

2019

Student engagement in Pacific Recreation's programs, services, and facilities as a predictor of participation in sports clubs

Dustin Rich

University of the Pacific, d_rich1@u.pacific.edu

Follow this and additional works at: https://scholarlycommons.pacific.edu/uop_etds

Part of the [Sports Studies Commons](#)

Recommended Citation

Rich, Dustin. (2019). *Student engagement in Pacific Recreation's programs, services, and facilities as a predictor of participation in sports clubs*. University of the Pacific, Thesis. https://scholarlycommons.pacific.edu/uop_etds/3586

This Thesis is brought to you for free and open access by the Graduate School at Scholarly Commons. It has been accepted for inclusion in University of the Pacific Theses and Dissertations by an authorized administrator of Scholarly Commons. For more information, please contact mgibney@pacific.edu.

STUDENT ENGAGEMENT IN PACIFIC RECREATION'S PROGRAMS, SERVICES, AND
FACILITIES AS A PREDICTOR OF PARTICIPATION IN SPORTS CLUBS

by

Dustin Scott Rich

A Thesis Submitted to the
Graduate School
In Partial Fulfillment of the
Requirements for the Degree of
MASTER OF ARTS

College of the Pacific
Health, Exercise, & Sport Sciences

University of the Pacific
Stockton, California

2019

STUDENT ENGAGEMENT IN PACIFIC RECREATION'S PROGRAMS, SERVICES, AND
FACILITIES AS A PREDICTOR OF PARTICIPATION IN SPORTS CLUBS

by

Dustin Scott Rich

APPROVED BY:

Thesis Advisor: Courtney Jensen, Ph.D.

Committee Member: Mark Van Ness, Ph.D.

Committee Member: Laura Whiteley, M.Ed.

Department Chair: Mark Van Ness, Ph.D.

Dean of Graduate School: Thomas Naehr, Ph.D.

DEDICATION

Sports build good habits, confidence, and discipline.

They make players into community leaders,

Teach them how to strive for a goal,

Handle mistakes,

And cherish growth opportunities.

- Julie Foudy

This thesis is dedicated to Pacific Recreation Administrators and the University of the Pacific sports club student members. The research conducted in this thesis was done with them in mind. I would like to see Pacific Recreation and the sports club program continue to strive and prosper following my departure from the University.

ACKNOWLEDGEMENTS

I would have not been able to complete my thesis, let alone the two-year graduate program without the help from many people.

I would first like to thank my parents: Joanne & Scott Rich. From being an only child, I would not know where I would be today if I did not have the two of you raise me. Your unconditional love and support have helped me get to where I am today; earning a master's degree and getting ready for entry into the real world. Thank you for being there for me during the good and hard times throughout my life. Your support from when I was struggling to adjust to a new culture is what pushed me to continue my studies and finish graduate school. Thank You.

Second, I would like to thank my girlfriend: Justine Caeg. Making the decision to leave Arizona and move back to California for two years was one of the hardest decisions I ever had to make. You supported my decision and cheered me on to achieve my goals. I could always go to you when I was struggling or had questions about life problems. I am happy to finally be moving in with you. If I did not have you in my life, I would not have been able to complete this program. Thank You.

I would like to extend a special thanks to my two thesis advisors: Mark Van Ness and Courtney Jensen. Although I came into this program when significant changes were occurring within the department, both of you were always readily available and provided me with the encouragement I needed to accomplish my thesis. The feedback, guidance, and support that both of you provided were essential into the process to the completion of this thesis. Thank You.

Student Engagement in Pacific Recreation's Programs, Services, and Facilities as a Predictor of Participation in Sports Clubs

Abstract

By Dustin Scott Rich

University of the Pacific
2019

Sports clubs are a program ran through Pacific Recreation at the University of the Pacific. This study determines whether using services and facilities that Pacific Recreation offers has a statistically significant relationship with students joining or participating in sports clubs.

METHOD: When a student comes into the Baun Fitness Center to work out, participate in a class, take part of personal training, or climb the rock tower, that student has to swipe into the facility and service of choice. The same process occurs for when a student wants to use external services like Intramural Sports and Informal Recreation. Quantitative data were pulled from Innosoft Fusion, software that Pacific Recreation utilizes to manage and track their facilities, programs, and services. 2,332 individual student datum were analyzed from the information received from Innosoft Fusion to measure student engagement from the Fall 2017 semester.

RESULTS: The Baun Fitness Center and other external services were found to play a significant role with association with participation in sports clubs. Participation in Baun Fitness Center workouts, rock tower, informal recreation, tiger training, and intramural sports associates with participation in sports clubs. It was determined that for each additional individual that

participates in these services or programs, there would be an increased chance of individuals to also participate in sports clubs.

CONCLUSION: It was concluded that there are additional ways for sports clubs to advertise and promote their clubs for recruitment. Pacific Recreation' marketing department can use the results from this study to analyze and plan additional marketing strategies that can use cross-promotion from the programs, services, and facilities Pacific Recreation has to offer. This study recommends multiple future research ideas for Pacific Recreation to take apart in to gain new insights on participation and marketing ideas from all of their programs.

TABLE OF CONTENTS

LIST OF TABLES	9
CHAPTER	
1. Introduction.....	10
Context of Problem.....	10
Importance of Study.....	11
Research Questions.....	11
Hypotheses.....	12
Delimitations.....	12
Objectives	12
Definition of Terms.....	13
2. Review of Literature	14
History of Sports Clubs.....	14
Previous Research on Recruitment	16
Previous Research on Participation	18
3. Research Methodology	21
Nature of Study	21
Subjects.....	21
Instruments Used for Data Collection	22
Collection of Data	22
Data Analysis Procedures	23
4. Results and Findings	25
Purpose Statement	25

Statistical Tests	25
Usage by Sex Analysis	28
5. Discussion	30
Findings	30
Recommendations	34
Future Research	35
Conclusion	38
REFERENCES	39
APPENDIX	41
A. TABLES	41

LIST OF TABLES

Table

1. Bivariate Correlations: Association with Sports Clubs	41
2. Linear Regression Analysis: University of the Pacific Sports Clubs Classification Table	41
3. Binary Logistic Regressions: Sports Clubs Involvement	42
4. Crosstabs & Chi-Square Analyses	43
5. 2017-2018 Academic Year: Sports Clubs Roster Numbers	46
6. ANOVA for Swipes per Week: Fall 2017 Semester	47
7. ANOVA with Repeated Measures: Days of the Week.....	49
8. Independent Samples T-Tests: Baun Fitness Center	50

Chapter 1: Introduction

University of the Pacific's Campus Recreation, formerly known as Pacific Recreation, inspires the Pacific community to "move, play, explore by providing engaging recreational programs and services that promote life-long education" (Pacific Recreation, 2018). One of the many programs Pacific Recreation has to offer to the students of the University of the Pacific is the opportunity to join sports clubs. As of the Fall 2017 semester, there were twelve active sports clubs on the University of the Pacific's Stockton, California campus: Archery, Basketball, Climbing, Lacrosse, Quidditch, Rugby, Men's Soccer, Women's Soccer, Tennis, Ultimate Frisbee, Men's Volleyball, and Women's Volleyball. Every sports club fosters team dynamics with a focus on student development governed by rules and regulations from Pacific Recreation and sanctioned leagues. The keys to success for sports clubs are student leadership and participation.

