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ASSESSMENT OF CAMPUS RECREATIONAL SPORT PROGRAMS

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THESIS

Submitted to the University of New Hampshire
In Partial Fulfillment of
the Requirements for the Degree of

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in

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ABSTRACT

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by

Eric Dorata

University of New Hampshire, May, 2018

Student development and health issues among college students are becoming a major concern for academic institutions. To address these issues, universities offer campus recreational sport programs that encourage physical activity and healthy lifestyles. There is a robust literature regarding the benefits of general campus recreation participation; however, little research has explored participants' perception of benefits related to certain campus recreation programming.

This study examined data from Intramural Sports and Sport Club participants at a northern New England university ($n = 324$). Survey questions assessed students' transferable skills and general health perceptions. Results indicated that several transferable skills and health perceptions are significantly different between genders within program types.

Findings support the need to continue researching collegiate services to ensure students receive an equal opportunity to enjoy the benefits of campus recreation programming.

Preliminary study findings and their implications for university administrators and staff will be discussed.

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Introduction

College students in America are facing unprecedented health and student development issues. Nearly half (53%) of college students nationwide report not being in good health, while 60% of students say they overwhelmed by anxiety (American College Health Association, 2017). College students also commonly experience academic failures, compromised learning environments, and impaired personal development because they struggle to maintain a healthy lifestyle and a good sleeping schedule (Hershner & Chervin, 2014). College campuses are addressing these physical and mental health issues in numerous ways. Some of these collegiate interventions include health and wellness centers (Kupchella, 2010), student accessibility services (Hong, 2015), lifetime activity classes (Clemson University, 2018) and campus recreation sport programs (Barcelona, 2002; Artinger et al., 2006; Haines & Fortman 2008, Lindsey, 2012; Lower, Turner, & Petersen, 2013; Forrester, 2015; Andre, Williams, Schwartz, & Bullard, 2017).

Campus recreation sport (CRS) programs are one of many platforms facilitating positive student development interventions for students on most American college campuses (Lower, Turner, & Petersen 2013). A robust body of campus recreation literature provides credible evidence documenting the value of participating in recreation programs (Barcelona, 2002; Artinger et al., 2006; Haines & Fortman 2008, Lindsey, 2012, Lower, Turner, & Petersen 2013, Forrester, 2015; Andre, Williams, Schwartz, & Bullard, 2017). Some of these benefits include stress reduction (Forrester, 2015; Lindsey & Sessoms, 2006), physical development (Lower, Turner & Petersen, 2013; Lindsey & Sessoms, 2006), social development (Artinger et al., 2006, Andre, Williams, Schwartz, & Bullard, 2017), and academic success (Forrester, 2015).

In this regard, this current study supplements the growing body of CRS program student development literature while exploring students' development perception among collegiate recreation sport programs. This research assessed transferable skills and general health perceptions of campus recreation sport participants. This study focused on intramural sports and sport club programs. Preliminary study findings and their implications for higher education administrators and campus recreation staff will be discussed.

Study Purpose

The cross-program assessment measured the relationship between participants in campus recreation programming and life effectiveness, general health, and academic success. This study answered the following research questions:

- 1) Is there a significant difference between the type of campus recreation programming and student development, as measured by life effectiveness, general health score, and academic success?

- 2) Is there a significant difference between male and female participants within different programming types (i.e., Sport Clubs or Intramural Sports)?

Literature Review

Student Development

Student involvement theory is based on the amount of physical and psychological energy that students devote to an experience (Astin, 1984). Students' degree of involvement may determine their development perception when experiencing a university program. In other words, student involvement associated with a collegiate program is directly related to the quality and

quantity of student engagement in that program (Astin, 1984). Subjectively, students' perception of their development may be comprised of life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985), emotional aspects (Diener and Emmons, 1984), and environmental factors (Astin, 1993). At most colleges, students have the opportunity to experience a degree of new academic and sport programs not previously experienced (Pilcher, Ginter & Sadowsky, 1997). A different environment with potentially new social, cultural, and academic demands may affect students' overall health and development. This is important for two reasons: 1) because an overwhelming percentage of students indicate not being in good health during college (American College Health Association, 2017) and 2) a college experience impacts students' wellbeing after graduation (Ray and Kafka, 2014).

