates for female FGCAs at all points throughout their collegiate career.

Most college athlete retention research has centered around NCAA institutions (e.g., LeCrom et al., 2009; Johnson et al., 2013). Comparatively, NAIA institutions represent a group of smaller colleges and universities, both in terms of enrollment and resources (NAIA, n.d.a). Additionally, athlete populations tend to make up a more sizeable portion of the overall student body at NAIA institutions relative to NCAA schools (NAIA, n.d.d; NCAA, 2023). Combining these factors highlights the increased importance of athlete retention at small colleges and universities. Yet, with the notable exception of Moleski et al. (2023), there is a dearth of research addressing retention at higher education institutions where it may matter most. Therefore, this study offers considerable theoretical insights to small colleges and universities at a time when enhancing retention among vulnerable populations, such as FGCAs, is paramount to the success of higher education institutions given enrollment challenges. Our findings help provide insight into FGCA demographics that may require additional support to persist through their collegiate experience, including males, underrepresented racial groups, and those with lower levels of academic performance. Our findings also highlight the importance of financial aid for retaining FGCAs at small colleges and universities, a factor that will likely play an even larger role in retention decisions as tuition costs continue to increase (Kerr & Wood, 2023). These findings all indicate the need for small college and university administrators to develop and execute practical

strategies for intentionally promoting retention among FGCA populations. We offer some strategic suggestions in the following section.

Practical Implications

There are several practical implications that institutional and athletic department administrators can utilize to promote FGCA retention. Although it is not possible to cover every FGCA retention initiative in this section, we offer three recommendations for small colleges and universities to consider. The first is to offer opportunities for FGCAs to build communities with other first-generation students outside of sport. First-generation students, regardless of athletic involvement, face similar challenges as the first in their families to attend college. Therefore, first-generation-focused student communities allow for like-minded students with similar questions and needs to come together for assistance and support. An example of this programming is the "First-Gen Scholars" program from the University of Saint Mary, an NAIA institution located in Kansas. This initiative offers first-generation students the opportunity to explore career-specific businesses around campus, connect with student mentors for assistance with navigating the college experience, and hear from former first-generation students that have successfully graduated from the institution (University of Saint Mary, n.d.). This program also provides a physical space for first-generation students to meet, relax, and build community with other first-generation scholars. Although not aimed specifically at athletes, programs such as this provide opportunities for FGCAs to build deeper ties to their institution.

Athletic departments can also be more intentional about recruiting personnel equipped to assist FGCAs as they persist to graduation. Our second recommendation is for athletic departments to consider strategically staffing coaching and advising positions with individuals that possess the knowledge and skills needed to help FGCAs navigate the pressures of the college experience. This includes intentionally staffing athletic department personnel that were once first-generation college students themselves. These individuals have first-hand knowledge of the unique set of circumstances and challenges faced by first-generation students. Therefore, they can serve FGCAs by guiding them through institutional, academic, and athletic department processes that may not come naturally to an individual who is the first in their family to attend college. This could include assistance with course registration, delivering academic tutoring in non-traditional modalities, and helping FGCAs with career goal setting. Furthermore, these athletic department staff members could help facilitate a specialized summer bridge program for incoming freshman FGCAs. Outcomes from summer bridge programs for first-generation students have indicated participants feel more comfortable accessing institutional resources, more connected to campus communities, and more familiar with academic expectations and support systems (Flaherty, 2023). These programs could be especially valuable for assisting incoming freshman FGCAs who will begin their athletic career on junior varsity programs at small colleges and universities given the enhanced likelihood of attrition for this population.

Finally, we propose institutions add athletic department personnel to academic early warning committees to help identify FGCA retention risks earlier than might otherwise occur. Many universities already have early warning committees. One example comes from the University of Michigan-Dearborn, an institution whose athletic teams compete within the NAIA. Their "Early Warning Program" is designed to identify students with early indications of struggling with course content or inconsistent attendance and communicate those instances to their Office of Academic Success (University of Michigan-Dearborn, n.d.). However, this program, along with most other early warning programs at small colleges and universities, does not include athletic department personnel in the workflow process. Placing athletic department

personnel on these committees could help identify and expedite resolution processes for FGCAs struggling to adjust to the dual demands of being an athlete and first-generation student.