"Collegiate recreational sports programs continually need to justify their existence" (Forrester, 2015, P.4). Students have multiple on-campus wide options of different clubs or recreational programs to participate in. Clubs are constantly enforced to recruit new members in order to continue on as an active club as members come and go throughout each academic year.

Context of the Problem

Although much research has been conducted in general on the importance of student participation and the effects that involvement can have on students, few studies have been researched that analyze specific internal recreation programs, services, and facilities to identify what associates with sports club participation. The intent of this study is to understand sports club's participation predictors at the University of the Pacific and find out whether Pacific

Recreation's programs, services, and facilities play a significant role in students' participation or enlistment in a sports club.

Importance of Study

Currently, the University of the Pacific's sports clubs is struggling for increased participation among students. There have been studies that investigated social climate factors that influence student's selection on both clubs and college institutions. "A well-developed recreation program should aid in recruiting new students, as well as meeting the recreational interests of its matriculated students" (Boynton, 1975, P.2). It was intended that this study will aid in determining predictors of participation in sports clubs from other Pacific Recreation programs, services, and facilities. With these data analyzed from this research, sports clubs may be able to identify where and how to internally recruit from other Pacific Recreation entities to increase the chances of student participation. In a larger context, this study provides a blueprint for other Pacific Recreation programs and services, or other similar institutions to follow in analyzing internal predictors of participation.

Research Questions

- 1) To what extent would adding additional recruiting opportunities help with sports clubs receiving further student interest?
- 2) To what extent can Pacific Recreation narrow search of predictors of participation in sports clubs from other recreational programs and services?
 - a. Is there a precise area or place where Sports Clubs can look to recruit new participants?
 - b. Is there a precise day, time, or week to market sports clubs to gain a higher chance of recruiting success?

Hypotheses

The hypotheses for this study were presented in null form:

- 1) A majority of sports clubs' participants also participate in additional Pacific Recreation programs and services.
- 2) Participation in other Pacific Recreation programs and services will lead to a fold increase in the odds of sports clubs' involvement.
- 3) The Baun Fitness Center acts as a centralized location for sports club advertisement.

Delimitations

- 1) This study was concerned only with registered University of the Pacific undergraduate students from the Fall 2017 semester.
- 2) This study was geographically delimited to the University of the Pacific, Stockton, California campus.
- 3) The data of students were examined as a whole group; Not divided by college classes: (Freshman, Sophomore, Junior, Senior).

Objectives

The following objectives were outlined in advance for this study: (1) to illustrate the relationship between students' participation in University of the Pacific sports clubs with other recreational programs; (2) to illustrate students' sports clubs' recreational interest through the degree of participation from other recreational services, programs, and facilities usage.

Definition of Terms

Sports Club: Sports clubs are "sports activities developed for and by students interested in further development or recreation in a particular activity. The clubs are student managed and very often funded with very little institutional aid" (Carr, 1994, P.10).

Student Participation: The extent to which students participate or involve themselves in a class, course, program, etc.

Recreation: Recreation is the “leisure participation of college students in a departmental campus recreation program on a college campus” (Berry & Dougherty, 1996, P.35)

Baun Fitness Center: The Baun Fitness Center is the flagship facility for Pacific Recreation’s programs and services.

Leadership Efficacy: One’s internal belief in the likelihood that they will be successful when engaging in leadership (Hannah, 2008, P. 669).

Chapter 2: Review of Literature

Although current research has investigated reasons and the effects of participation in recreational opportunities of students in reflection to the quality of college experiences and psychological and psychological benefits, little research within the history of University of the Pacific's existence and the establishment of Pacific Recreation has focused on the recruitment of students in sports clubs.

As sports clubs are student-run organizations, clubs need to recruit fellow students to continue as a club. Club leaders are appointed or elected by their clubs and are in charge of important club decisions and the direction of club involvement. According to a NIRSA research that examined the influences of enhancing educational impact (2014), sport club leaders scored lower than peers involved in intramural sports and/or a combination of intramural sports and club sports on both leadership efficacy and resilience. The researchers believed that "attention should be directed at identifying what contributes to this and how to bolster leadership efficacy and resilience among those participating in club sports" (Dugan, 2014, P.15). A resource-scare environment affects sports club leaders' belief in the likelihood that they will be successful and how they cope with stressful situations. One of the goals of this study is to improve the University of the Pacific sports clubs' leader's efficacy on recruitment strategies to become more successful and engaging in leadership.

History of Sports Clubs

Sports clubs are formed, developed, governed and administered by the student membership working in conjunction with the office of campus recreation at universities that offer sports clubs to the student body. Sports clubs are designed to promote student leadership, interest, involvement, and participation. They offer local communities an opportunity to

participate in a broad variety of sports and recreational activities. Collegiate sports clubs differ from the NCAA as they are not just for competitive type sports. A club's focus may also be recreational, instructional, or a combination of multiple types of activities. Collegiate sports club programs are based on student interest and designed to enhance specific institution experience by "creating an environment where students can unite in diverse groups to achieve common goals and objectives while encouraging healthy lifestyles" (Dickenson, 2018, P. 1). Sports clubs provide a valuable learning experience through student involvement in fundraising, community service, organization, administration, scheduling, budgeting, and leadership development. The clubs with the most success and stability are those with active members and dedicated officers.

Sports clubs started off as student groups that meet to participate in a particular recreational activity. Activities included sports and also included reading groups, listening to music, art classes, and many more non-traditional recreational activities. Attention for a greater scope of facilities, services, and instruction at University of the Pacific (Boynton, 1975) was from the result of having one gymnasium and one field that offered limited availability for students to use unless they were a part of an athletics team or playing intramural sports. Activity classes offered students to play in specific sports at specific times. Not every student was able to take these activity classes because of the required courses that they had to take during the day. An increased desired in the frequency of recreation activities availability lead the University of the Pacific to build and complete a new University Center and organized an administration that overlooked clubs on campus.

Every college campus that has sports clubs have their own story on the formation and need for recreational opportunities. Sports clubs continue to offer athletic activities for anyone who has a desire to participate and develop specific skills. For clubs that are competitive, they

have the opportunity for extramural competition without the heavy structured outlet of NCAA athletic programs. As of 2018, University of the Pacific, Stockton Campus has an enrollment headcount of 4996 Undergraduate, Graduate, and First Professional students. The National Intramural-Recreational Sports Association (NIRSA) partnered with Precor to assess facilities, offerings, programs, and participation data of over 200 campus recreation programs across the United States. The University of the Pacific was categorized in the “less than 5,000 students’ category. This category has the least amount of campus recreation departments that manage sports clubs (71%). “Across all regions, the average number of sports clubs managed by recreational sports is 22 clubs” (NIRSA, 2010, P.1). The University of the Pacific, as of the Fall 2018 semester has 12 active sports clubs on the Stockton, CA campus. According to the same survey, only 8% of campuses do not have sports clubs. For the majority, sport club programs are readily available for students to get involved in.

Previous Research on Recruitment

An individual’s perception has a major impact on the decision-making process, especially in how high school students select a college to attend. An individual will look at numerous deciding factors that will have an influence on the choice of college to attend. David Hall (2005) examined the role of University of the Pacific’s campus recreation program in meeting the university’s goal for social integration, retention, and satisfaction of its undergraduate students. “63.5 % of the students sampled indicated that the availability of sports facilities and programs played an important role in deciding to persist at Pacific” (Hall, 2005, P. 59). From those identified as participants, 80% indicated that participating in recreational sports activities encouraged interaction between themselves and other students. Overall, making friends, socialization, and being physically active were all reasons students indicated why they

participated in campus recreation programs. Hall's study recommended that the University of the Pacific "use its recreation facilities as a central focus in the recruitment and retention process. Campus recreation departments can do more to facilitate a connection among faculty, staff, and students" (Hall, 2005, P. IV). Although this recommendation is for the recruitment of students to attend the university, it shows that Campus Recreation is an important factor in student's perceptions of the availability of recreational activities, including sports clubs.

