

SENSE OF COMMUNITY IN THE CAMPUS RECREATION SETTING:  
FOSTERING COMMUNITY AS A STRATEGY FOR STUDENT RETENTION

by

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Institutions of higher education invest significant amounts of money building state-of-the-art campus recreation facilities in an environment where student fees and debt are increasing, while graduation and retention are declining. This contradictory environment places large investments at the forefront of scrutiny by higher education decision makers. However, this thesis supports the need for campus recreation centers on university campuses through recognizing the important role campus recreation centers play in building community and aiding in social integration among students. The purpose of this study was to examine the role of campus recreation in fostering a sense of community and the relationship between that sense of community and student persistence. Utilizing a mixed methods research approach from 141 student surveys at a higher education institution in the mid-Atlantic, results indicate a positive correlation between usage of campus recreation facilities and psychological sense of community in campus recreation student users. Results of this study do not support the notion that a higher psychological sense of community is related to student achievement or student persistence. However, additional research is necessary to further solidify these explore these relationships. The current study supports campus recreation as a critical aspect of the campus environment and a place where students reap a variety of benefits (e.g., physically, mentally, and socially).



SENSE OF COMMUNITY IN THE CAMPUS RECREATION SETTING:  
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To Coop

*Know that your life matters to many, so... do good work,*

*laugh every day, and press on.*

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## LIST OF ABBREVIATIONS

PSOC	Psychological Sense of Community.....	3
CSCS	Campus Sense of Community Scale.....	8
ECU	East Carolina University.....	11
SRC	Student Recreation Center.....	12
HSC	Health Sciences Complex.....	12
CRW	Campus Recreation and Wellness.....	12
GPA	Grade Point Average.....	13
SPSS	Statistical Package for the Social Sciences.....	14

## Chapter 1: Introduction

Amid rising tuition costs and drastic budget cuts, recreation facilities have received increased financial investment from institutions of higher education. The National Intramural-Recreational Sports Association (2016) facility and construction report reported an average of \$39 million was spent on campus recreation facilities in 2011. In a climate of mounting student debt, tuition rate hikes and higher student fees have accompanied increased investments. In many cases, these multi-million-dollar capital improvement investments have provided lavish spaces with state-of-the-art technology, with the goal of having students engage with each other through recreation, and thereby develop crucial social skills that aid in the collegiate integration process (Huesman, Brown, Lee, Kellogg, & Radcliffe, 2009; Tinto, 1975). Furthermore, potential extracurricular activity involvement, later defined to include campus recreation, has been identified as a factor in students' decision to attend certain institutions (Tinto, 1975). Research has indicated a positive relationship between campus recreation usage and (a) student development (Dalgarn, 2001; Forrester, 2014), (b) retention rates, and (c) social development (Hall, Scott, & Borsz, 2008). These facilities provide an environment that fosters sense of community and furthers the social integration process (Henchy, 2011).

Despite recent investments in campus community aspects, retention rates have been declining. According to American College Test (American College Test, 2015), retention rates for first-year college or university students continuing at the same public institution for their second year have decreased from 70.0% in 2004 to 64.2% in 2015. The National Student Clearinghouse Research Center (2017) found that first-time college graduation rates have fallen by 1.7% since 2013, and have declined an average of 0.675% per year, a trend expected to continue. Decreased retention and graduation rates have brought student persistence to the

forefront for institutional policymakers, educators, and administrators across the United States. In tandem with an increase in tuition costs and overall collegiate spending, state and federal governments have decreased their support for higher education institutions. The National Center for Educational Statistics (2016) reported that the cost per year to attend a four-year institution rose \$4,698 from 2005 to 2015, adjusted for inflation. In light of these contradictory factors, institutional budgets have come under increased scrutiny from stakeholders and a focus on student retention has been emphasized on university campuses.

Student integration within the social and academic structures of a higher education institution has been linked to increased persistence and overall student retention (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Tinto, 1975). For example, Kampf and Teske (2013) found that 86.1% of students involved in club sports returned to campus the following year, and other studies have tied intramural sports and intention to return to campus (Lindsey & Sessoms, 2006). Alignment of social views and feelings of belongingness associated with student integration have been shown to be a crucial part of student retention, and are key outcomes of a well-developed sense of community (Peterson, Speer, & McMillan, 2008; Tinto, 1975). Benefits of developing a strong sense of community can be observed at both the individual and communal level. Individualistic benefits of community are focused on physical and social well-being and are linked with higher levels of involvement, while communal benefits are linked with pro-social behaviors, civic participation, and overall satisfaction (Halamová, 2016). The purpose of the present study was to examine the role of campus recreation in fostering a sense of community and the relationship between that sense of community and student persistence.

The current study examines campus recreation facilities as an important environment that fosters sense of community and a critical aspect of the student persistence. Higher education

institutions have made large financial investments in the creation, expansion, and improvement of campus recreation facilities, activities, and programming in recent years, despite the increasingly limited resources. An investment in campus recreation is an investment in the development of campus community and placing an emphasis on increasing student retention through these facilities. Examining the sense of community developed through recreation facility usage can aid campus administration in understanding the role recreational opportunities at campus recreation facilities play in developing campus sense of community and impacting student persistence, further justifying the importance of campus recreation in the institutional learning environment.

Psychological sense of community (PSOC) has numerous benefits on individual participant perceptions, and communal views and engagement. In higher education settings, the benefits of sense of community have been linked to critical aspects of student integration (Tinto, 1975; Yasuda, 2009). Student integration plays a role in a student's decision to continue in higher education until degree completion (i.e. persist). In an institutional environment with increasingly limited resources, student integration and retention has become a common goal of administrators and institutional policymakers (Tinto, 1975). Campus recreation facilities provide opportunities for students to develop a sense of community and further integrate themselves within the university social and academic structures. In a qualitative study using in-depth interviews, Hall (2006) identified "sense of community" as a "central phenomenon" that emerged from participating in campus recreation (p. 43). Understanding the specific activities related to community building and the degree of community developed within campus recreation can provide justification for funding campus recreation as a critical component of the collegiate learning environment, and an integral part of student development and retention.

## **Chapter 2: Review of Literature**

The following section provides an overview of the relevant literature regarding the benefits of recreation, psychological sense of community, and student persistence. This study seeks to explore the relationship between recreation usage patterns and sense of community as well as the relationship between sense of community and student persistence.

### **Benefits of Recreation**

Participation in recreation is marked by a recreation experience that characterized by dynamic engagement during participation (Hull, Stewart, & Yi, 1992). Driver (1976) broadly defines this experience as, “the sum of a participant’s mental, spiritual, physiological, or other responses to recreation engagement” (p.163). This encompassing definition of recreation experiences provide a basis for understanding the benefits of recreation experiences.