We understand these recommendations may seem challenging to implement given the limited resources and time burdens already placed upon athletic department staff and athletes at small colleges and universities. To implement these recommendations, athletic departments must be intentional about prioritizing the workplans of existing personnel to allow them to focus on FGCA-based initiatives. Furthermore, athletic department administrators must be intentional about providing time and space for FGCAs to partake in first-generation-focused initiatives, such as student communities and summer bridge programs. Although it may seem challenging to find the time and resources to accomplish these initiatives at a small college or university, we feel these recommendations are worthwhile to pursue and would significantly help promote the academic success and retention of FGCAs at these institutions.

Limitations and Future Research

Several limitations of this study must be acknowledged, which provide avenues for future research on the topic of FGCA retention. This study relies on a single year of retention data and, therefore, is subject to time-based exogenous factors influencing retention that are not captured in our model. One example of this is the COVID-19 pandemic, which likely influenced retention decisions during the data collection period utilized in this research. Future research could incorporate a longitudinal data analysis of the topic. This would allow for more in-depth investigations of FGCA retention over time and allow for comparisons of FGCA retention as they progress through different grade levels.

This study was unable to incorporate several additional variables that may have influenced the explanatory power of our retention model. These include credit hour completion and GPA as a continuous measure of academic aptitude. We were unable to systematically collect these variables for the FGCAs in our sample in a consistent and reliable manner. Future investigations of the issue could utilize credit hour completion to assess whether FGCAs become more likely to persist as they become more familiar with the demands of being a college athlete while learning how to navigate the higher education environment. Furthermore, a continuous measure of academic aptitude (e.g., GPA) could provide more nuanced explanations of the relationship between academic success and FGCA retention.

Additionally, this study explored FGCA retention at small colleges and universities within the NAIA. Although this provides interesting results, the narrow scope of inquiry means results may not be generalizable to FGCAs competing at other institutions. Future research could explore the topic of FGCA retention at institutions of varied sizes and that compete in different intercollegiate athletic divisions. Future research exploring FGCA retention at large NCAA Division I programs could provide new evidence that would allow for interesting comparisons with FGCA retention at small colleges and universities. Furthermore, investigations of FGCA retention at NCAA Division III programs would provide salient comparisons given the relative similarities in institutional structure between that division and the NAIA, with the notable difference of NCAA Division III institutions not allowing athletic scholarships as part of financial aid packages.

Finally, this study, like many studies that examine college student retention (e.g., Moleski et al., 2023) explored retention through the lens of students retaining at the same institution year over year. Although it makes sense from an institutional perspective to explore retention in this manner, it may not provide the most realistic examination of modern-day college athlete retention. With the easing of transfer restrictions across college athletics, athletes are empowered

now more than ever to exercise freedom of movement between institutions. The impact of NIL on transfer decisions only compounds transfer activity within college athletics (Nakos, 2024). Therefore, future studies focused on college athlete retention should strive to broaden the concept of retention and explore athlete retention within higher education overall rather than at a specific institution. This would allow more detailed investigations into factors influencing college athlete retention, and help provide an understanding of whether FGCAs, for example, are still progressing toward degree completion (albeit at a different institution) or are dropping out of higher education altogether.

Conclusion

As higher education institutions continue to feel enrollment and retention strains, it is increasingly essential to understand the factors that influence those outcomes. This research focused on retention among first-generation college athletes at small colleges and universities, a uniquely vulnerable population within higher education. Our findings demonstrate that individual and athletic factors significantly impact FGCA retention. There are positive associations between gender, race, academic performance, financial aid, and competition level with FGCA retention. There is no relationship between sport type (individual vs. team sport) and FGCA retention. These results help extend knowledge on college student retention and provide important considerations for small colleges and universities as they navigate an increasingly complex higher education environment.

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