The Baun Fitness Center, similar to fitness centers at other college institutions, has many different types of enrollment choices to choose from for students and members to participate in. Besides sports clubs, there is intramural sports, fitness, training, outdoor adventures, group classes, and many more choices to partake in. Each program has factors that are relatively important that individuals' will look at to decide whether to join a program or not. Factors can include equipment, environment, accessibility, fees, and evaluating the current status of programs. If a particular sports club is coming off of a 1-10 win-loss season, would that factor into one's choice in joining a club? Does a sports club that has hundreds of dollars in fees to keep the club in operation play a role in one's decision? Students look into these types of factors before making decisions to partake in programs. According to Jang & Choi (2018), members "judge membership fee to be the most important factor when deciding to enroll" (Jang & Choi, 2018, P. 1051) in fitness center programs. The Baun Fitness Center membership fee is included in tuition pricing if a student enrolls as a full-time student. If part-time students want to use the Baun Fitness Center, they must pay a forty-dollar activity and recreation fee per semester or purchase an eligible membership. Students that do not have access to utilize the Baun Fitness Center do have access to participate in some of the offered sports clubs. Some sports clubs have free membership dues as others do not. Jang & Choi believe that the most important factors in

one deciding to pay membership fees or not is by evaluating the quality of service and facilities. “In order to attract potential customers, managers should ensure that fitness centers offer services of high quality and at a price that customers perceive to be reasonable” (Jang & Choi, 2018, P.1051). Sport club officers act as managers for their clubs and hold high expectations and standards to provide excellent service for students. Clubs that are competitive and travel usually have high operating expenses. Club officers are in charge of creating or setting up fundraisers to keep membership costs down. If a system can be set-up where clubs successfully implement strategies to keep the cost of membership dues low while providing a high level of service, it would be possible to predict club enrollment effectively.

Previous Research on Participation

Before the department of Campus Recreation was created under the division of Student Life at the University of the Pacific, “students expressed a significantly greater degree of participation in recreational opportunities outside the University of the Pacific, than their degree of participation in recreational opportunities through the university” (Boynton, 1975, P.42). In 1975, Boynton conducted a survey to investigate the extent to which the University of the Pacific campus recreational opportunities meet student recreational interests. Clubs and other recreational opportunities like intramural sports were run exclusively by student groups. Unorganized offerings indicated that students appeared to prefer leisure pursuits more than extracurricular recreational opportunities. Students expressed a significantly greater degree of participation in recreational opportunities outside the university. Students’ disinterest in participation in recreational opportunities on campus were affected by the following factors: 1) students’ awareness, 2) extent of activities available, 3) time factor, and 4) time of year, season, or climate preferred for participation. At the time, the University of the Pacific had very limited

use of facilities for recreational use. There was only one gymnasium that had a strict schedule of activities that was split between athletics and intramural sports on a seasonal basis. Boynton's (1975) study showed that there was a need for additional facilities and instruction. Her investigation offered greater awareness of recreational opportunities at the University of the Pacific, and of students' desires and engagement in selected recreation.

The impact that a college has on students, in this case, the University of the Pacific can be viewed through various experiences of college students. It is "believed that higher education plays an important role in engaging students in meaningful learning opportunities outside of the traditional classroom, often through extracurricular activities" (Brown & Johnson, 2018, P.460). Brown and Johnson (2018) examined the relationship between undergraduate student involvement in any extracurricular activity and the benefits from their participation through the lens of Astin's I-E-O model (A model used to guide research that explores the influence of the college experience on student outcomes). Based on their coding, three themes emerged: 1) involvement, 2) networking, and 3) belonging & relatedness. It was found that participation in student clubs provided students opportunities for students to broaden their connection to the university and other club members. "Involvement can provide students with an additional sense of attachment or bonding to the academic institution itself, commitment to values, positive attitudes towards school, and greater retention" (Brown & Johnson, 2018, P. 468). Social involvement within club membership allows participants to be more active within their clubs because it allows them to connect to different kinds of people. Clubs allow students to feel a sense of unity and a place to belong from the friendships and bonds formed while being an active member in clubs. These three themes revealed that engagement in clubs contributes to student

engagement, which in turn provide students' opportunities for personal growth throughout their college experience.

Chapter 3: Research Methodology

Nature of Study

Campus Recreation programs play an important role in positively influencing students' attitudes toward maintaining a healthy lifestyle. From Forrester's (2014) report, students "report skills development and attribute health and wellness benefits to their participation in campus recreation facilities, programs, or services" (Forrester, 2014, P.4). "The value of examining student participation in a recreation program will provide insight into such institutional issues as recruitment, persistence, satisfaction with the academic experience, and student development in relation to educational outcomes" (Hall, 2005, P.24). This study utilized quantitative research to determine the relationships among the variables being investigated to provide insight into Pacific sports clubs recruitment and student participation.

Subjects

This was a specific-area study. The selection criteria for participants were:

- 1) The person is a current undergraduate student at the University of the Pacific as of the Fall 2017 semester.
- 2) The person has ID swiped into the Baun Fitness Center at least one time during the Fall 2017 semester.

These criteria were determined by the research committee. The majority of students at the University of the Pacific utilize the Baun Fitness Center, resulting in the largest base pool possible from recreational services, programs, and services. As long as a student has ID swiped into the Baun Fitness Center, other areas of participation that the student has taken a part of can be searched under their recreational profile. Using these criteria, 2331 students were included in this study.

Instruments Used for Data Collection

The study used a data collection instrument called Fusion, a management software created by Innosoft Fusion that Pacific Recreation uses to track and manage their facilities, programs, and services. Fusion “help institutions manage their sports facilities with powerful, adaptable, and secure recreation management software. It helps institutions improve user experience, manage members, and streamline facility management” (Fusion Innosoft, 2018). Fusion has the capability to track what programs and services each student utilizes. Each time students arrive at the Baun Fitness Center, they have to swipe their ID card to enter the gym area of the facility. Each swipe tracks what day and time a student uses the Baun Fitness Center facility. Programs and services, like the climbing wall, group exercise classes, personal training, etc., use Fusion to track and manage the members that partake in the specific activities. Sports clubs use Fusion to track club member management. When a student has interest and wants to practice with a sports club, they have to log onto their Fusion account and fill out the sports club waiver affiliated to the sports club the individual is about to take apart of. Submitted waivers allow Pacific Recreation’s competitive sports office to track usage within all sports clubs. Fusion has a ‘reports’ function that allows individuals with manager capabilities to access pre-created reports that show student’s usage data with Pacific Recreation’s programs, services, and facilities.

Collection of Data

The selection of the base pool was obtained through the Baun Fitness Center usage report. This report showed 2331 student’s Baun Fitness Center usage data, which included: 1) the number of Baun Fitness Center ID Swipes, 2) day of the week for every ID swipe, 3) time of day entry for every ID swipe, and 4) the total number of Baun Fitness Center swipes.