In terms of recreation, the term “benefit” is broadly utilized when understanding the outcomes of recreation participation. According to Driver (1976), a benefit suggests an efficacy improvement in a participant’s ability to function after engaging in an activity. This improvement is further defined within physiological, psychological, and sociological aspects of post-participation outcomes. Improvements can be recognized in multiple aspects of function, including work through productivity, home through family unity, and academics through grade point average and retention.

Research posits that physical benefits from recreation participation reduce risk of chronic health conditions, sustain physical fitness, and improve health indicators (Besenyi et al., 2014; Jakes et al., 2003; Stone & Baker, 2014; Wolch et al., 2011). Previous studies have reported that recreation participation is linked to psychological benefits such as reduced stress and anxiety, increased optimism and concentration, reduced aggression, and personal fulfillment (Coleman &

Iso-Ahola, 1993 ; Fox, 1999; Taylor et al., 2004; Wankel & Berger, 1990). Socially, it has been found that benefits of recreation participation revolve largely around social inclusion and community development (Donnelly, Coakley, & Laidlaw Foundation, 2002; Fenton et al., 2017).

Social inclusion and integration is a widely-viewed outcome of participation in recreation (Bustad & Andrews, 2017; Kunstler, Thompson, & Croke, 2013). Recreation provides opportunities for participants to integrate into communities through socialization, networking, and peer group development (Axelson & Flick, 2010; Dalgarn, 2001). Previous research has determined that recreation environments provide opportunities for acceptance of cultural and socioeconomic differences (Dalgarn, 2001; Trussell & Mair, 2010). Dashper and Fletcher (2013) suggested that recreation environments, specifically sports, have been examined as a method for mitigating inequalities. These findings posit that recreation environments bridge cultural and socioeconomic boundaries that would otherwise be considered constraints for participants.

Mitigating constraints fosters an environment that can also develop meaningful community aspects in recreation users. Elements of community have included a diverse group of participants that are connected socially, have similar views, and participate in mutual activities (MacQueen et al., 2001). Schwarz and Trait (2007) found that recreation participation provides meaningful social networks and critical aspects of social capital that aid in the development of communities.

### **Psychological Sense of Community**

A sense of belonging is arguably a focal point of human psychological well-being (Peterson, Speer, & McMillan, 2008) and a foundational need (Baumeister & Leary, 1995). Community belongingness has strong roots in the social and behavioral sciences. Sarason (1974) defined PSOC through perception of others, interdependence, willingness of action towards



others, and being part of a larger structure. This individualistic view of community allows for the understanding of the unique interpersonal relationships within a group that formulates a sense of community. Aspects of PSOC have been identified throughout the PSOC literature and include safety, connection, belonging, support, and empowerment (Glynn, 1981; Hill, 1996). Expanding upon Sarason's (1974) PSOC theory, McMillan and Chavis (1986) further conceptualized PSOC into four dimensions of community: membership, influence, fulfillment of needs, and shared emotional connection.

*Membership* refers to an inherent inclusion of users within a group, and therefore, the converse, exclusion of users from a group. Furthermore, membership posits a sense of ownership, commitment, and vested interest within the nature, function, and structure of the group (Jason, Stevens, & Ram, 2015; McMillan & Chavis, 1986). *Influence* is a paradoxical dimension of community where influence is both organization controlled, and user controlled (McMillan & Chavis, 1986). Through the acknowledgement of other's needs and shared values, users develop influence over direction of the organization (McMillan & Chavis, 1986). Conversely, the organization provides influence over users through the conformity standards created inherently through membership boundaries leading to stronger community cohesion (McMillan & Chavis, 1986). *Fulfillment of needs* is rooted within intrinsic motivation to be a part of a larger group. Through fulfilling the needs of its members, organizations reward the members for being part of the organization (McMillan & Chavis, 1986). Furthermore, community is strengthened when members can fulfill the needs of other members while also fulfilling their own needs (McMillan & Chavis, 1986). *Shared emotional connection* per McMillan and Chavis (1986) is rooted in a shared history, space, or experiences. Although this history does not need to be experienced together, it must conclude in a shared value throughout

the members leading to further influence and fulfillment of needs (Boyd & Nowell, 2013; McMillan & Chavis, 1986).

These sense of community dimensions have been examined extensively and the results indicate positive relationships and impacts on community development. Within the context of recreational sports, Legg, Wells, Newland and Tanner (2017) used semi-structured interviews and found “social relations developed within league tennis were potentially part of a larger feeling of community” (p. 44). In an urban park setting, an examination utilizing survey data and in-depth interviews found that PSOC is higher in park users than non-users, and that those living closest to the park had higher PSOC (Gómez, Baur, Hill, & Georgiev, 2015). In some cases, the impact of park usage parallel benefits found within college campus recreation.

PSOC examination on university campuses have suggested meaningful benefits to those involved in campus communities. An examination of intramural sports within college campuses found that accompanied with increased level of intramural sport participation, was an increase in student sense of community (Phipps, Cooper, Shores, Williams, & Mize, 2015). Elkins, Forrester, and Noel-Elkins (2011) found a predictive relationship between campus recreation involvement and overall sense of campus community. Beyond activity-based campus community, PSOC has been examined on university campuses as community developed through places around campus. Research suggests that overall sense of campus community aspects are fostered within campus recreation facilities (Dalgarn, 2001.; Huesman, Brown, Lee, Kellogg, & Radcliffe, 2009). Additional studies have indicated a positive relationship exists between campus recreation usage and student development (Dalgarn, 2001), retention rates (Lindsey & Sessoms, 2006), and social development (Hall, Scott, & Borsz, 2008).

Although aspects of PSOC have been largely measured through the four dimensions outlined by McMillan and Chavis (1986), other measures have been established within this framework. The four-dimensional framework is the mostly widely used conceptualization, however issues with respect to operationalizing the concepts and consistency of findings regarding the PSOC structure (Loomis & Wright, 2018) have caused others to consider use of items that are more specific to the context under study, than a general community measure (Gómez et al., 2015; Legg et al., 2017). For the university campus context, the Campus Sense of Community Scale (CSCS) was developed, which was grounded in McMillan and Chavis' dimensions of PSOC (Warner, Shapiro, Dixon, Ridinger, & Harrison, 2011). The CSCS allows for university related outcomes of sense of community. Warner et al. (2011) extensively tested the CSCS and found it to be a significantly reliable and valid scale for the measure of PSOC.

### **Student Persistence**

Understanding why students choose to continue in higher education and how an academic institution can retain students has been an area of concern for academic institutional policy makers and stakeholders. A key step in conceptualizing student persistence is defining retention and persistence. Although these are often used interchangeably, persistence does not equate to retention. Student retention is defined by Siedman et al. (2012) as "... the ability of an institution to retain a student from admission through graduation" (p. 16), whereas student persistence is defined as "... the desire and action of a student to stay within the system of higher education from beginning year through degree completion" (p. 16). Defining persistence in this manner removes the institutional focus inherent in student retention and instead places the emphasis on the individual. Furthermore, for the purpose of this study, student persistence will be specifically defined as the desire and action of a student to stay within the specific institution through degree

completion. This definition provides the institutional context of student retention while maintaining the student-oriented aspects of student persistence.

