

EVALUATION OF STUDENT'S PERSPECTIVE OF NORTHERN MICHIGAN  
UNIVERSITY'S OUTDOOR RECREATION CENTER

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# CHAPTER I

## INTRODUCTION

### **Introduction Statement**

Providing recreation related resources on campuses to college students is a key factor in eliminating stress, ensuring academic success and helping young adults form healthy, lifelong habits (Bell, 2001). At Northern Michigan University, the natural environment serves as a key catalyst in recreation among college students (O’neill, 2008). Therefore, it is important to understand the benefits and needs of outdoor based recreation services at the school. Studies have shown that outdoor recreation benefits mental and physical well being at rates more rapid than general recreation (David, 2014). In parallel with student benefits are university benefits. By providing opportunities and resources for increased mental health and stress relief, researchers have found that students who utilize these programs have a higher retention rate in their first years of college as opposed to student who do not utilize these programs (Scott, 2014). Budget cuts occur when enrollment drops and the value of university funded programs are calculated. The student needs assessment of the Outdoor Recreation Center (ORC) on Northern Michigan University’s campus is essential to help determine its value and to adapt programs within the ORC to the needs of the student body. Simultaneously, this helps students live healthier lives, and ensures the program’s longevity, while maintaining student needs.

## **Theoretical Foundation**

At a college level, there are numerous sources of unavoidable stress which stem from varied aspects of academic and personal life (Brown, 1992). Managing these stressors is vital to a student's success and can be influenced through physical exercise and activity. In recent studies, it was revealed that students who participated in vigorous physical activity had lower levels of perceived stress and were less likely to report poor mental health than students who did not meet the same physical activity criteria (VanKim, 2014).

College students who actively use a campus recreation center in their leisure time positively impact their academic performance and social well-being (Huesman, 2007). Mill has established two predominant theories which parallel the ideas of student retention, academic success and sense of place. One of these, the theory of involvement, states that a student's environment directly influences their journey into adulthood. Studies show that students who maintain a connectedness with the university in recreational settings maintain more productive roles throughout their college careers compared to those who do not. The second theory is the theory of integration, which focuses on the sense of community and belonging stemming from students involving themselves in recreation based programs. Students who maintain these connections and senses of community are more likely to feel a sense of commitment to their institution (Miller, 2011). These types of programs could include experiences through a recreation center or other campus oriented functions such as a student's involvement in intramural sports. In a study conducted by by Gibbison, Henry, and Brown, they focused on the academic incentive of participating in intramural and recreational events on campus. After several examinations on samples of freshman level students, it was proven that by engaging in

these activities, even once or twice a week, would reflect an increase in that students overall college GPA.

Outdoor recreation has long been proven to be beneficial physically, psychologically and socially (Pearson, 2014). Outdoor Recreation is inherently active and physical activity generally contributes to a person's overall wellbeing. "Green exercise can make positive contributions to our health, help us recover from pre-existing stresses or problems, have an immunising effect by protecting us from future stresses, and help us to concentrate and think more clearly" (Countryside Rec. Network, 2006). Other physical health benefits of recreating outdoors includes reduction of obesity among participants and diminishing the risk of chronic diseases such as heart disease, diabetes, cancer, and osteoporosis. Common side effects also include a boost in immune system and an increase in life expectancy. Outdoor recreation has also been proven to reduce depression, relieve stress, and improves the general quality of life (Brown, 1981). Leisure time in the outdoors can affect a person's self esteem, promote spiritual growth, and increase overall life satisfaction (Burt, 1971). Time in the outdoors can also lead to major social benefits. Promotion of social bond between participants occur by uniting common interests and providing challenges to overcome together (CA State Parks, 2005).

Previous research indicates that the nature themed environment helps to reduce stress, and generally enhance psychological recovery (Tyrväinen, 2014) A study performed by Dr. Marc Berman of the University of Michigan involved subjects taking study breaks walking through arboretums or crowded busy streets. The results indicated that subjects chosen to walk through an arboretum during their study break showed a 20% increase in attention span compared to students who were made to spend their study break walking through busy city streets, who

garnered no increase in attention (Green, 2015). Nature connectedness has been found to also reduce feelings of anxiety, something every college student feels at some time or another (Martyn, 2015).

### **Statement of Problem**

In 2015, Northern Michigan University's student enrolment has decreased close to five hundred students below the student population of 2014 (Bohem, 2015). This decrease in enrollment has created inevitable budget cuts every year, including a \$2.6 million dollar cut for the 2014-2015 school year (Kwon, 2014). These budget cuts have reduced program offered at the university, and will proceed to do so if enrollment continues to drop. Many of the programs facing elimination are recreation based, and health promotion programs that have been proven to benefit students well being and academic success. As the distribution of funding for the programs becomes restricted, the Outdoor Recreation Center must make changes to best allocate their limited funds, while maximizing their appeal to the student body.

### **Purpose of this study**

Student wellbeing and retention are improved by outdoor recreation opportunities offered by the university. The purpose of this study is to identify student needs of the ORC at Northern Michigan University to determine programing implementation and proper use of university resources. Given the students perceptions and needs of the NMU outdoor recreation center, can the program designs be specifically targeted to provide these needs for the students and cause an increase in participation and worth of the ORC?

## **Assumptions**

- The needs of individuals in environments differing from Upper Michigan could yield slightly different results.
- The general needs of individuals in other environments are similar to results found at NMU, when based around stress relief in the outdoors as well as the positive effects of recreation organizations on student success.
- General research in regard to the natural environment's influence on stress is similar across all age groups and demographics.

## **Limitations**

There are a few limitations that may occur during the needs assessment. One limitation being the potential for inaccurate question answering in our survey. The research group will be unable to overview how participants answer and assess questions. There also may be an unwarranted pattern in individuals who respond to the survey. Students who reply may be part of a specific demographic such as class standing, involvement in university, or the program in which they study, giving us slightly skewed data. Lastly, the outcomes of these questions may be affected by the current season in which specific outdoor recreation activities are limited, or widely accessible.

## **Definition of Terms**

“Green Exercise”- Green exercise is physical activity taken outside while exposed to nature.