Phase II of the data collection came from the collection of program, service, and facility area usage data. Pacific Recreation's sports clubs, intramural sports, personal training, group fitness classes, climbing wall, and informal recreation member usage data was collected through Fusion by either creating individual area reports of member attendance or registration. Activity class rosters were obtained from the University of the Pacific's institution faculty software, InsidePacific.

The collection of data were entered into a Microsoft Excel sheet. Each row in the excel sheet would be a different student. Every student's name and institution ID number were deleted from the sheet and were coded with new 'fake' ID numbers to protect the information from all student samples. The columns in the excel sheet consisted of every program and service Pacific Recreation had during the Fall 2017 semester. The Baun Fitness Center usage data information was inputted into categorized columns for every student. On top of the information provided from the Baun Fitness Center usage data report, the mean, median, and mode of Baun Fitness Center ID swipe data were created for every sample student and inputted in categorized columns. From the data collected from Phase II, if a student participated in a specific area of recreational program and service, a 'Yes or No' check would be marked off for every student under the particular area. After all the data from Fusion were entered into an excel sheet, it was transferred into a statistical analysis software package (SPSS).

Data Analysis Procedures

To test the null hypotheses for this study, T-Scores, Logistic Regressions, Bivariate Correlations, ANOVAs, and Chi-Square comparisons were computed in SPSS for students' participation in programs, services, and facilities usage. The 0.05 level of significance was established for hypotheses testing.

The quantitative data were analyzed to determine the 95 percent confidence interval of the mean for each recreational program, service, and facility. Additionally, the Baun Fitness Center facility usage data were analyzed to determine the mean, median, and mode. The data were further compared among each other and presented with illustrative graphs and charts.

Chapter 4: Results and Findings

Purpose Statement

The purpose of conducting this study was to find out whether recreational programs, facilities, and services play a significant role in the participation and student interest in the University of the Pacific sports clubs' program.

Statistical Test for Hypothesis 1

The first null hypothesis was that the majority of sports clubs' participants also participate in additional Pacific Recreation programs and services. In order to answer this question, bivariate correlations (Table 1) were performed on Pacific Recreation programs, services, and facilities to view what associates with sports club participation. It was found that participation in Intramural Sports ($P < 0.001$), Baun Fitness Center Working Out ($P = 0.039$), Rock Tower ($P < 0.001$), Informal Recreation ($P = 0.003$), and Tiger Training ($P = 0.001$) associated with participation in sports clubs. Activity classes and Tiger X group fitness classes have no association with additional participation in sports clubs as the p-values for both items were greater than $p = 0.05$. Association between two programs or services can help Pacific Recreation learn and know what programs or services they can cross-advertise with. For example, if participation in sports clubs' associates with more participation in intramural sports or vice versa, advertisement of the two programs within both program areas can strengthen the relationship of association of the two programs.

Statistical Test for Hypothesis 2

The second null hypothesis was to see if participation in other Pacific Recreation programs and services will lead to a fold increase in the odds of sports clubs' involvement. As we can now view what associates with additional participation in sports clubs, the question that

appears is how can we predict whether somebody will participate in sports clubs? In order to answer this question, logistic regressions were performed on all of the mentioned Pacific Recreation programs and services that can be found in Table 1. Before the logistic regressions can be run, we have to figure out how accurate each logistic regression will be. A linear regression analysis (Table 2) was created using the University of the Pacific sports clubs participation numbers compared to the total research numbers. Overall, the model is significant ($p < 0.001$) and predicts with a 92.4% accuracy. Logistic regressions (Table 3) were run on Pacific Recreation services, programs, and facilities that associate with Sports Clubs participation from Hypothesis 1. What was found was that intramural sports, rock tower ID swipes, and tiger training sessions have significant data results that predict student participation in these programs and services will lead to a fold increase in the odds of sports club's involvement. With each additional intramural sports participant during the fall 2017 semester, there is a 3.9-fold increase in the odds of an intramural sports player to participate in sports clubs. With each additional weekly rock tower ID swipe during the fall 2017 semester, there is an 8678-fold increase in the odds of a rock tower climber to participate in sports clubs. With each additional weekly tiger training session during the fall 2017 semester, there is a 25-fold increase in the odds of a student who gets personal training to participate in sports clubs. With each additional weekly informal recreation ID swipe during the fall 2017 semester, there is a 2.18-fold increase in the odds of a student who participates in informal recreation to participate in sports clubs. The Baun Fitness Center ID swipes per week shared predictive power (multicollinearity) with other independent variables like Rock Tower, Tiger Training, Tiger X, Activity Classes as they are all located in the Baun Fitness Center. This results in the average number of Baun Fitness Center ID swipes not being significant within the whole model

($p=0.451$). Logistic regressions were not analyzed for activity classes ($p=0.234$) and Tiger X ($p=0.409$) as they did not associate with sports club association.

Statistical Test for Hypothesis 3

The third null hypotheses were to see if the Baun Fitness Center acts as a centralized location for sports club advertisement. In order to determine the exact sports clubs roster member usage of the Baun Fitness Center, crosstabs and chi-squares were analyzed. A linear model was developed using the weekly and total descriptive statistics of identification swipes to determine the best weeks to advertise and promote Pacific Recreation programs and services (Table 6).

From August 28th, 2017 through December 8th, 2017, the Baun Fitness Center was open 7 days a week except for the dates of November 23rd-25th for Thanksgiving break. The Fall 2017 semester consisted of 15 weeks where students were able to come into the Baun Fitness Center during operating hours. The normal hours of the Baun Fitness Center were 6:00 AM-12:00 AM (Midnight) Monday through Thursday, 6:00 AM-9:00 PM on Fridays, 10:00 AM-8:00 PM on Saturdays, and 10:00 AM-10:00 PM on Sundays. The Baun Fitness Center has the capability to track every student who enters the facility by requiring every student who comes through the front doors of the building to swipe their university provided identification card. The system Pacific Recreation uses to track ID Swipes is called Innosft Fusion Software. Innosft Fusion allows Pacific Recreation to track the usage of the facility. Table 6 shows the descriptive statistics of identification swipes from the 15 weeks of conducted research.

Using Table 6, viewers are able to compare and contrast the weekly usage of the Baun Fitness Center with the total counts from the 15-week period. With the data provided, sex ratios can be analyzed, and it can be determined what weeks have a higher usage over others. This

information can determine what weeks are the most reasonable to advertise sports clubs and additional Pacific Recreation programs and services. Before the research was conducted, it was assumed that the first week of school (Week 1) would have the highest attendance numbers and the last week of the semester (Week 15) would have the lowest numbers. If Thanksgiving break is excluded from the count, it was determined that this assumption was correct (Week 1 Total M=1.43, Week 15 M=0.67). The top five weeks in order of highest combined mean to lowest combined mean were the following: Week 1: M=1.43, Week 3: M=1.30, Week 2: M=1.28, Week 5: M=1.14, Week 4: M=1.13. The first five weeks of the Fall 2017 semester were the top five highest attendance weeks. It is interesting to see that Week 3 is higher than Week 2 and Week 5 is higher than Week 4. From the remaining 10 weeks in the semester, the total attendance count was equal to or greater than an M=1 only once during Week 11 (Week 11 M=1.07). If we are to look at sex usage between male and female, it can be determined that males utilized the facility more than females based off of the weekly means of male members compared to female members. Males had a mean equal to or greater than an M=1 every week except Thanksgiving Week (Week 13) and the final week of the study (Week 15). Females had a mean equal to or greater than an M=1 only through Weeks 1-3. From Week 4 through Week 15, females mean was less than the total number of female members that utilized the Baun Fitness Center during the Fall 2017 semester.