Although persistence is a complex phenomenon that incorporates numerous variables in students' lives such as support, finance, and integration, early theories on student drop out emphasize the interaction between the student and the educational environment and its impact on student persistence (Seidman, et al., 2012; Spady, 1971). Spady (1971) posits the alignment of environmental norms of an institution with the student's values and attributes will increase in the willingness to persist in higher education.

Tinto (1975) expanded Spady's model of student persistence to incorporate the inclusion of commitment to the institution and graduation as essential elements of student integration, both academically and socially. Tinto has posited that student integration within the social and academic structure of an institution is integral to a student's willingness to persist. Student integration is encompassed by the incorporation of alignment of social views (Spady, 1971; Tinto, 1975), involvement (Astin, 1977), inclusion and interaction (Thomas, 2000; Spady, 1971; Tinto, 1975), and acceptance of differences (Tinto, 1975) in the educational environment. Research identifies that student integration is especially important in freshman students persisting to their sophomore year (Seidman, 2012; Tinto, 1975; 1999). Early institutional interventions for students at risk of attrition have significant impacts on overall student integration and therefore student persistence and retention (Seidman, 2012).

Student persistence, as defined by Siedman (2012), places an emphasis on the individual student rather than the educational institution. This individualism supports the works of Spady (1971) and Tinto (1975) in placing the student at the forefront of persistence. Persistence theories recognize the importance of the interaction between student and educational environment.

Expanding upon these theories, alignment of social views, involvement, inclusion and interaction, and acceptance of differences culminate in what Tinto describes as student integration (Astin, 1977; Thomas, 2000; Spady, 1971; Tinto, 1975). Student integration, as a driver of student persistence, is an important aspect of understanding environments that foster student persistence.

The elements of student integration identified by Tinto (1975; 1993) align with the outcomes of PSOC identified by McMillan and Chavis (1986). This alignment allows for the development of a framework that identifies the relationship between PSOC and student integration (Figure 1). Extensive literature has related aspects of Tinto’s model of student integration to student persistence (Astin, 1977; Seidman, 2012), and this can be extrapolated to incorporate PSOC’s relationship to student persistence. The alignment of these aspects allows for the examination of PSOC to be applied to the student integration process. Furthermore, students successfully integrated into the educational and social structures of higher education have a higher willingness to persist. This study focuses primarily on the student’s integration into the social structures of higher education through community.

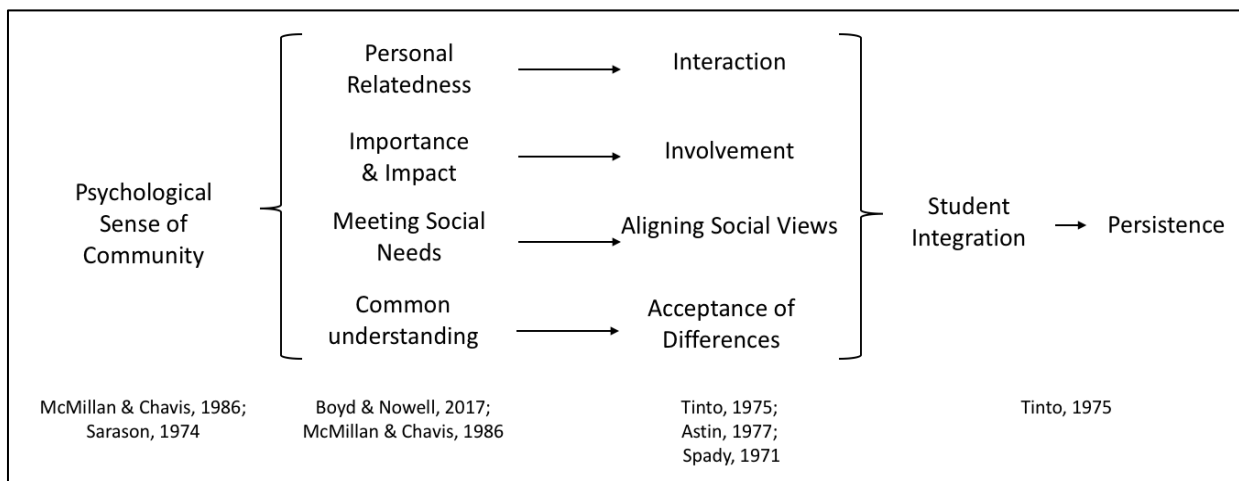


Figure 1. Developed framework of PSOC and student persistence. This framework exemplifies the alignment of the four dimensions of PSOC and the student integration process.

### **Chapter 3: Research Methods**

This study examines the relationship between campus recreation in fostering a sense of community and the relationship between that sense of community and student persistence employing a concurrent nested mixed-method design. This study was prominently driven by quantitative measures with supporting qualitative measures. Qualitative measures in this study are majorly addressing the benefits of campus recreation perceived by users, and corroborating the McMillan and Chavis dimensions of PSOC. The intent of this study was to determine if campus recreation users display a higher sense of community, and therefore, higher tendencies for persistence. To date, extensive literature on the impacts of campus recreation on student attrition and achievement exists. Current literature has also examined the role of sense of community and campus recreation on the college student integration process. Exploring the relationship between sense of community developed through campus recreation and student persistence, however, reveals a gap in current literature. The objectives of this research are to:

1. Identify if a relationship exists between frequency of campus recreation usage and psychological sense of community, and if so, what is the relative impact on PSOC?
2. Determine if psychological sense of community associated with academic achievement, and if so, what is the relative impact on academic achievement?
3. Identify if psychological sense of community developed through campus recreation participation related to student persistence, and if so, what is the relative impact on student persistence?

The following section provides an overview of the setting, participants, instrumentation and analysis for the study.

## Setting

East Carolina University (ECU) is an accredited institution within the University of North Carolina system in eastern North Carolina. ECU is the sole UNC-system university in eastern North Carolina with a population of nearly 29,000 students and an 18 to 1 student-to-faculty ratio in 2017 (Measures of Success, 2018). Ethnic minorities make up 26% of undergraduate and 20% of graduate students. Women account for 59% of the student population while men account for 31%. 43% of degree-seeking students at ECU are enrolled in a STEM or healthcare program (Measures of Success, 2018).

ECU's campus in Greenville, North Carolina, is home to two campus recreation facilities, the Student Recreation Center (SRC) and the Health Sciences Complex (HSC), with the latter completed in 2017. These facilities include multiple indoor sports courts including basketball and racquetball, group fitness studios, an indoor walking and running track, cardio decks, and weight rooms.