## CHAPTER II

### REVIEW OF LITERATURE

#### **Introduction**

Budget cuts and declining enrollment are both issues that are impacting Northern Michigan University. The review of literature will discuss both the effects of enrollment and budget cuts and the positive impacts that outdoor recreation centers and their programming can have on student retention and university funding.

#### **Enrollment and Budget Cuts**

There are 423 less students attending Northern Michigan University in 2015, compared to 2014, mirroring an ongoing trend in downward enrollment not only at NMU but throughout the country. Because student enrollment is decreasing, the university finds themselves facing a \$2.6 million dollar budget deficit. Decreases in budget as large as \$2.6 million dollars has the potential to eliminate many different resources and opportunities found on Northern's campus (Oldach, 2015). As the Outdoor Recreation Center may face consequences of this decrease in funding, it is important for employees and management of the center to understand in what ways the students utilize and understand the recreation center. NMU is not the only university suffering from the long term influences of budget cuts, as many universities throughout the nation are experiencing similar cuts in funding (Osman, 2006). Oftentimes, these universities' recreation centers are the first to experience budget related cuts in programming. This means that

as future cuts to programming are made, it is important to continually assess the desires of students in regard to recreation centers. If student enrollment continues to drop, more budget cuts will occur and the ORC will be forced to learn how they can fit the most apparent recreation needs to students, in a way that is financially effective and also draws growing numbers of students to the center (Osman, 2006). By attracting larger numbers of students, the ORC has the potential to create revenue for the university, retain student retention and eventually suffer less from cuts in university budgeting.

### **Outdoor Recreation Benefits**

Research shows that connections with nature have been proven to contribute to a person's well being in many ways. Psychological well-being, meaningfulness and vitality were all reported to be strongly related to high levels of connectedness with nature (Cervinka, 2012). It has long been accepted that nature is mentally restorative and psychologically beneficial. (Kaplan, 1989). Experiences with nature are also significantly related to overall cognitive anxiety. Self reported themes relating to experiences with nature include, relaxation, time out, enjoyment, connection, expanse, sensory engagement and a healthy perspective. All of these themes have a positive connotation and are terms that might be indicators of a person's well-being (Brown, 2014). University students are a notoriously anxious and stressed population (Bayram, 2008). University settings also demand a certain level of social and individual development (Astin, 1993). Leisure time in the outdoors can encourage spiritual growth, increase a person's self esteem, and heighten overall life satisfaction (Burt, 1971). Time spent in the outdoors also promotes social bonds between participants through uniting common interests and



providing opportunities for leadership and collaboration when problem solving (CA State Parks, 2005). If time in nature can relieve negative feelings, promote personal growth, and create opportunities for social development, it would be valuable for the university to support programs which encourage students to get outside. Recreating outdoors also promotes general physical health. All types of outdoor recreation are inherently physical activities and can reduce a population's obesity level, decrease the risks of diseases such as heart disease, diabetes, cancer, and osteoporosis while also leading to a stronger immune system (Brown, 1981). Considering the mental, social and physical benefits outdoor recreation can provide to students, it is apparent that support for programs encouraging students to spend time outdoors would be beneficial to the University.

### **Campus Recreation Benefits**

Many studies conducted in previous years have examined the beneficial aspects of college campus' recreational facilities and their effects on student success. Several these studies directly relate to a student's academic success and persistence to the use of on campus recreational facilities (Bucholz, 1993; Pascarella & Terenzini, 1991; Tinto, 1975). In a study conducted by (Belch, Gebel, & Maas, 2001) at a large university in the southwest, it was discovered that students using a recreation center achieved higher first-semester GPAs and higher first-year cumulative GPAs, including a higher total credit hour status as opposed to a group of non recreation center users. It was also discovered that the persistence rates of the recreationally active groups for a full year term was higher than students not involved in recreation by a percentage of 71 to 64 (Belch, Gebel, & Maas, 2001). When Belch, Gebel, &

Maas researched the individuals and the number of hours they spent in the facility they found a that an increase in hourly use of recreation centers resulted in an increase of first semester and first year GPA. Paired with academic benefits, college recreational facilities can provide an experience for new freshman that would allow them to gain an understanding and sense of belonging in a community that is a smaller representation their university population. According to Wade (1991), a student's ability to establish membership and a sense of "belonging" to the community is a key factor that will affect campus retention. Recreational facilities and students participation in recreational programs provides them the opportunity to meet groups of peers, as well as faculty, and could be a catalyst for the breeding of their community establishment (Belch, Gebel, & Mass, 2001).

### **Student Retention**

Student retention is one of the most important issues facing higher education today. Retaining students who enroll at an institution are of utmost importance to that institution for increasing graduation rates, and a turnover of students can cost them financially resulting in budget cuts. An NMU study revealed a positive increase measuring retention rates of freshmen beginning their first semester and ending their fifth semester from 1993 to 2013 (Retention Rates, 2015). In 1993, of the original freshmen student population, 56% of the students were retained by their fifth semester. In 2013, of the original freshmen student population, 63% of the students were retained (Retention Rates, 2015).

Universities are now developing a number of new programs for students to help keep them engaged in their classes, their community, and on campus. These types of programs could

include experiences through a recreation center or other campus oriented functions such as a student's involvement in intramural sports. At NMU, the outdoor recreation center is an important, but seemingly underused resource on campus. By identifying student needs, the ORC can develop programs tailored to the students' needs, resulting in an increase in retention rates. "A recreational facility with diverse programmatic offerings based on student, faculty, and staff needs can serve as a dynamic community and in so doing establishes an expectation of engagement and belonging by students. This activity is symbolic of the individual student's ability to connect to others in the environment and to the university community itself" (Belch, Gemel, & Maas 2001).

## **Conclusion**

Previous studies have revealed that campus recreation centers have positive effects on student retention. They have shown a positive correlation between recreation and enrollment, and the impacts of student participation in recreational programs on persistence, academics and sense of place. Studies have also shown that time in the outdoors is beneficial to a person's mental and physical wellbeing. It is believed that assessing the needs of NMU's Outdoor Recreation Center will aid in highlighting the potential benefits these programs could provide for the university and its student population.