Usage by Sex Analyses

The difference between males and females that participate in sports clubs is not a big enough of a difference to assume it's real as it is not significant (Table 4: Person Chi-Square: 4.801; $p=0.091$). Males and females are essentially equal when it comes to sex differences in sports club involvement because the sex count is close with each other (Males: 98, Females: 80)

and has a low number of 178 total sport club participants compared to the 2331 total count in the research.

The difference between males and females that utilize the Baun Fitness Center (Males: 1,102, Females 1,227) cannot be analyzed to look at a difference among who utilized the Baun Fitness Center because everyone from the total count has swiped into Baun or an external facility (informal recreation) at least once during the fall 2017 semester. Looking at the difference of the number of swipes from each individual, it is not a big enough of a difference to assume a sex difference as it is not significant (Table 4: Person Chi-Square: 181.29; $p=0.143$). Males and females are essentially equally represented when it comes to Baun Fitness Center participation. Looking at males and females who exercised on the weekend (Table 4), 59% of males and 54% of females exercised on the weekends. The difference between males and females is a big enough of a difference to assume that males are more likely to work out on the weekends (Table 4: Person Chi-Square: 6.057; $p=0.048$).

Out of all the programs that associate with sports clubs' involvement (Hypothesis #1 results), only intramural sports showed a difference between sex usage. The difference between males and females that participate in intramural sports (143 Males, 50 Females) is a big enough of a difference to assume that the significance is real (Table 4: Person Chi-Square: 60.756; $p=0.000$), and that males are more likely to participate in intramural sports over females.

Chapter 5: Discussion

Findings

The findings of this study are of importance to multiple stakeholders at the University of the Pacific, including Campus Recreation, Associated Students of the University of the Pacific (ASUOP), Student Services, and Team Pacific, and the innovate student development program at the University of the Pacific. Institutions similar in size and number of resources to the University of the Pacific can understand the importance of marketing, recruitment, and level of access to campus recreation programs, services, and facilities on campus. This study examined student engagement in Pacific Recreation programs and services to pinpoint predictors of student sports club involvement. Additionally, facility usage of the Baun Fitness Center was analyzed to determine the most popular days and weeks students utilized the facility. All of this information can be used to determine the “best chance” opportunities for sport club leaders to recruit for their clubs and for Pacific Recreation Marketing to market sports clubs and other recreational programs and services.

Results of this study revealed a number of important findings to determine predictors of sports club participation at the University of the Pacific. The total number of University of the Pacific enrollment during the Fall 2017 semester was a headcount 4,872 students on the Stockton, CA campus. A total of 2,331 students from the 4,872-headcount swiped into the Baun Fitness Center at least once during the Fall 2017 semester. That means 47.8 % of students have either entered the Baun Fitness Center to do some sort of fitness activity or socialize. Out of 2,331 students that have swiped into the Baun Fitness Center at least once during the Fall 2017 semester, 7.6% or 178 of those students participated in sports clubs (Table 4). That is 82.7% out of the total Fall 2017 all-sport club roster of 215 students (Table 5). It can be determined that a

majority of the Fall 2017 active sports clubs roster members utilized the Baun Fitness Center to either workout, take apart of activity classes, rock, climb, socialize, etc.

One of the goals of this study was to see if current sport club members already use the Baun Fitness Center. Knowing that 82.7% of Fall 2017 sports club roster members use the Baun Fitness Center indicated that a majority of sport club athletes use the Baun Fitness Center as a part of their lifestyle routines. This initial finding was researched further to determine the most popular weeks and days sport club members, and other users of the Baun Fitness Center used the facility. For Weeks, the most popular five weeks were the first five weeks of the semester. The mean of Week 1 was $M=1.43$. Week 15's mean was $M=0.67$. That is more than a 50% decline in the average amount of users than Week 1. There are weekly means that are higher than previous week's means, but ultimately, the degree of decline of member usage is much larger every time it occurs, which is what lead Week 15 to be an $M=0.67$. If sports clubs want to make the best out of their marketing strategies of the Baun Fitness Center, they need to do so within the first 5 weeks of the Fall semester. The best day of the week throughout the entire Fall 2017 semester for Sports Clubs to do active recruiting are Tuesday's, as that day of the week has the highest mean of $M=0.20$. One-fifth of the total 2,331 Baun Fitness Center users, on average, workout on Tuesdays. Mondays and Thursdays tied in second place with a means of $M=0.18$, and Wednesday's in third at a mean of $M=0.17$. The worst day of the weeks (Table 7) for Sports Clubs to do active recruiting (Ex: Tabling or Physical Activity) at the Baun Fitness Center are on Friday's ($M=0.13$), Saturday's ($M=0.08$), and Sunday's ($M=0.09$). Typically, students do not have classes on Saturday and Sunday's. Why would that lead Saturday and Sunday to have a mean 50% less than of Tuesday's, Monday's and Thursday's? Further research can be done to determine how much of the role University of the Pacific commuter students play with Baun

Fitness Center participation. As a majority of freshman have to live on-campus their first year at the University of the Pacific, further research can be done to show how much of a role they play in weekend attendance. The University of the Pacific has sports clubs that are only for males, only for females, and gender neutral. During the Fall 2017 semester, there were three male-only sports clubs, two-female only sports clubs, and seven gender-neutral sports clubs. From the gender analysis, it was found that there was no significant difference between male and females that utilize the Baun Fitness Center (1,102 Males & 1,227 Females) and participation in University of the Pacific sports clubs (98 Males & 80 Females). Although the difference between males and females are not significantly different, it assisted with analyzing significance of the means and standard deviations for the number of ID swipes for males and females (Table 8). On average, males swiped 17.5 ± 17.8 times during the Fall 2017 semester. Females swiped on average 12.7 ± 13.4 times during the Fall 2017 semester. Sports clubs that are trying to do active recruiting at the Baun Fitness Center would on average, interact with more males than females. This information allows sport club leaders to determine the best weeks and best days to recruit for new sport club members. Further research can be done to help determine the best days from the highest weekly means to pinpoint exact days for sports clubs to actively recruit for new sport club members. Using the database at-hand, it can additionally be determined when the best time of day is to actively recruit. This can be beneficial for future club leaders to use as a reference for trying to find the best weeks, days, and times to recruit for new members.

The Baun Fitness Center facility hosts many of Pacific Recreation's programs and services. The facility is also known as home base for external services and programs like intramural sports and sports clubs. Sports clubs actively recruiting at the Baun Fitness Center gives clubs a chance at recruiting new members. Similar to the industry of direct sales, clubs

will receive a lot of 'no's' before they receive one 'yes' from a student. This type of active recruitment can be beneficial if they were to receive multiple yeses from students but unfortunately, can be ineffective with the use of time to do so. This study helped open a point-of-view to look at different ways for sports clubs to recruit new members. One of the new ways sports clubs can recruit new members is by directly recruiting new members from other Pacific Recreation services and programs. By finding what programs and services associated with participation in sports clubs, it can be determined which specific programs and services lead to a fold increase in the odds of individuals joining a sports club. Referring to the statistical tests of hypotheses 1 & 2, it was determined that for each additional individual member participating in either intramural sports, tiger training, rock tower, or informal recreation, there is a fold increase in the odds of a student participating in one of those programs or services to also participate in sports clubs. These four programs have a significant association with students participating in both sports clubs and the other program at-hand. Knowing that current and additional participation in these programs and services can lead to additional sports club involvement, Pacific Recreation marketing can get creative with their sports clubs' advertisement and active clubs can engage in other types of recruiting strategies. The Pacific Recreation Marketing Team can create flyers to hand out or post at these programs and services that associate with sports club participation. Sports clubs can either do the same thing as the Pacific Recreation marketing team or attend these programs and services to do active recruiting. Pacific Recreation has sports clubs that are similar to the activities that take place at intramural sports, rock tower, and informal recreation. Future studies can be done to see if these particular clubs have an advantage over other clubs when it comes to recruiting from programs and services similar in sport.