Beyond these two facilities, ECU maintains two outdoor recreation areas that include baseball and softball fields, soccer and football fields, a high-ropes course, and an 18-hole disc golf course. Services provided by ECU Campus Recreation and Wellness (CRW), the overarching organization responsible for campus recreation, include wellness assessments, personal training, and group fitness, and are complemented by the work of the adventure center. The Adventure Center provides opportunities for students to experience outdoor recreation through structured programming, as well as rent recreation gear for their own experiences. Student fees for on-campus students account for a sizable portion of the funding structure for CRW facilities, activities, and programming.

## **Participants**

Survey enrollment was conducted in two phases due to challenges associated with the initial collection phase. The first phase was a systematic random intercept of every third student user entering the SRC. The second phase was a widely distributed online survey. The targeted population within this study were undergraduate students attending ECU.

**Phase One.** The main recreation facility, the SRC, is located on ECU's main campus and used mostly by ECU students. A systematic random approach was utilized to approach students entering the CRW facility. Every third student entering the SRC was intercepted, and asked for consent to participate in the study. If consent was given, the participant was asked to complete the Qualtrics survey on an iPad provided by the researcher. Random intercepts were conducted over one week at varying times of SRC operating hours to ensure a variety of users.

**Phase Two.** After intercepts were completed the same survey utilized in phase one was distributed to two separate populations within ECU's student body. First, the online survey was distributed to all students currently enrolled in ECU's Recreation and Leisure Studies program ( $n=401$ ). Second, an online survey link was distributed to a randomly generated list of student users of the Student Recreation Center ( $n=199$ ). Three follow up email reminders were sent to all online participants 5, 7, and 10 days after initial survey distribution. Research indicates that incentivizing responses, specifically with randomized lottery, increases response rate for initial contact as well as follow-up contacts (Kalantar & Talley, 1999). Following this method, a random drawing for one of five \$50 Amazon gift cards through voluntarily provided emails was utilized to increase survey recruitment throughout all distribution methods.



## **Instrumentation**

The data was collected using a 23-item survey (APPENDIX B) through the Qualtrics survey engine provided by East Carolina University. The survey instrument is composed of five sections: (a) student facility usage, (b) perceived sense of community, (c) persistence, (d) institutional status, and (e) general demographics of the participants.

Usage patterns were measured utilizing multiple choice questions to self-report usage of facilities and services. Interval data were collected on specific usage amounts per week. PSOC was measured using an adaptation of the CSCS constructed by Warner et al. (2011). Respondents were asked to rate their response to 6 statements on a Likert-scale from 1 (completely disagree) to 5 (completely agree). Persistence was measured dichotomously through the response to the following statement, “Do you plan to continue at this institution through graduation?” Institutional status was measured utilizing multiple choice questions to self-report class. Academic achievement was operationalized as grade point average (GPA). Demographics were measured in a similar manner that ECU collects demographic measurement.

Lastly, one short response question will be asked to gain a better understanding of the participant’s views on campus recreation and wellness, community, and higher education to provide a brief qualitative analysis to complement the quantitative results.

## **Analysis**

**Quantitative Data.** Data were managed and analyzed using IBM’s Statistical Package for Social Sciences (SPSS) version 24.0. Initial descriptive analyses, including Q-Q plotting, were performed to determine data distribution and consistency. Normality was analyzed using Kolmogorov-Smirnov test of normality, and then confirmed with Shapiro-Wilks test of

normality; to address normality concerns non-parametric statistics were used in data analysis.

The independent and dependent variables for the research objectives are depicted in Table 1.

Table 1

*List of research objectives and their associated variables and statistical analyses.*

Research Objective	I.V.	D.V.
1	Usage	Mean Sense of Community
2	Mean Sense of Community	GPA
3	Persistence	Mean Sense of Community

The following hypotheses were tested to address the research objectives of this study:

H1.1: There is a statistically significant correlation between frequency of campus recreation usage and mean sense of community scores.

H2: There is a statistically significant correlation between mean sense of community scores and grade point average.

H3: Students reporting a willingness to persist in higher education will display a statistically significantly higher perceived psychological sense of community than students reporting an unwillingness to persist in higher education.

After confirmation of the associations in the first objective, a Mann-Whitney U test testing the following hypothesis was used to further understand the relationship between frequency of campus recreation usage and mean PSOC scores.:

H1.2: Students reporting a frequency of usage greater than or equal to four times per week will display a statistically significantly higher perceived psychological sense of community than student reporting a frequency of usage less than four times per week.

This delineation of frequency of usage as high and low with the critical frequency being four times per week is supported by the works of Forrester (2014).

**Qualitative Data.** A thematic analysis was conducted on the responses recorded from the open-ended question. Responses were analyzed for themes from Driver's benefits of recreation participation; (a) physical, (b) psychological, and (c) social benefits. Initially, all responses were placed into word processing software. Keywords and phrases that are associated with Driver's benefit categories were searched for within each response. Responses were then analyzed to identify which benefits were being represented the most. Categories were then ranked by order of frequency in responses.

After confirmation that student users were receiving benefits from campus recreation usage. A second thematic analysis was conducted based upon the four dimensions of PSOC identified by McMillan and Chavis; (a) membership, (b) influence, (c) fulfillment of needs, and (d) shared emotional connection. Keywords and phrases that are associated with the dimensions of PSOC were searched for within each response. Responses were then analyzed to identify which dimensions of PSOC were most prominent within the open-ended responses. Dimensions were then ranked by order of frequency in responses.

## Chapter 4: Results

This study examined the relationships between campus recreation usage and PSOC, and PSOC and academic achievement operationalized as GPA, and the impact of PSOC of student persistence in higher education.

### Data Screening

The normal distribution of usage, GPA, and calculated mean PSOC were questionable after initial Q-Q plotting. Kolmogorov-Smirnov and Shapiro-Wilks tests were run to test normality. All tested variables (e.g., frequency of usage, mean PSOC, and GPA) have significant test statistics ( $p < 0.001$ ) for both normality tests indicating that the data is not normally distributed and non-parametric tests were used accordingly (Table 2).

Table 2

*Results of normality tests for frequency of usage, GPA, and mean PSOC.*

Variable	<u>Kolmogorov-Smirnov</u>			<u>Wilks-Shapiro</u>		
	<i>D</i>	<i>df</i>	Sig.	<i>W</i>	<i>df</i>	Sig.
Usage Per Week	0.12	137	<0.001	0.92	137	<0.001
GPA	0.14	137	<0.001	0.82	137	<0.001
Mean PSOC	0.14	137	<0.001	0.95	137	<0.001

### Sample Description

After completion of phase one of data collection, significant discrepancies were noted within the data that were being collected. One primary concern with Phase 1 of data collection was observed within the response rate of intercepts. A total of 62 students were intercepted with only 20 students agreeing to participate in the survey resulting in a 32% response rate. The demographic make-up of respondents was another challenge with phase one. Females were the

vast majority of respondents with 90% of responses collected during intercepts being female. Furthermore, only one non-white student was willing to participate in the survey resulting in only 5% of the data collected from intercepts identifying as ethnic minorities. Lastly, identifying student users of the SRC to intercept resulted in no representation for non-traditional students and led to a small distribution of ages among intercepted respondents ( $M=21$ ;  $SD=1.54$ )

Phase two of data collection aided in addressing the challenges from phase one. For phase two of data collection a list of Recreation and Leisure Studies students was provided by ECU's advising center ( $n=401$ ) and a list of student users of the on-campus Student Recreation Center ( $n=199$ ) was provided by CRW staff. Of the 600 students contacted about online survey enrollment, 124 students successfully enrolled in the study representing a 20.67% response rate for online surveys.

