

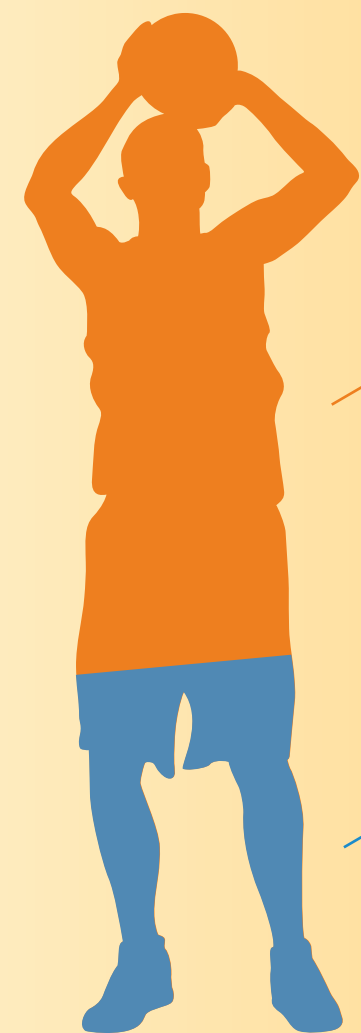
The Effect of Varsity Athletic Participation on Student Success

Evidence from the First-Time First-Year Entering Cohort of 2010

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SAMPLES AND FINDINGS

SAMPLE (COHORT OF 2010, N=929)



650

279

Non-Athletes 70%

Athletes 30%

Figure 1. Word Cloud of Outcome Majors for Athletes



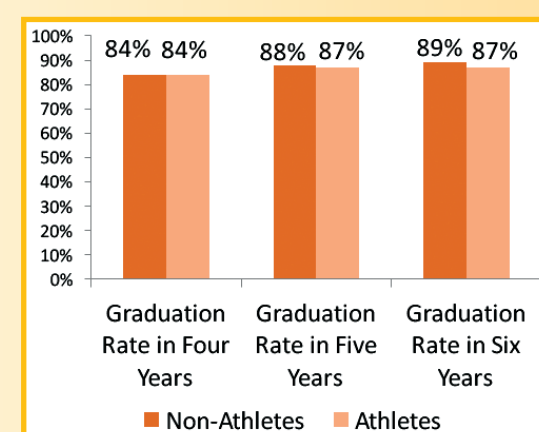
Figure 2. Word Cloud of Outcome Majors for Non-Athletes



Athletes were more likely than non-athletes to major in the social science and business cluster of departments and less likely to major in the humanities

FINDING FOR HYPOTHESIS 1

Graduation Rate Comparison

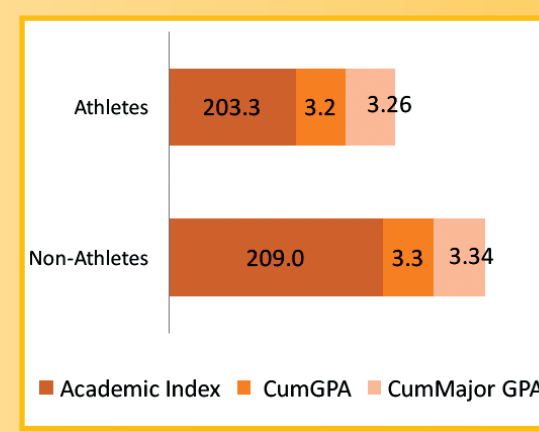


FINDING FOR HYPOTHESIS 1

Hypothesis 1 was accepted based on non-significant chi-square test results. Graduation rates were approximately the same whether the student did or did not participate in athletics.

FINDING FOR HYPOTHESIS 2

Average Test Score Comparison



FINDING FOR HYPOTHESIS 2

Hypothesis 2 was rejected. On average, athletes earned significantly lower test scores than non-athletes in Academic Index, Cumulative GPA and Cumulative Major GPA.

FINDING FOR HYPOTHESIS 3

Effect of Athletic Participation



GPA	Variance Explained	Model	Variables Added into Multiple Regression Model
Cumulative major GPA as Dependent Variable	35.48%	Model 1	Gender, Ethnicity, First Generation, POSSE, HS Academic Index, Outcome Major, Greek
	35.50%	Model 2	All of the above + athletic participation

FINDING FOR HYPOTHESIS 3

Hypothesis 3 was accepted. Controlling for the other factors, athletic participation accounted for only 0.02% of the variance in cumulative major GPA.

INTRODUCTION

Athletic programs contribute to school spirit, help build community, and provide valuable opportunities to learn life lessons (Emerson, Brook, & McKenzie, 2009). Disturbing trends toward greater differences between college athletes and other students in their academic achievement, choice of majors, and involvement in other aspects of collegiate life were identified by previous research (Shulman & Bowen, 2001; Bowen & Levin, 2003). The overall participation in intercollegiate sports in our school has been consistent over the past five years (around 22%). While Bucknell has one of the best graduation rates for athletes in the nation, examining the effects of participating in varsity athletics on student success has been recognized as a critical issue on our campus.

OBJECTIVES AND HYPOTHESES

The objective of this study was to examine the relationship between varsity athletic participation and student success in undergraduate education. Three different hypotheses were tested.

Hypothesis 1: Four-year, five-year, and six-year graduation rates would not be significantly different for athletes compared to non-athletes.

Hypothesis 2: Varsity athletic participation would not significantly correlate with academic performance as indexed by cumulative GPA and cumulative major GPA, without controlling for the other factors.

Hypothesis 3: After controlling for the pre-existing differences in high school GPA, student demographic background, and college experiences, varsity athletic participation would not have a significant effect on academic performance.

This study informs institutional policies and practices regarding varsity athletic participation on student success at Bucknell.

METHODS

1. Graduation rates and cumulative GPAs are proxies to measure student success.
2. Chi-square Test, ANOVA, Independent-Samples T Tests, and Multiple Regression Models. Cumulative major GPA was used as the dependent variable in multiple regression models. The independent variables included race/ethnicity, gender, first-generation, POSSE, citizenship, high school academic index (AI) *, student first majors, fraternity/sorority participation, and athletic participation.

*AI is calculated by the office of Admissions prior to admission to Bucknell. The index is based on a weighted average of each student's high school SAT score, ACT score, and high school class rank.

CONCLUSIONS

1. Students participating in athletic groups are just as likely to graduate as students who do not participate in athletic groups.
2. Before controlling for other factors, athletes earned significantly lower test scores than non-athletes. The difference in academic test scores between non-athletes and athletes was larger for males than for females. After controlling for other factors, participating in athletic groups was not significantly correlated with student academic performance.
3. High school academic index is the strongest predictor for student cumulative major GPA. The difference in cumulative major GPA between athletic groups and non-athletic groups was not related to athletic participation itself but was highly related with high school class rank, SAT scores and ACT scores. If the admissions requirements are lower for recruited athletes than for their non-athlete counterparts, recruited athletes are more likely to earn lower college GPA and do more poorly on other measures of academic achievement. Therefore, the student athletes should be recruited with, and perform at, the same academic standard as the general student body.
4. Having some important non-cognitive and behavioral measures would allow us to have a more comprehensive understanding and build a better model in the future.

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