Recommendations

In examining the findings of the initial research questions and the quantitative information regarding predictors of sports club participation from Pacific Recreation programs, services, and facilities, the following serves as recommendations for University of the Pacific, Pacific Recreation, and sports clubs' leaders:

1. Sports clubs should take advantage of the new recruiting opportunities that can be carried out at the Baun Fitness Center and the programs that associate with sports club participation. As of the Fall 2017 semester, 178 out of the 215 sports club roster members utilize the programs and services inside the Baun Fitness Center. Although 178 out of 2,331 seems like a low number (7.6%), sports clubs should use the findings from this study to focus on recruiting new members from associated programs and on the weeks/days the Baun Fitness Center has the highest attendance numbers. Sports clubs need to become more innovative to recruit for their club in ways that are not just tabling at a time that is convenient for them.
2. Pacific Recreation should use this database as a base to determine the best marketing strategies for all of its programs and services. Even though the findings from this study were directed towards predictors of participation for sports clubs, the data can additionally be used to find predictors of participation from other programs like Tiger Training, Intramural Sports, Tiger X, Rock Wall, etc.
3. Pacific Recreation can use the database from this study to analyze further into finding the precise time of days from every day and every week from the fall 2017 semester to pinpoint out periods of times that the Baun Fitness Center will have the highest percentage chance of high attendance numbers. This can be beneficial information for

Pacific Recreation's marketing team, sports clubs, and other services and programs to acquire as everyone can save time and resources on marketing during times that have higher chances of attendance numbers over times periods that do not.

4. University of the Pacific and Pacific Recreation should use the data from this study to determine how much of an impact Pacific Recreation's programs, services, and facilities play on the role of recruitment and retention at the university. Future research can be added onto the dataset from this study to determine average grade predictors from the number of swipes a student has at the Baun Fitness Center or any of Pacific Recreation's programs or services. The University of the Pacific and Pacific Recreation can also use this database to determine the level of student retention at the university by viewing to see if each additional swipe into the Baun Fitness Center plays a role in increasing the percentage chance of a student completing their full course of study at the university. Ultimately, the database from this study can be seen and used as a base point to determine the impact the Baun Fitness Center and campus recreation plays on a student's decision and role at the university. This hopefully can help show university officials and the board of regents that recreation plays a huge role on-campus. Additionally, this can help Pacific Recreation's case to push for an expansion of the Baun Fitness Center or a new recreational facility.

Future Research

Although this study and previous literature have shined a light on finding internal campus recreation predictors for participation in sports clubs at the University of the Pacific, additional and other areas of calling for further research has arisen. Based on the findings in this study and

the subsequent recommendations, the following research would further add to the body of knowledge about predictors of participation in sports clubs at the University of the Pacific.

1. Further research can be conducted and study to determine whether the sex differences in the rate of participation of sports clubs or the Baun Fitness Center users is indicated by male dominance of sport or fitness. The collection of future student data can determine if there is evidence of the gap of rates of participation between males and females is narrowing or not to determine if sports clubs or fitness is largely organized for males. To show the connections between these differences and patterns of power, researchers will need to analyze the public support of the programs. “Public support of sport takes place in a variety of ways including the location of programs in educational institutions, direct government support of sports organizations, and indirect support through tax incentives for corporate donations and sponsorship of events and programs” (Theberge, 1985, P. 194). In a sports club program, public support includes looking at the size of the institution and studying new student demographics to get a better understanding of the background of students that are either being recruited or self-enrolling to the university. Analyzing the direct support the Sports Club Administration and Associated Students of the University of the Pacific give to current programs can show if there is evidence of implications of sports clubs or fitness as a male preserve. There is a need for more research to identify how sporting practices contribute to—and challenge—gendered social arrangements.
2. With the recent integration of Presence, the new campus engagement platform that the Associated Students of the University of the Pacific acquire to replace the former campus engagement software called Orgsync, sports clubs can now track attendance at any and

all sport club recruiting events, including recruiting events such as REC Fest, Fall and Spring club fair, and Tiger Day; events that all sports clubs at the University of the Pacific are required to attend. Future research should look at student participation from these events and predict the level of chances of sports club participation sports clubs receive from these events. Understanding the predictors that come from these recruiting events and the information from this study, sports clubs can further understand if these recruiting tactics are working or not. This data can be beneficial for the Associated Students of the University of the Pacific and the Sports Club Administration to know and see if these recruiting events are working in the ways they have planned them to be.

3. Future studies should also look at interviewing sport club officers and leaders to understand what motivates these leaders to take on the leadership roles they have taken. The Sports Club Administration has the power to shape the program to meet the needs of the student leaders. If the Sports Club Administration cannot understand the internal issues within clubs and their leaders, it can lead to poor recruitment and clubs shutting down. A study that looks at the achievement-goal theory in the context of sport club officers can help the sports club program get a better understanding of the sports clubs' officers achievement behavior. This can help the Sports Club Administration evaluate the sports club's officers' competence or incompetence and orient the program accordingly in hopes to improve the program and recruitment of student members.
4. According to an institutional data set research and study conducted by NIRSA (2016), the student participation level for sports clubs at the University of the Pacific felled just below the 25th percentile of all NIRSA recognized campus recreation programs. The 25th percentile is set at 378 participants and the University of the Pacific, during the 2015-

2016 academic year, had 371 total participants. In the same study, it was concluded that the area of indoor recreation space at University of the Pacific (18,000 square footage) was below the 25th percentile of 59,538 square footage. At this time the area of indoor recreation space per student was one square footage per 2.9 students. The 25th percentile was set at one square footage per 5.0 students. For areas of outdoor recreation space, University of the Pacific lands on the 25th percentile at 2 acres. That is 0.02 acres of outdoor recreation space per student. Future Research should look at the role of limitations sports clubs have with facility space and see how much of a contributing factor it plays in sports club participation and recruitment.

Conclusion

This study did not seek to establish an exact answer to fix the problem University of the Pacific sports club's face with recruitment and participation numbers. This study is to be used as a starting guidance for Pacific Recreation and sports clubs' leaders to use as recommendations of advice to their operations. The research outcomes of this study indicated the important role campus recreation programs, services, and facilities play as one cohesive unit for all of the programs Pacific Recreation offers. The data from this study can help Pacific Recreation's marketing team analyze further on cross-promotions between their own programs. All of Pacific Recreation's programs and services can gain new insights on participation and marketing ideas from this study. Between fall semester of 2017 and spring semester of 2019, Pacific Recreation added new sports clubs to the roster but also lost a couple of clubs. It is recommended that this study is to be conducted again in the near future to ascertain the issues sports clubs face with recruitment and participation at the University of the Pacific.