## CHAPTER III

### METHODS

#### **Introduction**

The research and evaluation being studied was focused primarily on the perception of NMU students regarding the Outdoor Recreation Center on campus. In agreement with the current head of the ORC, this study recorded student's, awareness, use, and expectations of our recreation facility, to better understand what programs can be implemented to maximize participation and utilize resources efficiently. The evaluation utilized a non-random convenience sample of undergraduate (or graduate) students to obtain information from all class standings. All participating students completed a designated survey with questions specifically highlighting aspects of the study. The results have been collected, organized, and further analysed to base our conclusion of the study.

#### **Participants**

Students participating in this study were sampled from the general population of those enrolled at Northern Michigan University (NMU). The population includes all levels of undergraduates and potentially graduate students. There were 134 students who completed the survey.

Participants in this study consisted of a convenience sample through a residence hall email list, facebook friends and student based pages, and location/time of survey respondents. Participants identified as either male, female or transgender and were in the age range of 18-34

years and currently are enrolled at NMU. The participants are assumed to be currently Marquette residents and therefore live near Lake Superior, as well as expanses of natural recreation areas (including the North Country Trail), and within 50 miles of Pictured Rocks National Lakeshore. Most participants of this survey were found in Jamrich Hall, a main study hall on campus between 2:00pm and 4:00pm on a weekday. Although participants of the survey differed in age and class standing, they all attend the same university and are exposed to the same Marquette and Upper Peninsula cultures. The majority of these students were found spending their afternoon indoors and studying with computers.

### **Participant Selection**

The sample for the study included approximately 134 undergraduate and graduate students during the fall semester of 2015. These students were willing respondents to a survey that they were exposed to through their school email, facebook feeds, or in person at the library, in Jamrich hall, or in the Physical Education and Instructional Facility (PEIF). Participants were selected through a non-random convenience sampling and participated voluntarily. As this is an evaluation, there was not an experimental group of participants.

### **Procedures**

Two methods were used in the administration of the survey: sharing on facebook and in person. All members of the research team shared the survey to their own facebook as well as posted it to student pages such as the ORC's page and others. The researchers' facebook posts containing the survey utilized a snowball method in which researchers' "friends" may have

shared the survey with other NMU students. Lastly, researchers approached potential participants in person at several locations around the NMU campus with iPads, on which participants could complete the survey. Researchers spent 20 minutes at the Library on November 19th from 3:40pm-4pm and one hour and forty minutes in the Jamrich Hall commons on November 19th from 2:00pm-3:40pm. Response to these surveys was entirely optional for all participants.

### **Selection of Measurement**

For the evaluation, the researchers designed a nine question survey that focused on a few important aspects to help determine students' perception and expectation of the ORC. The first question aimed to obtain the student's age, gender, class standing, and major. This question identified the most common demographic filling out the survey as well as any trends within these demographics and their use of the ORC. For example, the comparison of class standing to utilization of the ORC in hopes to determine a stronger target market for future offered programs. The remaining questions were designed to obtain a better understanding of the participants' awareness and relationship with the ORC. The first question inquired how often students utilized the ORC. Respondents placed themselves on a scale identifying the amount of usage based on visits per semester. These visitation categories ranged from: 1-5, 6-10, 11-15, 16-20, over 20 visits per semester. A visit to the ORC was defined as a student's utilization of the rock climbing wall, rental of any available equipment, direct inquiries involving both on or off campus programs, and or participation in any on or off campus programs. Next, students were asked what would motivate them to use the ORC and what would prevent them from utilizing the ORC? These questions helped gain an understanding of the most effective and

ineffective incentives offered by the ORC, providing insight into what can be done to create more effective and rewarding programs. In a similar vein, the survey also asked what program out of five hypothetical programs listed would garner the most interest. These programs consisted of different recreational activities including: climbing, canoeing, white water rafting, sea kayaking, backpacking and winter camping. The focus of the hypothetical programs question was an attempt to understand what types of programs would attract the highest number of students. Following specific program inquiries, a question was presented to determine how much students would be willing to pay for the offered programs. The final part of the survey focused on questioning student's perspectives on the effectiveness of ORC advertisements on campus and in the community. The survey asked participants to provide a statement of desired change in advertising that would be more effective for future programs and opportunities offered through the Outdoor Recreation Center. This question helped to gather information in attempt to obtain an accurate gauge of student perception on the effectiveness of the ORC.

### **Data Collection**

The data collection is based upon the responses to the self created survey. Participants who completed the survey by a facebook post completed the survey independently with no contact with the researchers. Participants who were completed the survey at the various locations were approached by researchers and politely asked to participate. Participants responded independently via the iPad, but had made personal contact with at least one of the four researchers before completion and the researchers were present while the participant responded.

All participants experienced the same written format and questions while responding to the online survey. Response to these surveys was entirely optional for all participants.

### **Handling of Data**

To insure the confidentiality of the participants in this study, the data collected via the survey from each participant was stored as raw data in a private online database. Once the survey is completed by a participant the results were compiled into the database with no possibility to connect the responses to that specific participant. The data was stored in a password protected computer under an organized file system. Once the study was completed the database was erased to ensure total confidentiality.

### **Data Analysis**

The data compiled from responses to the survey included quantitative and qualitative data. Statistical analysis was used on the quantitative data collected. Researchers evaluated the mode of the specific responses to conclude an overall answer to each question. Researchers defined populations within the respondents based on age, class standing and gender which were then used to analyze trends and common responses related to each defined population. A comparison was then based on the statistical data to determine significance between the developed sub categories of participants and their use, expectations and perceptions of the Outdoor Recreation Center at Northern Michigan University.



## CHAPTER IV

### RESULTS

#### **Introduction**

The purpose of this study was to gain insight in regards to the student's perception of the outdoor recreation center on the campus of Northern Michigan University. Using a non-random convenience sample, survey results were gathered from 134 participants. The selected participants responded to a nine question survey that was categorized by awareness, interest, motivational use, and rate of participation. All 134 participants volunteered to fill out the survey and were all currently enrolled NMU students (including at least one NMU alumni). These students ranged in age, gender, and class standing. The results of the survey were then analysed and categorized to better determine relations between age, gender, and class standing to the students overall perception of the on campus recreation center based on awareness, interest, motivational use, and rate of participation.