University Wellness Interventions

To re- mediate these student health and development concerns, it is essential for universities to offer a multitude of opportunities that encourage physical activity and meet the interests of a diverse student body to assist in the development of healthy lifestyles (Lower, Turner, & Peterson, 2013). University student services may include wellness centers, student accessibility services, lifetime activity courses, and campus recreational sport programs. Wellness centers educate students about the negative health outcomes associated with physical inactivity (Stapleton, Taliaferro, Bulger, 2017). Student accessibility services provide services to a diverse student body because an individual with or without disabilities deserves an equal opportunity to participate in, and enjoy the benefits of, wellness programs or activities conducted by a university (U.S Department of Education, 1998). Lifetime activity courses offer some non-academic classes for students to participate in leisure experiences that may develop their identity, social relationships, and physical abilities (Beck, 1996). Campus recreation departments serve as

a comprehensive full-service resource because most departments offer physical activity programs as well as wellness programs to a diverse student population. This research suggests different university interventions support students to develop active and healthy lifestyles through out of classroom learning experiences (Kuh, 1995).

Campus Recreation Programming

Campus recreation consists of a variety of wellness-based programs and services that influence student development in a variety of ways (Barcelona, 2002; Artinger et al., 2006; Haines & Fortman 2008, Lindsey, 2012, Lower, Turner, & Petersen 2013, Forrester, 2015). For example, a study of over 33,500 students who participated in the NIRSA/NASPA Consortium Nationwide Survey indicated participating in campus recreation sport or fitness programs contributes to their time management, social community, academic performance, and a sense of community (Forrester, 2014). The study also reports campus recreation programs have a positive impact on various health and wellness outcomes (Forrester, 2014).

CRS programs are considered to be a valuable service within campus recreation departments, as validated by a longitudinal study directed by the Higher Education Research Institute (HERI) (Haines, 2001; The Ohio State University, 2003). The HERI indicated students receive the most benefits from their participation in recreational sport programs. Campus recreational sport programs may include competitive or transitional sport leagues which may have varying degrees of intensity and requirements. Some of the benefits include developing a feeling of physical well-being, reducing stress levels, and maintaining a healthy level of fitness (Haines, 2001; The Ohio State University, 2003). The results suggest campus recreational sport programs aid in the process of developing skills and healthy behaviors among students. However, one of the themes of this research is few studies conduct a comparative analysis of

campus recreational sport programs. Much of the existing research documents the general benefits from campus recreation participation. This research does not assess the extent of these benefits or the degree of which these benefits impact students from certain campus recreation programming (Andre, Williams, Schwartz & Bullard, 2017). Accurate and current data about campus recreational sport programs aids in the justification for adding personnel and resources (Hall, 2006) as well as promoting student benefits.

Demographic Differences

With regard to the evaluation of campus recreation programming, limited research explores student development among different program offerings. Lower, Turner and Petersen (2013) focused on the overall, social, intellectual, and fitness perceived benefits associated with three different campus recreation programs such as group fitness, intramural sports, and sport clubs. As a result, the findings indicate sport clubs' participants receive the greatest perceived benefit among all categories (Lower, Turner, & Petersen 2013). These results support a study by Hanies and Fortman (2008) which found that sport club participants have a significant increase in cognitive or learning outcomes following involvement. Both studies indicated significant differences between sport club and non-sport club members but did not find differences between demographics within programs. Thus far limited research investigates demographic differences related to sport club members. With that said, a study designed to assess the perceived social benefits of intramural sport participants found significant differences between males and females (Artinger et al., 2006). Artinger and a group of researchers discovered females reported significantly higher benefits compared to males in social bonding, university integration, reliable alliance, and cultural outcomes. On the contrary, Web and Forrester (2015) found no significant differences between gender while examining the affective outcomes of collegiate intramural

sport participation. These limited and conflicting results about CRS programs and gender outcomes indicates additional research needs to explore CRS programs as well as how different demographics experience these collegiate services.

Methods

Study Location and Program Description

This study was conducted at a mid-size university in New England. It included students who participated in two campus recreation programs (intramural sports and sport clubs). Intramural Sports are informal recreational sport teams, in which student participate in a variety of sports with their peers. Sport clubs are intercollegiate competition sport teams, with an emphasis on student leadership and development. Students are ultimately responsible for the operation and management of their sport club team. Sport club members differ from intramural sports because sport club members are required to pay dues, attend practices, try-out for starting positions, and are often in charge of the logistical coordination for attending and hosting competitions.