References

- Berry, D. W. & Dougherty, J. (1996). Student Retention: Using recreation to assist in the transition from high school to college. *NASPA Journal*, 32(2), 35-41.
- Boynton, P. (1975). *A comparison of college recreational opportunities and students' recreational interests and participation*. Published master's thesis, University of the Pacific, Stockton, CA.
- Brown, C., & Johnson, J. D. (2018). Sport Management Student Club Participation: An Exploratory Study. *College Student Journal*, 52(4), 460–476.
- Carr, R.E., Jr. (1994). *Current trends in risk management strategies of recreational sport club programs*. Published master's thesis, University of the Pacific, Stockton, CA.
- Dickenson University (2018). [*Sport Club Handbook*]. Retrieved from https://www.dickinson.edu/download/downloads/id/3874/sport_club_handbook
- Dugan, J. P., Torrez, M. A., & Turman, N. T. (2014). *Leadership in intramural sports and club sports: Examining influences to enhance educational impact*. NIRSA.
- Forrester, S. (2014). *The Benefits of Campus Recreation*. NIRSA.
- Forrester, S. (2015). Benefits of Collegiate Recreational Sports Participation: Results From the 2013 NASPA Assessment and Knowledge Consortium Study. *Recreational Sports Journal*, 39(1), 2–15

Fusion Innsoft (2018). [Website Homepage]. Retrieved December 24, 2018, from www.innosoftfusion.com

Hall, D. (2005). *A comparative study of perceptions of participants and non-participants in a campus recreation program on the quality of students' college experiences*. Published master's thesis, University of the Pacific, Stockton, CA.

Hannah, S. T., Avolio, B. J., Luthans, F., & Harms, P. D. (2008). Leadership efficacy: Review and future directions. *Leadership Quarterly*, 19, 669-692.

National Intramural-Recreational Sports Association (NIRSA) (2010). [*Sport Club Participation by Enrollment*]. Retrieved January 20th, 2019, from www.nirsa.net

National Intramural-Recreation Sports Association (NIRSA) (2016). [Institutional Data Set]. Retrieved January 20th, 2019, from <https://nirsa.net/nirsa/>

Pacific Recreation (2018). [Mission Statement, Vision, and Values]. Retrieved December 18, 2018, from <https://www.pacific.edu/campus-life/activities-and-programs/athletics-and-recreation/campus-recreation.html>

Theberge, N. (1985). Toward a Feminist Alternative to Sport as a Male Preserve, *Quest*, 37:2, 193-202

Won Yong, J., & Kyoungcho, C. (2018). Factors Influencing Choice When Enrolling at a Fitness Center. *Social Behavior & Personality: An International Journal*, 46(6), 1043–1055.

APPENDIX A: TABLES

Table 1: Bivariate Correlations: Association with Sports Clubs

What Associates with Sports Club Participation?		
Program, Service, Facility	R=	P=
Intramural Sports Participation	0.142	<0.001*
Activity Classes Participation	0.142	0.231
Tiger X Participation	0.017	0.408
Baun Fitness Center ID Swipes Per Week	0.043	0.039*
Rock Tower Swipes	0.170	<0.001*
Informal Recreation ID Swipes Per Week	0.062	0.003*
Tiger Training Sessions Per Week	0.072	0.001*

Table 2: Linear Regression Analysis: University of the Pacific Sports Clubs Classification Table

Classification Table				
	0	1	Percentage Correct	
Sport Club Participation	0	2148	5	99.8
	1	171	7	3.9
Overall Percentage				92.4

a. The cut value is .500

Variables in the Equation						
	B	S.E	Wald	df	Sig.	Exp(B)
Constant	-2	0.078	1021.665	1	0.00*	0.083

a. Overall, the model is significant ($p < 0.001$) and predicts with a 92.4% accuracy.

APPENDIX A: TABLES CONTINUED

Table 3: Binary Logistic Regressions: Sports Clubs Involvement

Intramural Sports Participation							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
1.37	0.20	45.12	1	0.00*	3.91	2.63	5.83

Average Rock Tower ID Swipes Per Week							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
9.07	1.51	36.10	1	0.00*	8678.27	450.53	167165.30

Average Tiger Training ID Swipes Per Week							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
3.22	1.41	5.23	1	0.02*	24.96	1.58	393.81

Average Informal Recreation ID Swipes Per Week							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
0.78	0.27	8.26	1	0.004*	2.18	1.28	3.70

Tiger X Participation							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
-0.25	0.30	0.68	1	0.41	0.78	0.44	1.40

Activity Class Participation							
						95% C.I. for Exp(B)	
B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Up
0.43	0.36	1.42	1	0.23	1.54	0.76	3.13

APPENDIX A: TABLES CONTINUED

Table 4: Crosstabs & Chi-Square Analyses

Sports Clubs Participation: Sex							
Sports Clubs Participation			Sex				
			Male	Female	Unidentified	Total	
	No	Count		1004	1147	2	2153
		% within Sex		91.10%	93.50%	100%	92.40%
	Yes	Count		98	80	0	178
		% within Sex		8.90%	6.50%	0.00%	7.60%
	Total	% within Sex		1102	1227	2	2331
% within Sex			100%	100%	100%	100%	
Chi-Square Tests							
		Value	df	Asymptotic Significance (2-sided)			
Person Chi-Square		4.801 ^a	2	0.091			
Likelihood Ratio		4.943	2	0.084			
Linear-by-Linear Association		4.79	1	0.029			
N of Valid Cases		2331					

Baun Fitness Center & Informal Recreation Number of Swipes: Chi-Square Tests					
		Value	df	Asymptotic Significance (2-sided)	
Person Chi-Square		181.290 ^a	162	0.14	
Likelihood Ratio		192.358	162	0.05	
Linear-by-Linear Association		53.976	1	0.00	
N of Valid Cases		2331			

Exercise on the Weekends: Sex						
Exercise on the Weekends			Sex			
			Male	Female	Unidentified	Total
	No	Count	450	563	1	1014
		% within Sex	40.80%	45.90%	50%	43.50%
	Yes	Count	652	664	1	1317
		% within Sex	59.20%	54.10%	56.50%	56.50%
	Total	Count	1102	1227	2	2331
		% within Sex	100%	100%	100%	100%
	Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)			
Person Chi-Square	6.057 ^a	2	0.048*			
Likelihood Ratio	6.063	2	0.048			
Linear-by-Linear Association	6.026	1	0.140			
N of Valid Cases	2331					

Intramural Sports Participation: Sex						
Intramural Sports Participation			Sex			
			Male	Female	Unidentified	Total
	No	Count	959	1177	2	2138
		% within Sex	87.00%	95.90%	100%	91.70%
	Yes	Count	143	50	0	193
		% within Sex	13.00%	4.10%	0.00%	8.30%
	Total	Count	1102	1227	2	2331
		% within Sex	100%	100%	100%	100%
	Chi-Square Tests					
	Value	df	Asymptotic Significance (2- sided)			
Person Chi-Square	60.756 ^a	2	0.00*			
Likelihood Ratio	62.654	2	0.00			
Linear-by-Linear Association	60.244	1	0.00			
N of Valid Cases	2331					