#### **Descriptive Statistics**

The group of participants consisted of 54 males, 70 females, and 3 identified as "other". Respondents range in class standing as follows; 15 freshman, 17 sophomore, 39 junior, and 49 seniors. Also included were the responses from 4 alumni. Each participant was asked or prompted to fill out the survey via a web link or personal interaction with the surveyor. Figures and tables were created based data in order to show the breakdown of responses and comparisons of demographics relative to perspective.

**Figure 4.1** Gender of Participants

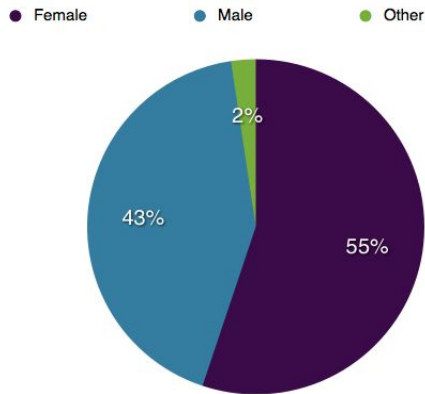


Figure 4.1 describes the gender ratio of our population, with the most female students at 55% followed by 43% male and 2% other. 70 respondents identified as female, 54 identified as male and 3 identified as transgender/other.

**Figure 4.2** Age of Participants

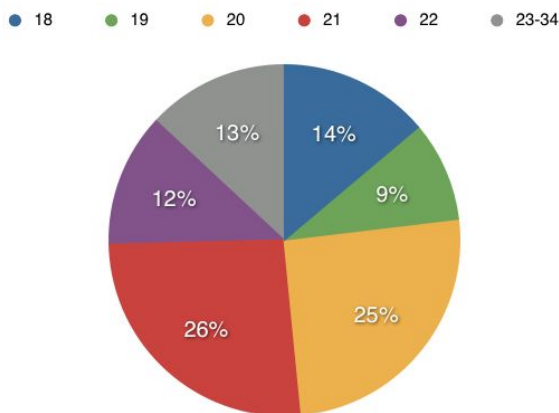


Figure 4.2 describes the age of the participants, the majority of the participants were ages twenty and twenty one with 25% being twenty and 26% being twenty one. Specifically, 33 respondents reported to be the age of twenty and 34 respondents reported to be the age of twenty one. The minority of participants who completed the survey were between the ages of nineteen and eighteen, with 9% being nineteen and 14% being eighteen. Specifically, 18 respondents reported to be the age of eighteen and 12 respondents reported to be the age of nineteen. Ages ranging

from twenty two to thirty four were also a minority, with 12% being twenty two and 13% being twenty three-thirty four. Specifically, 16 respondents reported to be the age of twenty two and 17 respondents reported to be between the ages of 23 and 34.

**Figure 4.3** Class Standing of Participants

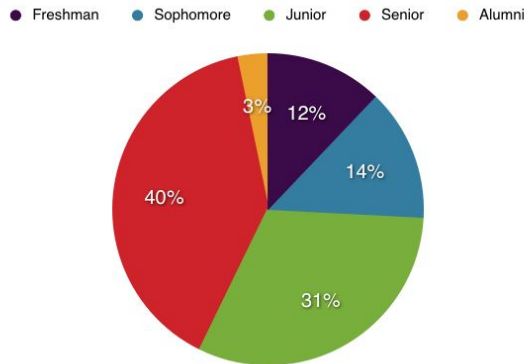
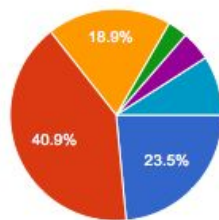


Figure 4.3 shows the percentage of students by grade who completed the survey. The largest portion of participants were seniors who consisted of 40% of the survey, followed by Juniors at 31%. Sophomores made up 14% of the survey, while Freshman made up 12%. An unexpected 3% (4 individuals) of the participants in the survey identified as alumni and/or post baccalaureate students. Due to this small sample size, their results were omitted from Tables 4.2 and 4.3.

**Figure 4.4** Utilization of the Outdoor Recreation Center (ORC)

**Have you heard of the Outdoor Recreation Center(ORC)? If so, how often do you utilize it?**



No	31	23.5%
Yes (never utilized)	54	40.9%
Yes (1-3 times per semester)	25	18.9%
Yes (5-10 times per semester)	4	3%
Yes (10-20 times per semester)	6	4.5%
Yes (20+ times per semester)	12	9.1%

Figure 4.4 shows if participants are aware of the ORC, and if so how often they utilize it. The most frequent response indicated that the largest portion of students (40.9%) had heard of the ORC, but did not utilize it, while the second largest portion (23.5%) had never heard of the ORC at all. This information indicates that even if participants in the survey were aware of the ORC, the majority (64.4%) have not utilized the ORC at all while at NMU.

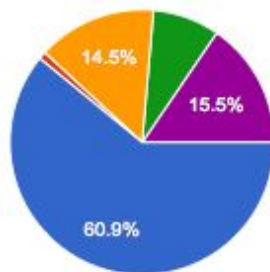
**Table 4.1** Awareness and Utilization of ORC by Gender

	No	Yes (never utilized)	Yes (1-3 times per semester)	Yes (5-10 times per semester)	Yes (10-20 times per semester)	Yes (20+ times per semester)
Male	10	24	11	0	3	7
Female	20	27	13	2	3	4
Transgender	1	0	0	2	0	0
N/A	0	3	1	0	0	1

Table 4.1 indicates that regardless of gender, the majority of students are aware of the ORC but have never utilized it.

**Figure 4.5** Origin of Awareness of the ORC

**If you are aware of the ORC, how did you hear about it?**

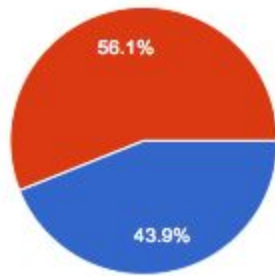


Word of mouth	<b>67</b>	60.9%
Facebook	<b>1</b>	0.9%
Class	<b>16</b>	14.5%
Poster bulletins	<b>9</b>	8.2%
Other	<b>17</b>	15.5%

Figure 4.5 reveals student’s awareness of the ORC and how they became aware of it. The majority of students (60.9%) have heard of the ORC through word of mouth. The most uncommon way to hear of the ORC was through the ORC’s Facebook page. Of the 17 “other” respondents, 7 discovered the ORC while visiting the PEIF.

