Value of Campus Recreation Multi-Institutional Research

*The relationship between campus recreation facility use and academic outcomes for first-time undergraduate students across multiple institutions*

# Research Objective

This research seeks to assess the relationship between academic success and campus recreation participation controlling for student differences across multiple institutions. Previous recreation studies from single institutions lack consistency and robustness, including variable use and statistical design.

# Rationale

The fall-to-fall retention rate for first-year students at colleges and universities in the United States increased only 3.6 percentage points between 2009 and 2017, according to the National Student Clearinghouse Research Center. Given projections of national reductions in the number of high school (HS) graduates that may yield lower tuition revenue, retention of students has become even more important for colleges and universities. This study examines the relationship between campus recreation facility use and first-year retention and cumulative GPA of full-time, first-time undergraduate students across multiple universities. Authors examine differences between facility users and non-users by pairing facility access data with student records. Statistical analysis includes logistic regression, controlling for student demographics, academic preparedness, academic goals, family characteristics, and various environmental factors.

# Methods\*

Sample:Census data for a fall cohort of full-time, first-time freshmen (FTF) students (to analyze participants and non-participants) from the Office of Institutional Research (IR).

## Outcome variables

* 1st-year retention (Fall to Fall) calculated from institution’s student HEPC files
* GPA (cumulative, census end)

## Predictor variable

* Recreation facility use – binary variable, based on facility visits within a fall academic semester (i.e., sum of use August through December), from facility card swipe data.

Data analysis:Our analysis uses multivariate regression controlling for variables identified in the retention literature, including the following control variables:

# gender

# race/ethnicity (person of color or white)

# residency (in state or out of state)

# high school GPA

# high school test scores (ACT and SAT)

# major description

# first-generation student

# Pell grant recipient

# unmet need

# living on campus

# intercollegiate athletics

Data management:Research adheres to Institutional Review Board (IRB) protocol # 1911790841 at the IRB of record, West Virginia University. Each collaborating institution has an IRB authorization agreement (IAA-IRB of record) and a Data Use Agreement (DUA). Protocol includes deidentifying student data at each institution prior to multi-institutional data pairing, and reporting in summary (i.e., across students and institutions). All deidentified data transfers will occur on a secure server.

# Participant Roles & Expectations

This study seeks to increase comparability and reliability of findings and support campus recreation and institutional retention. To do this, researchers seek to replicate existing single-institution research on campus recreation and academic outcomes across multiple institutions.

## Collaborators

1. Access swipe card data from student recreation center(s) *Note:* institution may need to work with their recreation management software system

* Custom report (Excel) for Facility Usage (sum) by Membership Type (student membership users only) to include ID# as an optional selectable criterion from entry card reader(s)
* For one (1) academic fall semester (i.e., August 1, 2018-December 31, 2018)
* Each excel file should have the following columns: Name 1, Name 2, Student ID, Aug sum, Sept sum, Oct sum, Nov sum, Dec sum

1. Data request to Institutional Research for non-users, covariates for which to control in multi-variate model; variables subject to availability include (data dictionary provided):

* *Student ID, Gender, Race/Ethnicity (person of color or white), Residency, High school GPA, Sat combined scores, Act composite scores, Major description, First-generation student, Pell grant recipient, Unmet need, Living on campus, Intercollegiate athletics, Fall Cumulative GPA, Retention*
* Census data for full-time, first-time freshman for a fall academic semester
  + *Note:* exclude high school taking college courses and online students

1. Pair & deidentify data (i.e., remove student ID after pairing data sets)

## Study coordinator (West Virginia University)

1. Facilitation & guidance through detailed data requests, data dictionary
2. Coordinate IRB & DUA - Principal Investigator
3. Data management for deidentified data repository & statistical analysis
4. Reports & publication of multi-institutional research in peer-reviewed journal

# Benefits

To increase comparability and reliability of findings, this research focuses on student-level data across multiple institutions. Findings will quantify relationship between recreation participation and academic outcomes. Implications include defining the role of campus recreation in institutional retention & GPA.

# Contacts

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