APPENDIX A: TABLES CONTINUED

Table 5: 2017-2018 Academic Year: Sports Clubs Roster Numbers

2017-2018 Academic Year Sports Clubs Roster Numbers			
	2017-2018 "Try-Outs"	Fall 2017 Roster Members	Spring 2018 Roster Members
Archery	53	16	15
Basketball	41	25	23
Climbing	32	24	21
Lacrosse	5	1 (Inactive)	Inactive
Quidditch	8	5	6
Rugby	25	14	18
Men's Soccer	41	25	25
Women's Soccer	25	22	Inactive
Tennis	25	18	8
Ultimate Frisbee	35	31	16
Men's Volleyball	19	19	11
Women's Volleyball	35	16	9
Total Numbers	344	215	152

APPENDIX A: TABLES CONTINUED

Table 6: ANOVA for Swipes per Week: Fall 2017 Semester

Descriptive Statistics: Baun Fitness Center Weekly ID Swipes								95% Confidence Interval	
	Sex	Number of Weekly Swipes	Mean	Std. Deviation	Number of Students	Std. Error	Lower Bound	Upper Bound	
Total Week 1 Swipes	Male	1801	1.63	1.84	1102	0.05	1.54	1.73	
	Female	1541	1.26	1.44	1227	0.05	1.16	1.35	
	Unidentified	1	0.50	0.71	2	1.16	-1.77	2.77	
	Total	3343	1.43	1.65	2331				
Total Week 2 Swipes	Male	1672	1.52	1.72	1102	0.05	1.43	1.61	
	Female	1316	1.07	1.37	1227	0.04	0.99	1.16	
	Unidentified	2	1	0	2	1.09	-1.14	3.14	
	Total	2990	1.28	1.56	2331				
Total Week 3 Swipes	Male	1660	1.51	1.81	1102	0.05	1.41	1.60	
	Female	1377	1.12	1.44	1227	0.05	1.03	1.21	
	Unidentified	1	0.50	0.71	2	1.15	-1.75	2.75	
	Total	3038	1.30	1.63	2331				
Total Week 4 Swipes	Male	1485	1.35	1.67	1102	0.05	1.26	1.44	
	Female	1158	0.94	1.37	1227	0.04	0.86	1.03	
	Unidentified	1	0.50	0.71	2	1.08	-1.61	2.61	
	Total	2644	1.13	1.53	2331				
Total Week 5 Swipes	Male	1494	1.36	1.68	1102	0.05	1.27	1.45	
	Female	1153	0.94	1.34	1227	0.04	0.86	1.02	
	Unidentified	1	0.50	0.71	2	1.07	-1.59	2.59	
	Total	2648	1.14	1.52	2331				
Total Week 6 Swipes	Male	1132	1.03	1.44	1102	0.04	0.95	1.11	
	Female	971	0.79	1.21	1227	0.04	0.72	0.87	
	Unidentified	1	0.50	0.71	2	0.94	-1.34	2.34	
	Total	2104	0.90	1.33	2331				
Total Week 7 Swipes	Male	1250	1.13	1.53	1102	0.04	1.05	1.22	
	Female	1008	0.82	1.28	1227	0.04	0.74	0.90	
	Unidentified	0	0	0	2	0.99	-1.95	1.95	
	Total	2258	0.97	1.41	2331				
Total Week 8 Swipes	Male	1226	1.11	1.51	1102	0.041	1.031	1.194	
	Female	970	0.79	1.24	1227	0.039	0.714	0.868	
	Unidentified	0	0	0	2	0.973	-1.908	1.908	
	Total	2196	0.94	1.39	2331				
Total Week 9 Swipes	Male	1266	1.15	1.57	1102	0.04	1.07	1.23	
	Female	1026	0.84	1.26	1227	0.04	0.76	0.92	

	Unidentified	0	0	0	2	1.00	-1.96	1.96
	Total	2292	0.98	1.42	2331			
Total Week 10 Swipes	Male	1273	1.16	1.64	1102	0.04	1.07	1.24
	Female	996	0.81	1.25	1227	0.04	0.73	0.89
	Unidentified	0	0	0	2	1.02	-2.01	2.01
	Total	2269	0.97	1.46	2331			
Total Week 11 Swipes	Male	1335	1.21	1.67	1102	0.05	1.12	1.30
	Female	1153	0.94	1.36	1227	0.04	0.86	1.02
	Unidentified	1	0.50	0.71	2	1.07	-1.60	2.60
	Total	2489	1.07	1.52	2331			
Total Week 12 Swipes	Male	1162	1.05	1.50	1102	0.04	0.97	1.14
	Female	1017	0.83	1.30	1227	0.04	0.75	0.91
	Unidentified	1	0.50	0.71	2	0.99	-1.44	2.44
	Total	2180	0.94	1.40	2331			
Total Week 13 Swipes	Male	435	0.39	0.75	1102	0.02	0.35	0.44
	Female	347	0.28	0.65	1227	0.02	0.24	0.32
	Unidentified	1	0.50	0.71	2	0.49	-0.47	1.47
	Total	783	0.34	0.70	2331			
Total Week 14 Swipes	Male	1105	1.00	1.50	1102	0.04	0.92	1.08
	Female	862	0.70	1.22	1227	0.04	0.63	0.78
	Unidentified	1	0.50	0.71	2	0.96	-1.39	2.39
	Total	1968	0.84	1.37	2331			
Total Week 15 Swipes	Male	849	0.77	1.36	1102	0.04	0.70	0.84
	Female	706	0.58	1.09	1227	0.04	0.51	0.64
	Unidentified	0	0	0	2	0.87	-1.70	1.70
	Total	1555	0.67	1.23	2331			
	Total Swipes	34,757						

APPENDIX A: TABLES CONTINUED

Table 7: ANOVA with Repeated Measures: Days of the Week

Descriptive Statistics: Baun Fitness Center Daily ID Swipes				
	Sex	Mean	Std. Deviation	N
Monday Baun Mean	Male	0.22	0.25	1102
	Female	0.15	0.20	1227
	Unidentified	0.07	0.09	2
	Total	0.18	0.23	2331
Tuesday Baun Mean	Male	0.23	0.26	1102
	Female	0.18	0.23	1227
	Unidentified	0.07	0.09	2
	Total	0.20	0.24	2331
Wednesday Baun Mean	Male	0.20	0.24	1102
	Female	0.15	0.18	1227
	Unidentified	0	0	2
	Total	0.17	0.21	2331
Thursday Baun Mean	Male	0.20	0.25	1102
	Female	0.16	0.21	1227
	Unidentified	0	0	2
	Total	0.18	0.23	2331
Friday Baun Mean	Male	0.16	0.22	1102
	Female	0.10	0.15	1227
	Unidentified	0.11	0.15	2
	Total	0.13	0.19	2331
Saturday Baun Mean	Male	0.10	0.16	1102
	Female	0.06	0.11	1227
	Unidentified	0.12	0.16	2
	Total	0.08	0.14	2331
Sunday Baun Mean	Male	0.11	0.17	1102
	Female	0.08	0.14	1227
	Unidentified	0.04	0.05	2
	Total	0.09	0.16	2331

APPENDIX A: TABLES CONTINUED

Table 8: Independent Samples T-Tests: Baun Fitness Center

Independent Samples T-Test: Baun Fitness Center ID Swipe Statistics						
	Sex	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2 - tailed)
Number of Baun Fitness Center ID Swipes	Male	1102	17.48	17.849	0.538	0.00*
	Female	1277	12.69	13.388	0.382	
Average Baun Fitness Center ID Swipes per Week	Male	1102	1.166	1.19	0.036	0.00*
	Female	1227	0.846	0.892	0.255	