**Figure 4.6** Advertisement Awareness

**Have you seen any advertisements for the ORC on campus?**

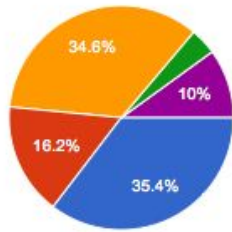


Yes **58** 43.9%  
 No **74** 56.1%

Figure 4.6 indicates that 56.1% , or over half of the student participants have not seen any advertisements for the ORC on campus. The remaining 43.9% of student participants have seen advertisements on campus. This indicates that advertising of the ORC is relatively ineffective, only reaching just under half of the surveyed population.

**Figure 4.7** Barriers of ORC Utilization

**What would prevent you from utilizing the ORC?**



Not enough time **46** 35.4%  
 Not enough money **21** 16.2%  
 Not aware of opportunities **45** 34.6%  
 Personal equipment/experiences **5** 3.8%  
 Other **13** 10%

Figure 4.7 reveals what prevents students from utilizing the ORC and the results indicate that 35.4% of students do not have enough time and 34.6% are not aware of opportunities.

**Table 4.2** Grade and Barriers of Utilization

	<b>Not Enough Time</b>	<b>Not Enough Money</b>	<b>Not Aware of Opportunity</b>	<b>Already have Experience/Equipment</b>	<b>Other</b>
<b>Underclassmen</b>	<b>15</b>	<b>2</b>	<b>17</b>	<b>1</b>	<b>1</b>
<b>Junior</b>	<b>19</b>	<b>11</b>	<b>8</b>	<b>2</b>	<b>1</b>
<b>Seniors</b>	<b>15</b>	<b>9</b>	<b>10</b>	<b>2</b>	<b>5</b>

Table 4.2 shows the relationship between grade and barriers of utilization. Because there was a smaller percentage of Freshman and Sophomores, their results have been combined into one category (Underclassmen). Along with this, four responses given by alumni were omitted due to the small sample size. This table indicates that the majority of Underclassmen are not aware of opportunities, while Juniors and Seniors claim to not have enough time.

**Figure 4.8** Motivation to Utilize the ORC

**What would motivate you to utilize the ORC?**

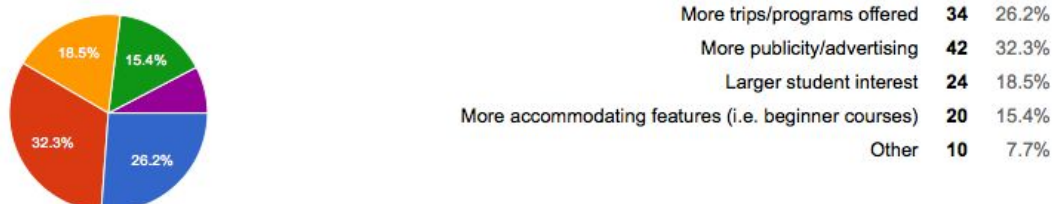


Figure 4.8 reveals what would motivate students to utilize the ORC most. Results indicate that the majority (32.3 %) of students would like to see the ORC publicly advertised more. 26.2% of students would like to see more trips and programs offered, 18.5% would be motivated by a larger student interest and 15.4% would like more accommodating features in the ORC.

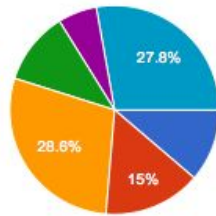
**Table 4.3** Grade and Motivation to Utilize the ORC

	More Trips/Programs Offered	More Publicity/Advertising	Larger Student Interest	More Accommodating Features	Other
<b>Underclassmen</b>	10	15	7	5	0
<b>Juniors</b>	11	7	12	7	2
<b>Seniors</b>	11	17	4	11	7

Table 4.3 shows the relationship between grade and motivation to utilize the ORC. Because there was a smaller percentage of Freshman and Sophomores, their results have been combined into one category (Underclassmen). Along with this, four responses given by alumni were omitted due to the small sample size. Most underclassmen and Seniors claimed that more publicity and advertising would push them to utilize the ORC, while Juniors believed larger student interest would play a key role in their use of the ORC.

**Figure 4.9** Potential Program Preferences

**Out of these programs, select which one you would prefer to see offered through the ORC.**

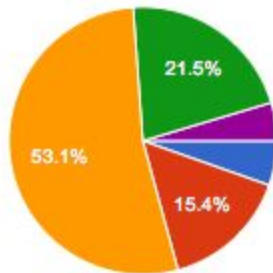


Climbing trip to Devil's Lake	15	11.3%
Canoeing trip in the eastern U.P.	20	15%
Whitewater rafting the Wolf River	38	28.6%
Sea Kayaking instructional course	15	11.3%
Winter Camping weekend	8	6%
Weekend backpacking trip to Pictured Rocks	37	27.8%

Figure 4.9 reveals student's interest in certain programs potentially offered by the ORC. The survey indicated that students are most interested in Whitewater rafting the Wolf River (28.6%) and a weekend backpacking trip to Pictured Rocks (27.8%).

**Figure 4.10** Preferred Price Rates

**How much would you be willing to pay for this program?**



\$0	7	5.4%
\$10	20	15.4%
\$20	69	53.1%
\$50	28	21.5%
Other	6	4.6%

Figure 4.10 reveals the amount of money students are willing to pay for potential future programs. The survey indicated that students are most willing to pay a \$20 fee to the ORC, while 21.5% indicated that they would be willing to pay upwards of \$50 for a hypothetical program.

## Conclusion

The data produced through survey responses revealed that almost 65% of students surveyed did not utilize the ORC at all. Based on the data, advertising of the ORC reaches under half of the surveyed population. In parallel with this, 60% of students who are aware of the ORC became aware of the ORC through word of mouth. Gender did not seem to affect the utilization or awareness of the ORC. The data indicates that the main barriers of utilization of the ORC include not having enough time and a lack of awareness of opportunities. The majority of

upperclassmen reported to not have enough time and the majority of underclassmen reported to be unaware of opportunities. Over half of respondents would like to see the ORC publicly advertised more and to see more trips and programs offered. Of the potential trips, students are most interested in Whitewater rafting the Wolf River and a weekend backpacking trip to Pictured Rocks. Over half of the respondents reported that they would be willing to pay \$20 and another 20% of respondents would be willing to pay \$50 or more.