Instrument

The data collection occurred during the fall semester of 2017. Data collection involved a 15-minute online survey. A modified life effectiveness questionnaire was used to assess transferable skills of student participants. The SF-12 was used to evaluate the overall health of each survey respondent. The SF-12 measured the physical and emotional health of the campus recreation program participants. This survey instrument was developed for the Medical Outcomes Study, a multi-year study to assess survey respondents' wellbeing (QualityMetric, 2018). The life effectiveness questionnaire is an eight-factor, 24 item survey, to assess the following constructs: achievement motivation, active initiative, emotional control, intellectual

flexibility, self-confidence, social competence, task leadership, and time management (Neil, Marsh, & Richards, 2003; Flood, Gardner, & Cooper, 2009; Frauman & Waryold, 2009; McLeod & Allen-Craig, 2007). Both of these questionnaires measured various aspects of student development and health.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) conducted descriptive statistics and regression analysis to test for relationships within the study. Frequency counts and measurement of central tendency generated a combined life effectiveness and general health score for each survey respondent. Also, a regression analysis tested the relationship between the students' life effectiveness general health score, academic success, and their participation in the campus recreation programming.

Results

Demographics and Visitor Use

Of the 361 respondents who completed the survey, 226 (62.6%) were females and 135 (37.1%) were males. The percentage of female respondents was higher than the percentage of enrolled females (55% of all university students). Survey respondents' age ranged from 18 to 48 years old, with an average age of 20.06 ($SD= 2.395$). There was a fairly equal distribution of respondents between first year, third year, and fourth year. Second year students were slightly overrepresented.

With regard to campus recreation program participation, 166 (51.2%) of students participated in intramural sports and 158 (48.8%) students participated in sport clubs. The percentage of students participating in intramural sports and sport clubs was higher than the proportion of students who participate in these programs across the campus.

Table 1. Demographics and Participant Use

Variable	% or M	N
Age		
18-19	18.0%	65
20	27.7%	100
21	22.7%	82
22	19.4%	70
23 and older	12.4%	44
Class		
First Year	24.0%	87
Second Year	29.2%	106
Third Year	21.5%	78
Fourth Year	20.1%	73
Graduate	4.1%	15
Other	1.2%	4
Gender		
Females	62.6%	226
Males	37.1%	135
Campus Recreation Program		
Intramural Sports	51.2%	166
Sport Clubs	48.8%	158

Differences Between Campus Recreation Programs

- 1) Is there a significant difference between the type of programming and life effectiveness, general health score, and academic success?

Analysis of variance was used to assess differences between sport clubs and intramural sports participants' health, life effectiveness, and academic success. The only significant difference between Sport Clubs and Intramural Sports was the general health of participants. Sport Clubs participants reported significantly better general health than did Intramural Sports participants ($M = 74.77, SD = 12.10; M = 66.35, SD = 21.08$, respectively). No other significant differences were found between program groups.

Table 2. Summary of Perceived Self-Assessment Mean Difference Between Program Types

Domain	IS mean (SD) N=166	SC mean (SD) N=158	F Value	Significance
General Health Score	66.35 (21.08)	74.77 (18.15)	14.778	.000
Physical Functioning Score	93.29 (17.53)	93.82 (20.28)	.065	.800
Role Physical Score	85.39 (20.06)	86.15 (20.19)	.115	.734
Bodily Pain Score	90.66 (15.42)	88.60 (17.75)	1.240	.266
Vitality Score	55.15 (23.50)	59.17 (21.73)	2.548	.111
Social Functioning Score	81.17 (24.06)	81.96 (20.71)	.099	.753
Role Emotional Score	78.01 (25.04)	79.43 (23.61)	.275	.601
Mental Health Score	67.69 (19.22)	69.14 (18.21)	.485	.487
Overall SF-12 Score	77.20 (13.47)	79.13 (12.10)	1.829	.177

*Note: IS stands for Intramural Sports

*Note: SC stands for Sport Clubs

Intramural Sports

- 2) Is there a significant difference between male and female participants within the programming types (i.e., Intramural Sports or Sport Clubs)?

When comparing differences in health self-perceptions between male and female participants among intramural sport participants, there were numerous significant differences. Though male and female students may participate in similar or the same intramural sports teams with males, there were significant differences in their perceived self-assessment for the self-reported GPA, general health and life effectiveness items. Females students reported significantly lower scores for most health items, and two of the life effectiveness items. Only for self-reported GPA did female students report higher scores than males. For example, female students scored a lower emotional control score compared to males ($M = 3.29, SD = .91; M = 3.83, SD = .72$, respectively). In addition, female's students reported feeling more downhearted and depressed compared to males, which resulted in lower mental health score for females ($M = 63.49, SD = 18.78; M = 72.56, SD = 18.80$, respectively). Males indicated a lower self-reported GPA compared to females ($M = 3.27, SD = .42; M = 3.45, SD = .42$, respectively) (see Table 3 for a full list of items and difference).