Throughout both phases of data collection, a total of 144 survey responses were collected resulting in a 21.75% response rate. Of those 144 surveys, 141 were completed and usable within the study parameters. Exclusion criteria included incomplete PSOC, GPA, or persistence sections of the survey, and non-student responses.

Demographic data were collected from all participants including age, gender, ethnicity, and year in school. The sample age ranged from 18 to 48 with an average age of 22 ( $SD=3.93$ ). Almost three quarters of the participants identified as female, which does not align well with the student body at ECU. The majority of the participants were undergraduate students with the highest represented class being seniors (45.7%) and decreasing in representation per class with freshman being the least represented class.

Only 11.3% of participants indicated they were African American or Black with the overwhelming majority indicated being white (78.7%). Most respondents indicated being white

or Caucasian, with the percentage of ethnic minorities for undergraduate and graduate students being similar to the student body at ECU (Table 3).

Table 3

*Percentage of ethnic minorities of this study compared with percentage of ethnic minorities of ECU.*

Class	Study (n=141)	ECU <sup>a</sup> (n=29,131)
Undergraduate	21.1%	26%
Graduate	19.2%	20%

<sup>a</sup> Measures of Success, 2018

### Qualitative Findings

Each survey included one qualitative question asking respondents, “What does campus recreation mean to you?” This question’s aim is twofold. First, this question is aimed at deriving the perceived benefits of campus recreation. Secondly, to aid in understanding the meaning of the communities developed through campus recreation, and to derive dimensions of community developed by McMillan and Chavis in campus recreation. Of the 141 surveys collected, 98 provided responses to the qualitative questions.

**Benefits of Recreation.** To understand the benefits users of campus recreation were experiencing, 75 keywords and phrases, 25 per benefit category, were identified (APPENDIX C). Key words and phrases included *fitness, active, exercise, cope, stress, relax, community, friends, comfortable, and opportunity*. Once key words were identified each category of recreation benefit was ranked based on the frequency of the search terms within them. Table 4 provides a ranking of the three benefit categories as well as some examples of the search terms.

Table 4

*Three categories of recreation benefits, their respective frequencies and search terms (n=98).*

Category of Benefit	<i>f</i>	Search Terms
Physical	66	Fitness, Active, Workout, Health/Healthy, Exercise, Equipment, Well-Being
Social	48	Involved, Opportunity, Together/Togetherness, Community, Group, Interaction, Comfortable
Psychological	26	Cope, Stress, Relax/Relaxation, Escape, Emotional, Confidence, Blow Off Steam, Outlet, Play, Feel Better

The most common aspect of the qualitative responses was engrained in the physical benefits of recreation. Just under 70% of respondents indicated that campus recreation and wellness offers some sort of physical benefit ( $n=66$ ). One respondent indicated that “having the opportunity to do what you want in a healthy manner whether it be by yourself, with a partner, or a group of friends. It is important for your overall dimensions of wellness.” Responses such as these were typical across the qualitative responses with most of the responses indicating health, fitness, physical activity, and working out as a main source of campus recreation meaning.

The social aspects of recreation were broadly identified within the qualitative results. Forty-eight respondents indicated aspects of campus recreation that are socially related. Social identifiers included the words: social, community, family, interaction, opportunity, friends, togetherness, groups, safety, and involvement. The community established through campus recreation is prominent through responses such as, “Campus recreation and wellness means having a sense of home and togetherness in a community.” Numerous responses indicated that

campus recreation meaning strong community, opportunity to engage and be involved with others.

Psychological benefits were specifically mentioned by 26 respondents (26.5%). The psychological benefits of campus recreation usage were largely stemmed from relieving stress and escaping monotony of day-to-day obligations. One response stated, “The Campus Rec & Wellness provides me with an escape from stress and school work by bettering myself.” However, other respondents indicated, “the student recreation center has been a place where I can find myself, become myself, and be myself.” The key words “mental health” were the third most commonly written words students used depicting psychological benefits underlying the words “relax” and “stress relief.”

All responses had evidence of at least one of the three themes within the qualitative responses. Over half of all responses provided evidence of at least two of the three themes with numerous responses identifying all three themes encompassing the meaning of campus recreation.

**PSOC in Campus Recreation.** To extrapolate the four dimensions of community in the meaning of campus recreation, 40 keywords and phrases, 10 per dimension, were identified (APPENDIX D). Some key words were repeated throughout different dimensions, as some words such as *together* and *involved* can imply more than one dimension depending on context. Key words and phrases included *community, social, importance, engage, opportunity, needs, together, and connecting*. After keywords and phrases were identified within responses, dimensions of PSOC were ranked based on frequency of the search terms. Table 5 provides a ranking of the dimensions as well as some examples of the search terms.



Table 5

*Ranked dimensions of PSOC by frequency and examples of search terms (n=88).*

Dimension	<i>f</i>	Search Terms
Fulfillment of Needs	71	Opportunity, Resources, Needs, Manage, Provide
Membership	46	Social, Community, Friends, Welcoming, Together
Shared Emotional Connection	17	Similar, Goals, Connection, Alongside, Compete, Home
Influence	9	Input, Control, Importance, Involved, Engage, Aim

All dimensions of PSOC were recognized within the responses to what campus recreation means to the user. Although 96 responses were recorded for this question, only 88 of the responses indicated at least one aspect of PSOC. Majority responses indicated two or more aspects of PSOC. One respondent stated, “a community that looks out for one another and offers opportunities to stay healthy and make friends while doing it.” This statement encapsulates all four dimensions of PSOC well. It offers membership through community, fulfillment of needs through opportunity, shared emotional connection through making friends, and influence through, “looking out for one another.” Responses reporting opportunity, community, and friends were typical across qualitative response and many encompass

The most common identified dimension of PSOC was *fulfillment of needs* with 80% of responses including at least one keyword related to the dimension. Fulfillment of needs reverberated the qualitative benefits of recreation findings. The clear majority of campus recreation users are having needs met through campus recreation. Physical needs were largely the needs reported as being fulfilled through campus recreation. Responses such as, “a place to stay fit,” and “a place to work out and provide opportunities I otherwise would not have,” were

common throughout the qualitative responses and clearly indicate physical needs being met through campus recreation. The second most common dimension identified was membership with over half of responses incorporating aspects of membership. Many of the responses incorporating membership related to togetherness, feeling welcomed, and friends.