Based on the data, almost 60% of the students have never used the ORC due to lack of time and awareness of opportunities. Majority of the respondents feel that the ORC should advertise more and host more trips/programs. An interest in these programs is shown by almost 75% of respondents' willingness to pay a participation fee of at least \$20.

## CHAPTER V

### DISCUSSION

#### **Introduction**

The focus of this study was to obtain information that would be beneficial in determining the student perception and needs of the Outdoor Recreation Center on Northern Michigan University's campus. Multiple focus areas were determined which included awareness, interest, motivational use, and rate of participation. A survey was conducted that yielded results from 134



participants. These participants were comprised of all levels of upper education including freshman, sophomores, juniors, seniors, and alumni.

### **Summary of Study**

Using a non-random convenience sample researchers gathered data from 134 participants using a survey constructed to identify NMU students perception and needs of the on campus recreation center. Students were asked a series of questions regarding their demographics, awareness of the ORC, rate at which they participate in programs or use the available facility, and interests in potential programs that could be offered in the future. A series of questions was also asked in regards to students willingness to contribute financially in order to participate in desired programs. Researchers used social media to promote the survey to the student body and also actively sought out respondents at two on campus locations that commonly facilitate large gatherings of students.

### **Discussion of Findings**

One focus area of the research was to determine students overall awareness of the on campus recreation center in regards to the facility, programs offered, and advertisement for the programs and facility. It was found that out of the 134 students surveyed only 31 participants had never heard of the ORC (see figure 4.4). However in the same figure you will notice that out of all the participants, whether or not they were aware of the opportunities available, 64.4% have never utilized the ORC while attending NMU. The comparison of these finding and the significance between gender of participants was analysed. It was found that out of the 54 people

who were aware of the ORC yet never utilized the facility, 24 participants were male and 27 were female (see table 4.1). This supports the finding that student's gender did not have a significant impact on their awareness and or use of the ORC. When data was collected regarding how students became aware of the ORC it was discovered that the most effective way that students were being informed of the program was through word of mouth (see figure 4.5). A strong 60.9% of the surveyed population responded to knowing of the ORC through other students. Only one participant had discovered the ORC through their social media advertisement and 14.5% had become aware of the center while visiting the PEIF. Because word of mouth was found to be the most effective way for the ORC to grow with new participants, research assumes that the group that is utilizing the facility is mainly comprised of students who share some form of a social connection outside of the ORC. Figure 4.6 reveals that over half of the surveyed population had never seen advertisement for the ORC on or around campus. In order to broaden the diversity of their participants the ORC could look towards more effective ways of advertisement that would promote their programs to the entire student body.

A second focus area of this study was to determine students interest in specific programs at the ORC and what would motivate them to more actively use the facility. A series of questions was asked that provided results on what students wanted to see from the ORC as well as issues pertaining to the prevention of students use of the offered programs. When the data was categorized by class standing, it was discovered that all class levels, freshman through seniors, shared a balanced desire for more offered programs (see table 4.3). It was also discovered that juniors had the highest demand for a larger student interest, while underclassman as well as seniors said that an increase in public advertisement would motivate them to utilize the facility

more. Research points to the the idea that as underclassman, students are less likely to know about the opportunities offered by the ORC. By the time students reach junior status they are more concerned with networking and the social implications that group programs can offer. At a senior level students have previously experienced the benefits of networking and are now looking for a diverse list of programs and opportunities. Researchers also inquired about what types of programs would motivate students to more actively participate in the ORC. Students were given the choice between a number of programs including: climbing, canoeing, whitewater rafting, kayaking, winter camping, and backpacking. When asked to pick the one activity they would most likely participate in it was discovered that over half of the participants, a total of 56.4%, preferred either white water rafting or backpacking as a program option (see figure 4.9). It was also determined through the survey that the majority of participants who used the facility and were interested in these types of programs were most susceptible to pay an average of \$20 for the offered trips (see figure 4.10). It was found that only 21.5% of the survey sample was willing to pay a fee of \$50 for these potential programs. This could have been a result of students who are unaware of real trip expenditures or a misunderstanding of the survey question itself. Participants of the surevey might have viewed this financial payment as more of a cover fee to get into the facility for an offered program and not an overall cost of the trip including travel, food, and lodging.

A third focus area of this study was to determine an overall rate of students participation at the ORC facility. Because the information obtained in this research was directed to be beneficial to the ORC and its participants, it was important to determine how much of the sample population was actually utilizing the opportunities offered. The participation rate was defined by

the number of visits to the ORC a student made per semester. The categories were then divided into groups of visits ranging from 0, 1-3, 5-10, 10-20, and 20 or more (see figure 4.4). It was discovered that out of the 134 participants only 104 were aware of the ORC's existence. Of that remaining 104 participants, only 50 reported actually utilizing the facility. 7.5% of the participants fell between 3-10 visits, and 12 participants reported utilizing the facility 20 or more times per semester (see figure 4.4). When looking at the entire sample it was discovered that 64.4% of the participants never utilized any offered opportunities at the ORC. The data reveals that there are a significant amount of students who do not know about the ORC or are aware of the facility yet fail to use it. When looking at further data to determine why such a vast number of students were not utilizing the programs or facility, it was determined that the largest contributor to the low participation rates across all class standings was a lack of time to commit to said programs (see table 4.2).

## **Conclusion**

In conclusion, previous research has show the vast importance that on campus recreation facilities can have on students success and retention (Bucholz, 1993; Pascarella & Terenzini, 1991; Tinto, 1975). Due to budget cuts being made at Northern Michigan University and the limited funds for health and promotions it will be crucial for the ORC to hone in on ways that they can increase participation rates and reflect an increase in their funding. The research here has determined that public promotions and available programs play a key part in the success of obtaining new participants. The students in the sample who were aware of the facility had a high demand for specific programs and more frequently offered programs. Because time was a large

contributor to students lack of participation it is assumed that by offering more programs, there would be more available opportunities for students to utilize the facility. Because there was a large percentage of students willing to pay in order to participate in these programs, more public advertisement and more opportunities for group trips could aid in the overall increase of participation in the ORC from the student body.