Sport Clubs

Due to the nature of this study, there is no clear indication if the survey respondents played on co-ed teams and single gender teams. However, there were still significant differences in how females and males perceived their self-assessment of general health and life effectiveness. Female students scored a lower emotional control score compared to males ($M = 3.49, SD = .90; M = 4.03, SD = .83$, respectively). In addition, females indicated bodily pain

interfere more in their daily lives compared to men ($M = 82.21$, $SD = 18.88$; $M = 93.36$, $SD = 14.22$, respectively). Males students indicated they are less motivated to complete tasks and goals compared to females ($M = 4.29$, $SD = .57$; $M = 4.48$, $SD = .52$, respectively) (see Table 4 for a full list of items and difference).

Table 3. Summary of Genders' Perceived Self-Assessment Mean Difference Within Intramural Sports

Domain	Female (SD) N=88	Male (SD) N=77	F Value	Significance
SF-12 Overall Score	74.23 (13.98)	80.65 (12.15)	9.761	.002
Physical Functioning Score	94.54 (14.47)	91.77 (20.57)	1.002	.318
Role Physical Score	82.24 (21.16)	89.28 (18.10)	5.195	.024
Bodily Pain Score	89.48 (16.83)	92.53 (12.86)	1.66	.199
Vitality Score	50.85 (23.19)	60.19 (23.15)	6.629	.011
Social Functioning Score	75.56 (25.42)	87.33 (20.92)	10.360	.002
Role Emotional Score	73.43 (25.05)	83.27 (24.30)	6.516	.012
Mental Health Score	63.49 (18.78)	72.56 (18.80)	9.565	.002
General Health Score	64.48 (19.74)	68.24 (22.51)	1.305	.255
Life Effectiveness Overall Score	3.87 (.50)	4.00 (.39)	3.225	.074
Social Competence	3.93 (.82)	4.07 (.71)	1.307	.255
Achieve Motivation	4.39 (.56)	4.36 (.53)	.094	.760
Intellectual Flexibility	3.89 (.61)	3.93 (.55)	.203	.653
Task Leadership	3.78 (.73)	3.95 (.68)	2.283	.133
Emotional Control	3.29 (.91)	3.83 (.72)	17.612	.000
Achieve Initiative	4.10 (.66)	4.04 (.61)	.381	.538
Self Confidence	3.89 (.79)	4.20 (.58)	7.805	.006
Time Management	3.86 (.73)	3.63 (.75)	.153	.696
Self-Reported GPA	3.45 (.37)	3.27 (.42)	8.120	.005

Table 4. Summary of Genders' Perceived Self-Assessment Mean Difference Within Sport Clubs

Domain	Female (SD) N=107	Male (SD) N=49	F Value	Significance
SF-12 Overall Score	77.94 (12.32)	81.40 (11.53)	2.751	.099
General Health Score	73.22 (18.99)	77.75 (16.20)	2.089	.150
Physical Functioning Score	93.69 (20.63)	93.87 (20.11)	.003	.958
Role Physical Score	85.39 (20.20)	87.24 (21.11)	.273	.602
Bodily Pain Score	86.21 (18.88)	93.36 (14.22)	5.573	.019
Vitality Score	58.87 (21.51)	60.20 (22.77)	.123	.726
Social Functioning Score	80.37 (19.43)	84.69 (23.28)	1.462	.228
Role Emotional Score	76.86 (24.08)	84.69 (23.28)	3.727	.055
Mental Health Score	68.92 (17.45)	69.38 (20.10)	.021	.884
Life Effectiveness Overall Score	3.96 (.46)	4.00 (.56)	.303	.583
Time Management	3.67 (.66)	3.52 (.77)	1.518	.220
Social Competence	3.99 (.72)	3.96 (.83)	.036	.851
Achieve Motivation	4.48 (.52)	4.29 (.57)	4.296	.040
Intellectual Flexibility	3.95 (.51)	4.01 (.70)	.401	.527
Task Leadership	3.89 (.67)	3.95 (.73)	.295	.588
Emotional Control	3.49(.90)	4.03 (.82)	12.742	.000
Achieve Initiative	4.25 (.70)	4.20 (.79)	.186	.667
Self Confidence	3.93 (.69)	4.06 (.91)	.990	.321
Self-Reported GPA	3.39 (.39)	3.30 (.48)	1.495	.223