The two least common dimensions of PSOC identified were shared emotional connection, and influence, respectively. When these dimensions were present in responses, they were often associated with other aspects of community. For instance, one respondent stated, “It is good to know that other people are working out alongside with you.” This response implies multiple dimensions of PSOC. Membership through the implied community and shared emotional connection through experiencing the same workout and activity. Therefore, there is some limitation in identifying keywords as relating to the dimensions of PSOC, as they are intertwined with each other. Although, all aspects were not represented evenly throughout the responses, many of the responses provided support for the dimensions of PSOC within campus recreation usage.

### **Research Objectives**

The average PSOC score was 3.90 on a 5-point Likert scale ( $SD=0.68$ ). Sophomores reported the highest mean levels of PSOC with an average of 4.21 ( $SD=0.53$ ) followed closely by freshmen with a mean PSOC score of 4.13 ( $SD=0.56$ ). Interestingly, graduate students displayed the lowest level of average PSOC as shown in Table 6.

Table 6

*Mean PSOC scores by class.*

Class	<i>M</i>	<i>n</i>	<i>SD</i>
Freshman	4.13	5	0.56
Sophomore	4.21	16	0.53
Junior	3.95	28	0.85
Senior	3.85	64	0.66
Graduate	3.75	27	0.65

**Usage and PSOC.** Research Question 1, “Is campus recreation participation associated with psychological sense of community,” was addressed using a Spearman’s rank-order correlation due to the normality concerns during the initial analysis. Results indicate a weak but statistically significant correlation between frequency of campus recreation facility usage and mean PSOC ( $r_s=0.200, p=0.018$ ). Frequency of usage ranged from 0 times per week to 14 times per week with a mean of 3.55 time per week ( $SD=2.79$ ).

After confirmation of association, analysis of the relationship between frequency of usage and PSOC shifted to further understanding if higher frequency of usage resulted in statistically significantly higher levels of PSOC. A Mann-Whitney U test was conducted to test the hypothesis, “Students reporting a frequency of usage greater than or equal to four times per week will display a statistically significantly higher perceived psychological sense of community than student reporting a frequency of usage less than four times per week.” Results suggest students who reported a high frequency of campus recreation usage show significantly higher levels of PSOC ( $U=1986, p=0.044$ ).

**PSOC and Academic Achievement.** To address Research Question 2, “Is psychological sense of community associated with academic achievement,” a Spearman’s rank-order

correlation was utilized. Academic achievement was operationalized as GPA, with the average GPA being 3.23 ( $SD=0.61$ ). Results of the correlation analysis indicate that there is no statistically significant correlation between PSOC and GPA at the 95% confidence interval ( $r_s=0.00; p=0.985$ ).

**PSOC and Student Persistence.** Research Question 3, “Does the psychological sense of community developed through campus recreation participation impact student persistence,” was addressed utilizing a Mann-Whitney U test. The analysis was rooted in testing the hypothesis, “Students reporting a willingness to persist in higher education will display a statistically significantly higher perceived psychological sense of community than students reporting an unwillingness to persist in higher education.” At the 95% confidence interval, results accept the null hypothesis and do not support higher levels of PSOC aiding student persistence ( $U=744.00; p=0.586$ ).

## Chapter 5: Discussion

The purpose of this study was to examine the role of campus recreation in fostering a sense of community and the relationship between that sense of community and student persistence. The findings of this study support certain aspects of the literature and run contrary to others. The benefits derived from recreation put forward by Driver (1976) are represented in the qualitative findings. For instance, when asked about what campus recreation meant to them, one respondent stated, “it means being healthy, active, and stress free, with my friends and peers.” This statement shows the physical, psychological, and social benefits that correspond to utilizing campus recreation facilities. Physical benefits of campus recreation usage have been corroborated in this study by over two thirds of respondents reporting that health and fitness is at least one aspect of what campus recreation means to them. Qualitative responses indicate that psychological benefits go beyond simply escaping and relieving stress and towards deeper meaning. These responses identify campus recreation settings as a place where users can better identify intrapersonal meaning. The social benefits of campus recreation usage are largely rooted in the community that is formed through recreation. Social benefits were often cited through togetherness, connecting with peers, opportunities otherwise unavailable, and meeting needs. Community within campus recreation was largely corroborated through the quantitative data.

Responses further suggest that the focus of the meaning of campus recreation facilities does not revolve around the specific activities that are engaged in at those places, but rather the connection that is created at those spaces. Most of the statements regarding meaning of campus recreation emphasize that it is a space or place and do not mention a specific activity that occurs in that space. This can further the notion that having a space rather than an arbitrary activity is at the forefront of user benefit and the activity itself is a secondary concern.

These results support the impact of campus recreation on the campus community. Campus recreation provides a space to develop a community with peers. This connection can be an integral part of the social integration into higher education (Tinto, 1975). However, community goes further and provides a network of social support structures that allow for students to persist when facing challenge. This is corroborated by qualitative responses such as, “[campus recreation] is a community that looks out for one another and offers opportunities to stay healthy and make friends while doing it.” These indicate a support structure of reciprocal trust that is found in campus recreation.

### **Campus Community**

This study complements the findings of Elkins, Forrester, and Noël-Elkins (2011), Huesman, Brown, Lee, Kellogg, and Radcliffe (2009), and Dalgarn (2001) that suggest involvement in campus recreation leads to higher overall sense of community. The current study found perceived PSOC is high overall. ECU, much like many other higher education institutions, offers numerous extracurricular activities for students to engage in. While not tested in the current study, it is likely that the high levels of overall PSOC could be related to other activities engaged in by students, such as sporting events (Warner & Dixon, 2013). However, the notion that higher education institutions exhibit overall higher PSOC should further the importance of the relationship identified between frequency of usage and PSOC within this study. Although the correlation is weak, in an environment where PSOC is high, frequency of campus recreation use has a statistically significant relationship with PSOC.

### **Academic Performance, Persistence, and PSOC**

Academic performance, as much as persistence, is of utmost concern to stakeholders in higher education (e.g., include administration, alumni, parents). The findings of this study do not

support the majority of the literature that says student development and academic success is an outcome of campus recreation, sense of community, and involvement (Astin, 1977; Dalgarn, 2001; Lindsey & Sessoms, 2006). Although these results run contrary to many of the findings of other studies on student persistence, each higher education institution has a unique set of attributes that diversifies their student body. PSOC at ECU is relatively high whether students utilize campus recreation facilities or not, and the majority of respondents chose a willingness to continue in higher education. This poses a large issue with student persistence as a whole. Student persistence is a momentary measure. However, this is not to say that PSOC is unrelated to student persistence. Although, statistically it was not supported, the high levels of PSOC at ECU and the overwhelming majority of students willing to persist in higher education indicates that there could be a possible connection between these two elements of student life.

The overall mean GPA, a measure of academic achievement and success, in this study is relatively high with minimal variability, which is mirrored in the overall PSOC in this study making it difficult to deduce the relationship between the two. Furthermore, with campus recreation usage frequency being quite variable, it is difficult to relate academic success to campus recreation usage frequency. Not being able to make this step and identify these crucial relationships to student success makes it improbable that support for academic performance is present in this study. However, it should be noted that this study viewed overall PSOC for campus recreation users. Activity- or program-based PSOC, such as programming provided by the Adventure Center, could provide stronger sense of PSOC providing evidence for key support structures in academic success.

Academic integration through success has been identified as one of the keystones for student persistence as shown in Tinto's (1976) seminal piece on student retention, however, this

research does not support the relationship between academic success and student persistence. Nor do these findings support the relationships identified by Astin (1977) and Spady (1971) that involvement and communal integration support a student's willingness to persist in higher education. Without the crucial aspects of student persistence identified by Tinto (1976) this study cannot make the connection between PSOC and student persistence with these findings.

### **Limitations**

Several limitations were identified throughout the process of implementing this study. Limitations have been identified within the study design, specifically the instrumentation and measurement, and the methodology of data collection. The methodology and data collection are the primary limitations, which led to a lack of data collected, and therefore, a limit to the impact of these results. The original systematic random sampling of individuals entering the East Carolina University Student Recreation Center was met with two main limitations. First, enrollment via intercept was more challenging than expected with a successful completion rate of 32%. Secondly, the timing of the intercepts and supplemental online survey led to a low response rate overall, and an inaccurate demographic makeup of users.

The demographic that was being reached through the intercepts was not an accurate depiction of the study population, primarily due to the target population. This study examines persistence in higher education and this requires those enrolled to be students of the university and therefore analyzes the sense of community developed in students that use campus recreation facilities. However, identifying student users prior to intercept removed the potential for non-traditional students to be included within the study. The demographic makeup that was primarily reached through the intercepts were white females closely followed by white males with only



one African American. This is not representative of the student population at East Carolina University as a whole, nor the population of Student Recreation and Wellness users.

To supplement the intercept data, an online survey was distributed to a list of student users of the Student Recreation Center and Recreation and Leisure Studies students. However, the timing of this distribution came after students finished their spring semester and summer session classes had just begun. The timing of the distribution left a lower response rate than desired. Furthermore, this change in methodology has significant impacts for generalizability and impact of the results. These results are only generalizable to student users of the Student Recreation Center at East Carolina University, not the overall users of Campus Recreation and Wellness services, which was the original targeted population. Therefore, the results identified within this study can only be utilized and analyzed in the frame of the SRC. Furthermore, by analyzing overall SRC PSOC, measuring the PSOC created through small groups or activity-based communities is limited. Placing an emphasis on the community developed through individual activities is an aspect of campus recreation that needs to be further explored.

Limitations of the instrumentation are largely related to measuring student persistence. In this study, student persistence was measured dichotomously. At the time of survey completion, students were actively engaging in academic work and overall reported a willingness to continue at East Carolina University until degree completion. Student persistence is not a simple concept and measuring persistence in a dichotomous way removes the complexity of persistence. A better examination of persistence would be a longitudinal study that measures persistence throughout a student's higher education experience.

## **Future Research**

Future research aiming to study sense of community in campus recreation and student persistence should consider focusing on longitudinal studies to emphasize student persistence as a tangible and complex variable that can best be measured by incorporating the time element. Furthermore, student persistence, specifically the student integration process, often occurs within the first year of higher education. Longitudinal studies, to best understand student integration and how it pertains to student persistence, could focus primarily on incoming classes.

Utilizing qualitatively-driven methods could aid in better understanding the student integration process, and student persistence. Qualitative-focused mixed method approaches, would also be beneficial in determining the true meaning of community in campus recreation to students and help corroborate findings pertaining to the benefits of campus recreation and the dimensions of PSOC. Participant observations could aid in understanding the complexity of PSOC in campus recreation. Specifically, full participant observations could provide a better understanding of the community that is developed within individual activities and programs.

Future studies should consider including focus groups, as well as quantitative data collection from samples of student who have not persisted in higher education (i.e. dropped out). These studies focusing on non-persistence could provide further insight into the decision making of students that do not persist in higher education. Furthermore, future research should consider utilizing samples from students that do not use campus recreation facilities. If an incoming class is utilized, an experimental design could be implemented therefore controlling for campus recreation usage.

Focusing on understanding the connection between PSOC and student integration, a vital stepping stone in connection PSOC to student persistence. Without solidifying this connection, it is difficult to connect PSOC developed in campus recreation to student persistence and retention.

## **Conclusion**

The current analysis suggests that campus recreation usage is associated with perceived PSOC even in environments where PSOC is relatively high.. Although associations between PSOC and academic achievement as well as student persistence were not supported, this research still has practical implication for higher education institutions. Outside of student persistence and academic achievement, users of campus recreation facilities are perceiving benefits from their usage. Physical and mental health benefits along with development of critical support systems are some of the benefits derived from campus recreation usage and supported in this study. This study adds to the literature addressing PSOC in campus recreation and supports the need for campus recreation in the higher education setting. The community developed in campus recreation, although not supported within this study to be associated with student persistence or academic achievement, should not be overlooked as an important aspect of a student's higher education career. This research advocates for the importance of campus recreation in the higher education system by identifying the benefits being derived from usage, and acknowledging the relationship between usage and community. Future research aimed at identifying the impact of campus recreation usage on student integration utilizing alternative measures can further the findings of this study and provide crucial relationships associating PSOC to student persistence.

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## APPENDIX A: IRB EXEMPT APPROVAL CORRESPONDENCE

RX: Your Exempt study has been approved

umcirb@ecu.edu

Wed 05/02/2018 10:04 AM

To: Pilgreen, Daniel Glyn <PILGREEND11@students.ecu.edu>;



### EAST CAROLINA UNIVERSITY

#### University & Medical Center Institutional Review Board

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### Notification of Exempt Certification

From: Social/Behavioral IRB  
To: [Daniel Pilgreen](#)  
CC: [Paige Viren](#)  
Date: 5/2/2018  
Re: [UMCIRB 18-000921](#)  
Campus Recreation and Student Persistence

I am pleased to inform you that your research submission has been certified as exempt on 5/1/2018. This study is eligible for Exempt Certification under category #2.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

## APPENDIX B: SURVEY INSTRUMENT

### Informed Consent

You have been identified as a student who is intending to use one of East Carolina University's Campus Recreation and Wellness facilities or services. To better understand the sense of community among Campus Recreation and Wellness users, you have been asked to participate in this survey.

We appreciate you taking the time to respond to this survey, it should only take about 2 minutes. All responses are voluntary and anonymous. In order to best analyze the information gained through this survey, your responses will be combined and analyzed as aggregates, not the individual.

There are minimal risks involved in participating in this survey. The primary risk of harm is the impdence upon your current use of the Campus Recreation and Wellness facilty or service by taking the time to complete this survey.

If you have any questions or concerns regarding this survey, its contents, the information provided, or wish to request a physical copy of this survey, please contact Daniel Pilgreen via  
email: pilgreend11@students.ecu.edu or telephone: 252-328-0018

Again, thank you for your time and willingness to complete this survey.

By clicking "continue" you are providing informed consent to utilize the data collected by this survey insturment to better understanding the connection between campus recreation usage and student persistence.

- 
- Continue
  - Do not continue

## Facility & Service Usage

### Section 1: Campus Recreation Usage

To better understand which facilities and services provided by East Carolina University Campus Recreation & Wellness are used, and how often these facilities and services are used, please answer the following questions:

---

Which facilities provided by East Carolina University Campus Recreation and Wellness do you use? (select all that apply)

---

- Blount Recreational Complex
- Health Sciences Complex
- North Recreational Complex
- Student Recreation Center
- I do not utilize East Carolina University Campus Recreation & Wellness Facilities

How often do you utilize East Carolina University Campus Recreation and Wellness facilities per week? Please indicate an interger between 0-14.

---

Which of the following aspects of the Blount Recreational Complex do you use? (select all that apply)

---

- Flag football/soccer fields
- Softball fields
- Ropes Challenge Course
- Other (please specify)

Which of the following aspects of the Health Sciences Complex do you use? (select all that apply)

---

- Indoor Sport Courts
- Weight Training Area
- Cardio Deck
- Wellness Center
- Other (please specify)

Which of the following aspects of the North Recreational Complex do you use? (select all that apply)

---

- Outdoor Sports Fields
- Fishing & Boating Pond
- Sand Volleyball Court
- Outdoor Walking & Jogging Trails
- Outdoor Fitness Equipment
- Disc Golf Course
- Odyssey High Challenge Course
- Other (please specify)

Which of the following aspects of the Student Recreation Center do you use? (select all that apply)

---

- Indoor Sports Courts
- Indoor Track
- Indoor Climbing Wall
- Fitness Studios

- Weight Training Area
- Cardio Deck
- Cross Training Court
- Indoor/Outdoor Pool
- Wellness Center
- Other (please specify)

**Sense of Community**

Section 2: Sense of Community

The following questions refer to the East Carolina University Campus Recreation and Wellness Community. To understand the community developed at these facilities, please indicate your response to the following statements.

---

Rate your response to the following statements from strongly disagree to strongly agree:

---

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
There is a real sense of community at ECU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a strong feeling of togetherness on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a sociable atmosphere at ECU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel very attached to ECU.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like I belong at	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ECU.

Students at ECU  
feel they can get  
help if they are in  
trouble.

### Student Description

Section 3: Description of yourself as a student

To obtain an overview of the students using East Carolina University's Campus Recreation & Wellness, please provide the following characteristics:

---

What is your current student status?

---

- Freshman
- Sophomore
- Junior
- Senior
- Graduate

What degree are you seeking?

---

- Masters
- Doctoral
- Other

What is your current cumulative GPA?

---

Are you an international student?

---

- Yes
- No

Do you plan to continue at East Carolina University through degree completion?

---

- Yes
- No

### **Qualitative**

Section 4: Free Response

The following questions are aimed at understanding Campus Recreation and Wellness through your views. Please answer questions openly and honestly, all answers are confidential.

---

What does the Campus Recreation and Wellness community mean to you?

---

### **Demographics**

Section 5: Demographic

To obtain an understanding of East Carolina University's Campus Recreation &

Wellness users outside of the classroom, please answer the follow questions:

---

What year were you born?

---

What is your gender?

---

What is your ethnicity?

---

- White
- Black/African American
- Latino/Hispanic
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other

Do you live on campus?

---

- Yes
- No

Do you work for Campus Recreation & Wellness?

---

- Yes
- No



## Contact Information

If you would like to be entered into the drawing for 1 of 5 \$50 Amazon gift cards, please enter your email address below.

---

You have completed the survey! Thank you for your willingness and time.

If you have questions please contact Daniel Pilgreen via email: pilgreend11@students.ecu.edu or phone: (252) 328-0018.

Again, thank you for your time!

---

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## APPENDIX C: BENEFITS OF RECREATION KEYWORDS AND PHRASES

### Social Benefits Keywords:

1. Involved
2. Opportunity
3. Otherwise would not be able to
4. Together/togetherness
5. Everyone
6. Without judgement/judged
7. Social
8. Friends
9. Peers
10. Community
11. Connecting/Connection
12. Compete
13. Fun
14. Interaction
15. Meet new people
16. Alongside
17. Welcome
18. Home
19. Group
20. Comfortable/Comfort
21. Caring/Care
22. Attached
23. Similar/Similarity
24. Collective
25. Niche

### Psychological Benefits Keywords:

1. Cope
2. Stress
3. Relax/Relaxation
4. Mentally/Mental Health
5. Better myself
6. Escape
7. Build up
8. Emotional
9. Finding myself
10. Confidence
11. Manage
12. Spiritual
13. Blow off steam
14. Outlet
15. Play
16. Relieve
17. Better the lives

18. Let go
19. Forget
20. Run from
21. Remove
22. Feel better
23. Peace
24. Soul
25. Better person

### Physical Benefits Keywords

1. Fitness
2. Active/Activities
3. Workout
4. Physical
5. Well-being
6. Health/Healthy
7. Wellness
8. Getting fit
9. Recreate
10. Exercise
11. Yoga
12. Gym
13. Improve themselves
14. Energy
15. Testing limits
16. Strength
17. Physically fit
18. Equipment
19. Safe exercising
20. Leisure activities
21. Weight gain/Weight loss
22. Healthy lifestyle
23. Lift weights
24. Bodybuild
25. Cardio

## APPENDIX D: DIMENSIONS OF PSOC KEYWORDS AND PHRASES

### Membership Keywords

1. Social
2. Every/Everyone
3. Myself/Me/You/Your
4. People together
5. Community
6. Important
7. Meet
8. Welcoming/Welcomed
9. Friends
10. Niche

### Influence Keywords:

1. Input
2. Control
3. Importance
4. Looks out for one another
5. Improve
6. Involved
7. Engage
8. Care/Caring
9. Aim
10. Attachment

4. Need

5. Manage

6. Stay

7. Provide

8. Keep

9. Improve/Better

10. Helpful

### Shared Emotional Connection Keywords:

1. Bringing

2. Together

3. Striving towards

4. Similar

5. Goals

6. Make friends while doing it

7. Connecting

8. Compete

9. Alongside

10. Sense of home