### **Implications for Higher Education**

Evaluations of extracurricular and recreational resources and their usefulness on campus is something which every institution of higher education must face. Extensive research regarding the positive impact of recreation centers on college campuses makes it impossible to deny that these resources aid in student retention and student well-being. Although Northern Michigan University has an outdoor recreation center of its own, research in this study concludes that more effective measures of advertising and an increase of programs offered, among many other factors has the potential to influence the general well-being and overall retention rate at NMU.

This research is important for NMU and the ORC because it determines the effectiveness of a program which has been proven to aid in student and university wellbeing at other institutions. While student retention often relates to the levels of stress and anxiety experienced in a college setting, deciphering if NMU's recreation center has this same effect on students is important in determining what the ORC can do to adapt and better benefit the student body as well as the university (Huesmann, 2007). Although research indicated that students were generally unaware of the ORC, the information gained through the survey can be used as a

resource for employees of the ORC to adapt the center in a way that better fits the needs of students.

### **Recommendations for Further Research**

The first recommendation for further research would be to spend a longer period of time collecting survey results from students on campus. By extending the period of time in which data is collected, researchers would be able to receive input from a larger portion of the student body. More time spent collecting surveys would involve researchers to survey participants in other areas on campus besides main academic buildings. By spreading the survey around all areas of campus, and spending a longer time collecting results, researchers would inevitably collect a set of results that would display a more accurate and in depth assessment of NMU student's perception of the ORC.

In regard to student's perceptions of the ORC, further research regarding students who do utilize the ORC on a regular basis could be assessed to determine what methods of student outreach are effective. Not only would this give the research a much more in depth view as to why some people do utilize the ORC, it will help relay which forms of advertisement, types of trips and costs of programs already attract students. Having this information could help the ORC in strengthening its advertising, its tripping program and the costs associated with it in ways that could increase rates of student use, and ultimately, student retention.

Another way to further research would be to conduct similar surveys at other universities. Although these schools would not have the same exact culture and perception of NMU, due to location, student demographics and size (among many others), it would still create data which

could be paralleled to NMU's ORC. This information could also be telling of what methods other student recreation centers use in order to retain and increase the involvement and interest of the student body. This increased range of study and diversity of answers could potentially provide information which would not be apparent through a singular study of NMU. These answers could provide examples of other ways recreation centers advertise, types of trips they offer how often students utilize those facilities.

### **Concluding Comments**

Some of the data findings were surprising to the researchers; most notably, the conclusion that nearly 65% of the students did not use the ORC at all. This implies that it is a very underused resource when the campus-wide population is considered. Campus-wide advertisement may be both the problem, as well as solution, to the underuse of this valuable and unique student recreation resource. While personally surveying individuals, the researchers found that many students did not know what the ORC was and had to have it explained to them. This is a huge revelation for the ORC as they now know that they need to boost their advertising and reach out to a larger percentage of the student body, specifically underclassmen.

An evaluation of the ORC was fairly straightforward and simple to conduct. There was no difference in populations, so all the students surveyed were treated the same and the survey could be administered to anyone willing to respond. The questions in the survey were created to best evaluate the student body's perception of the ORC. This was a fairly simple task; however, after the first few responses the researchers chose to edit some of the questions to make them easier to understand and flow better. After analyzing the data, it became obvious what should be

changed if this survey were to be used again. The age, gender and class standing of participants should all have been multiple choice answers to avoid fill in responses, as well as not consolidating those three categories into only one question. Most of the age and gender responses were accurate, but some were left completely blank. “Class Standing” was misinterpreted by more respondents than the researchers anticipated; receiving answers such as “middle class” and several “good”s. There were interesting answers to the fill in questions, and while most seemed helpful, many rendered that participant an anomaly during the interpretation of data and therefore could not be used. Evaluations seem easy to conduct at first glance, but the researchers’ experience taught them that even if the overall process is simple, every little detail and phrasing choice must be considered when creating a survey of any kind.

If the researchers were to conduct this evaluation again, they would alter a few questions on the self-designed survey. The “other” option would be dropped from majority of the questions as that option didn’t seem to produce very significant results and gave the respondents opportunities to answer unprofessionally. Responses to *What could be done to improve/attract more attention in the ORC?* included: “sex sells”, “more bear poop”, and “stop being weirdos”. Another question the researchers felt would be interesting to alter was *Out of these programs, select which one you would prefer to see offered through the ORC*. Specific programs and locations were presented as choices for respondents such as, *Weekend backpacking trip to Pictured Rocks* or *Whitewater rafting the Wolf River*. For future evaluations it might be beneficial to simply list the activities and create another question with specific locations. Another possible programming question could consider smaller, day trips such as hiking a portion of the North Country Trail, kayaking around Presque Isle, tour of some of the bike trails or other local,



guided adventures. These would all be less intimidating and inexpensive activities that would be interesting to see if students would actually want to participate in. The researchers hope that the data collected and analyzed will help the ORC and NMU staff members make informed decisions to help direct the program into one of valuable student enrichment which benefits a majority of the NMU student population.

## REFERENCES

- Astin, A. (1993). What matters in college. *Liberal Education*, 79(4), 4-15.
- Bayram, N., & Bilgel, N. (2008, August). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, 43(8), 667-672.  
<http://link.springer.com/article/10.1007/s00127-008-0345-x>
- Bell, J. (2001, May 25). Otterbein College advances on \$9.5M recreation center. *Business First-Columbus*, 17(40), A5. Retrieved from  
[http://go.galegroup.com/ps/i.do?id=GALE%7CA75216769&v=2.1&u=lom\\_nmichu&it=r&p=ITOF&sw=w&asid=bf84caa5f8900ff229b1036f3e15e9f2](http://go.galegroup.com/ps/i.do?id=GALE%7CA75216769&v=2.1&u=lom_nmichu&it=r&p=ITOF&sw=w&asid=bf84caa5f8900ff229b1036f3e15e9f2)
- Boehm, A. (2015, September 9). NMU enrollment down according to 10th day report. In *Upper Michigan's Source*. Retrieved October 20, 2015.  
<http://uppermichiganssource.com/news/local/nmu-enrollment-down-according-to-10th-day-report>
- Brown, P. J., & Kelly, J. R. (1981). Psychological benefits of outdoor recreation. In *Social benefits of outdoor recreation* (pp. 13-17).  
<http://www.cabdirect.org/abstracts/19831899505.html;jsessionid=851D320E6A747CA4759CF03A8707DEC3>

Brown, R. T. (1992). Helping students confront and deal with stress and procrastination. *Journal of College Student Psychotherapy*, 6, 87-102.