Discussion

This study was designed to compare certain recreational sport programs (e.g., Sport Clubs and Intramural) and assessed differences within and between sport-based programming for male and female students. Sport club programs are labeled as the interface between intramural

sports and varsity sports (Lower, Turner, & Petersen 2013). This type of programming facilitates a heightened competitive atmosphere. Unlike intramural sports, sport clubs compete against other universities' clubs during tournaments or meets. Due to the competitive nature of this programming, many sport clubs participate in vigorous training sessions (e.g., multiple times per week) to hone their skills and optimize their physical fitness. Rigorous physical activity is not only seen during the season but also during the off-season. Students can use these training sessions to enhance their fitness and create opportunities to take their mind off assignment deadlines and exams. This consistent physical activity can preserve personal development (both physical and mental) as participants progress through their academic career. Coaches may also be an important factor for students' general health development. Most university sport club programs have coaches or instructors who may be knowledgeable about the sport and could facilitate trainings to achieve general health development within participants (Lower, Turner, & Petersen 2013). Intramural teams typically do not have trained coaches available, which offers a possible explanation for the significant general health difference between intramural sports and sport clubs (Lower, Turner, & Petersen 2013). This type of structure may significantly influence the participants self-perception of their general health associated with sport club participation.

Intramural sports and sport clubs' participants reported self-perception differences between male and female members. Female intramural sport participants scored significantly lower than males in the following variables: role physical, vitality, social functioning, role emotional, mental health, emotional control, and self-confidence, whereas female sport club participants scored significantly lower in bodily pain and emotional control compared to male participants. A possible reason for these gender-based differences may be a social desirability response issue. Social desirability "refers to the fact that some respondents will answer items in a

way they believe would be most socially appropriate, regardless of their true feelings” (Worthen, White, Fan, & Sudweeks, 1999 p.172). Males might have indicated a higher self-perception compared to females because dominant cultural expectations influence their survey responses. In short, societal constructs may impede survey respondents’ capacity to express their true vulnerabilities.

The finding of this research contradicts previous research findings. For example, Artinger (2006) suggested females improve their social skills more so than males when both genders participate in intramural sports. Females obtained significantly higher social benefits compared to males in four out of six variables. These findings have important implications for practitioners because students who are emotional and socially healthy have a greater chance to adequately integrate themselves into the academic system to attain a college degree (Artinger et al., 2006). Another study assessing the affective outcome (positive and negative affect) of intramural sport participation in a collegiate setting found no significant differences between genders (Webb & Forrester, 2015). Because of these contradicting findings future research should continue to explore collegiate recreational sport outcomes in relation to demographic characteristics.

Management Implications

Recreational sport programs should address the gender differences regarding self-perception and outcomes. Understanding how males and females perceived their collegiate recreational sport participation might provide insights for managers on how to best serve the unique needs of each gender. Campus recreation professionals need to promote greater institutional understanding of the recreational sport programs on college campuses. Managers should consider how program structure, repetition level, and student empowerment opportunities may be influencing student development. For instance, designing intramural programs that

simulate a sport club structure may provide opportunities to enhance fitness levels, increase participation, and develop leadership skills among students. Also, managers should provide additional resources such as trained personnel or educational interventions to create a supportive environment for social and emotional development. Deeper understanding of CRSs' intricacies may increase institutional support for campus recreation programs, and such support will enable recreational sports departments to remain competitive with other essential institutional services.

Recommendation for Future Research

When interpreting the results, it is important to note the limitations of this research. It cannot be definitively said that all intramural teams and sport clubs were represented in the sample which may limit the study's generalizability beyond those represented in the study. Also, it is unknown if survey respondents participated in coed or single gender programs so differences may exist between program types. Furthermore, this study did not ask about the level of use among program participants.

Future research should use a sampling method that encapsulates all intramural and sport club offerings to provide a holistic depiction of the sample population. While future research should assess the role coed or single gender programs may have on program outcomes, future studies should also ask survey respondents about their depth of use which may support Astin's (1984) theory of student involvement. This theory suggests that the more involved students are, or the more CRS they participate in, the more they stand to benefit. Overall, there is a need for future research to explore the outcomes of different CRS programs to understand better how the programs benefit students and the university as a whole.

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Appendix

IRB Approval Letter

University of New Hampshire

Research Integrity Services, Service Building
51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

03-Nov-2017

Dorata, Eric
Recreation Management & Policy, Hewitt Hall
4 Library Way
Durham, NH 03824

IRB #: 6789

Study: Evaluation of Campus Recreation Programs

Approval Date: 01-Nov-2017

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. This document is available at <http://unh.edu/research/irb-application-resources>. Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson