

# **Effects of Intercollegiate Athletic Participation on Male Orientations Toward Learning**

*(Wolniak, Pierson, Pascarella)*

# **Research Questions**

- 1. Controlling for differences in precollege characteristics, institutional characteristics, and college experiences, to what extent do male athletes become differentially oriented toward the process of learning during the first 3 years of college?**

## **Research Questions (cont'd.)**

- 2. Are the effects of athletic participation on learning orientations the same for all men, or do they differ for men with different background characteristics (e.g., precollege ability, ethnicity, social origins), different college experiences (e.g., Greek affiliation, grades), or men in different institutional contexts (e.g., NCAA Division I versus Non-Division I schools, the average academic ability of the institution's student body)?**

# **National Study of Student Learning** **(NSSL)**

## **Sample**

**2685 students in 18 four-year colleges  
located in 16 different states**

**3 public research universities**

**1 private research university**

**4 liberal arts colleges**

**2 historically black colleges**

**8 regional colleges and universities**

## **Dependent Variables**

### **Learning Orientations Scales for Years 1, 2, & 3:**

- Openness to Diversity/Challenge
- Learning for Self-Understanding
- Internal Locus of Attribution for Academic Success
- Preference for Higher-Order Cognitive Activities

## **Independent Variable(s)**

- Intercollegiate Athletic Participation (Men)
  - Participation in football or basketball
  - Participation in sports other than football or basketball

# **Control Variables**

(precollege characteristics)

- **Precollege Learning Orientation**
- **Ethnicity/Race**
- **Family SES (parent education and income)**
- **Precollege Academic Motivation**
- **Age**
- **Volunteer Work in Secondary School**
- **Precollege Composite Academic Ability**

# **Control Variables**

(measures of student experiences in college)

- **Cumulative Credit Hours Completed**
- **Hours Spent Studying (per week)**
- **Hours Spent Working (per week)**
- **Place of Residence**
- **Self-Reported College Grades**
- **Fraternity Membership**
- **Volunteer Work During College**
- **Interpersonal Involvement**
- **Patterns of Coursework in 5 Areas (social sciences, mathematics, technical, arts & humanities, and natural sciences & engineering)**
- **Average Student Precollege Composite Academic Ability**
- **NCAA Division I or Non-Division I Institution**

## **Data Collected**

**Fall 1992**

CAAP reading, math,  
critical thinking  
NSSL precollege questionnaire  
(3,840)

**Spring 1993**

CAAP reading, math,  
critical thinking  
NSSL follow-up questionnaire  
College Student Experiences  
Questionnaire (CSEQ)  
(2,685)

## **Data Collected (cont'd)**

**Spring 1994**

CAAP science reasoning,  
writing skills  
NSSL follow-up questionnaire  
CSEQ  
(1,761)

**Spring 1995**

CAAP reading, critical thinking  
NSSL follow-up questionnaire  
CSEQ  
(1,054)

## **Methodology**

1. Estimated the *Total and Direct Effects* of male intercollegiate athletic participation on each of the four learning orientations for the first 3 years of college.
2. Tested for the presence of *Conditional Effects* of male intercollegiate athletic participation on learning orientations using cross-product terms (between the dummy variables and each of the individual precollege and college experience variables plus the institutional measures).

# **Results**

## **Total & Direct Effects**

### **Revenue-Producing Sports (i.e., football and basketball)**

- Little consistent negative impact on athletes' learning orientations, relative to their nonathlete counterparts.
- Statistically negative impact for football and basketball players was on second-year Learning for Self-Understanding.
- Male football and basketball players made gains on the four learning orientations during the first three years of college that were essentially equal to their nonathlete counterparts.

# **Results**

## **Total & Direct Effects**

### **Nonrevenue-Producing Sports (i.e., sports other than football or basketball)**

- **Significant, negative direct effects on both end-of-first-year and third-year Learning for Self-Understanding.**
- **Made gains on the four learning orientations during the first three years of college that were essentially equal to their athlete counterparts.**
- **Tended to inhibit Openness to Diversity/Challenge, relative to male nonathletes, at the end of both the second and third years of college.**
- **Male participants in nonrevenue sports tend to make smaller net gains during college in both Openness to Diversity/Challenge and Learning for Self-Understanding than did their nonathlete counterparts.**

# **Results**

## **Conditional Effects**

Cross-product terms involving athletic participation and the control variables were associated with statistically significant increases in explained variance in 2 of 12 analyses:

### **1. End-of-second-year Openness to Diversity/Challenge**

- Negative impact of participation in nonrevenue sports was more pronounced when the athlete was also a member of a fraternity. This negative influence of athletic participation on for men in fraternities was about 1.5 times as large as the negative effect of athletic participation for men who had not joined a fraternity.

*\*\*These effects did not vary significantly in institutions with different levels of student body academic selectivity or in schools with an NCAA Division I or non-Division I athletic program.*

# Results

## Other College Experiences Influencing Learning Orientations (Positive Influences)

- Interpersonal involvement during college *enhanced* growth in both Openness to Diversity/Challenge and Learning for Self-Understanding across all three years of the study.
- Amount of study had consistent *positive influence* on greater Internal Locus of Attribution for Academic Success.
- In the end-of-the-third year of college, amount of coursework in the arts and humanities had a *positive impact* on growth in:
  - Openness to Diversity/Challenge
  - Learning for Self-Understanding
  - Preference for Higher-Order Cognitive Activities
- Net impact of fraternity membership is mixed. Greek affiliation had modest *positive effects* on first-year Preference for Higher-Order Cognitive Activities and second-year Learning for Self-Understanding. However, by the end of the third year of college, being a member of a fraternity had a sizeable *negative impact* on growth in Openness to Diversity/Challenge.

# **Conclusions**

## **First Conclusion** (contrary to most current research)

- Male athletes participating in revenue-producing sports made net gains across the four learning orientations that were similar to those of their male nonathlete counterparts.

## **Second Conclusion**

- Male intercollegiate athletes participating in nonrevenue-producing sports tended to be the outlier group in terms of growth in learning orientations.

## **Third Conclusion**

- Fraternity membership had a conflicting impact on learning orientations during college.

## **Fourth Conclusion**

- Certain academic and nonacademic experiences during college had rather consistent direct, positive influences on male learning orientations, irrespective of whether or not one participated in intercollegiate athletics.

# **Contact Information**

**Ernie T. Pascarella**

**The University of Iowa  
Educational Policy and Leadership Studies  
N 430 Lindquist Center  
Iowa City, IA 52240  
(319) 335 - 5369**

**ernest-pascarella@uiowa.edu**

**This presentation is on-line at:**

**<http://www.uiowa.edu/~epls/faculty/pascarel/presentations.htm>**