Bucholz, D. (1993). Evaluation of recreational sports facilities and programs at Arizona State University. (Unpublished master's thesis, Arizona State University, Tempe, Arizona, 1993)

California State Parks. (2005). The health and social benefits of recreation . In *An Element of the California Outdoor Recreation Planning Program*. Retrieved October 20, 2015.

<http://www.parks.ca.gov/pages/795/files/benefits%20final%20online%20v6-1-05.pdf>.

Cervinka R., Röderer K., Hefler E. (2012). Are nature lovers happy? On various indicators of well-being and connectedness with nature. *Journal of Health Psychology*, 17, 379–388.

<http://hpq.sagepub.com/content/early/2011/08/19/1359105311416873.abstract>

Countryside Recreation Network. (2006). A countryside for health and wellbeing: The physical and mental health benefits of green exercise. In *The Health Well*.

[http://obesity.thehealthwell.info/search-results/countryside-health-and-wellbeing-physical-and-mental-health-benefits-green-exercise?source=relatedblock&content=resource&member=6842&catalogue=Research%20and%20Evaluation,Report&collection=Cardiovascular%20Health%20%28Draft%29,Mental%20Health%20,Conditions,Stroke,Hypertension,Coronary%20Heart%20Disease%20%28CHD%29,Chronic%20Conditions,Obesity&tokens\\_complete=true](http://obesity.thehealthwell.info/search-results/countryside-health-and-wellbeing-physical-and-mental-health-benefits-green-exercise?source=relatedblock&content=resource&member=6842&catalogue=Research%20and%20Evaluation,Report&collection=Cardiovascular%20Health%20%28Draft%29,Mental%20Health%20,Conditions,Stroke,Hypertension,Coronary%20Heart%20Disease%20%28CHD%29,Chronic%20Conditions,Obesity&tokens_complete=true)

- Gibbison, G. A. (2011, April). The chicken soup effect: The role of recreation and intramural participation in boosting freshman grade point average. *Economics of Education Review*, 30(2), 247-257. <http://ezpolson.nmu.edu:5020/science/article/pii/S0272775710001172>
- Green, J. (2011, September 8). Research shows nature helps with stress. In *The Dirt: Uniting The Built & Natural Environments*. Retrieved October 20, 2015. <http://dirt.asla.org/2011/09/08/research-shows-nature-helps-with-stress/>
- Holley A. Belch, Melinda Gebel & Gerald M. Maas (2001) Relationship Between Student Recreation Complex Use, Academic Performance, and Persistence of First Time Freshmen, *NASPA Journal*, 38:2, 254-268, DOI: 10.2202/1949-6605.1138 [http://www.tandfonline.com/doi/abs/10.1300/J035v06n02\\_09#.VibRvKKwCOU](http://www.tandfonline.com/doi/abs/10.1300/J035v06n02_09#.VibRvKKwCOU)
- Huesman, R. L., Brown, A. K., Lee, G., Kellogg, J. P., & Radcliffe, P. M. (2007). Modeling Student Academic Success: Does Usage of Campus Recreation Facilities Make a Difference? *The National Symposium on Student Retention*. [http://conservancy.umn.edu/bitstream/handle/11299/159766/CSRDE\\_2007\\_Modeling\\_Student\\_Academic\\_Success\\_paper.pdf?sequence=1](http://conservancy.umn.edu/bitstream/handle/11299/159766/CSRDE_2007_Modeling_Student_Academic_Success_paper.pdf?sequence=1)
- Kaplan R., Kaplan S. (1989). *The Experience of Nature: A Psychological Perspective*. Cambridge: Cambridge University Press. <https://books.google.com/books?hl=en&lr=&id=7180AAAIAAJ&oi=fnd&pg=PR7&dq=The+experience+of+nature:+a+psychological+perspective&ots=ToL-SGr95e&sig=nFWWKrspK6ZEIb>

[0hcy1jRL4RKJE#v=onepage&q=The%20experience%20of%20nature%3A%20a%20psychological%20perspective&f=false](http://www.upmatters.com/news/nmu-budget-cuts-over-26-million)

Kwon, E. (2014, July 18). NMU budget cuts over \$2.6 million. In *UP Matters*. Retrieved October 20, 2015. <http://www.upmatters.com/news/nmu-budget-cuts-over-26-million>

Martyn, P., & Brymer, E. (2015). The relationship between nature relatedness and anxiety. *Journal of Health Psychology*. <http://hpq.sagepub.com/content/early/2014/10/31/1359105314555169.full>

Miller, J. J. (2011). Impact of a University Recreation Center on Social Belonging and Student Retention. *Recreational Sports Journal*, 35, 117-129.

[http://www.naspspa.org/AcuCustom/Sitename/Documents/DocumentItem/04\\_miller\\_RSJ\\_2011002\\_117-129.pdf](http://www.naspspa.org/AcuCustom/Sitename/Documents/DocumentItem/04_miller_RSJ_2011002_117-129.pdf)

O'Neill, S. (2008, September 11). NMU Outdoor Rec. Center still growing. *The North Wind*.

<http://www.thenorthwindonline.com/nmu-outdoor-rec-center-still-growing/>

Oldach, B. (2015, September 24). NMU discussing budget cuts. Retrieved October 26, 2015, from

<http://uppermichiganssource.com/news/local/nmu-discussing-budget-cuts>

Osman, R., Cole, S., & Vessell, C. (2006). Examining the Role of Perceived Service Quality in Predicting User Satisfaction and Behavioral Intentions in a Campus Recreation Setting.

*Recreation Sports Journal*, 20, 21-20,21. Retrieved October 25, 2015,

<http://www.humankinetics.com/acucustom/sitename/Documents/DocumentItem/5753.pdf>

Pascarella, E., & Terenzini, P. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco: Jossey-Bass

Pearson, D. G. (2014). The great outdoors? Exploring the mental health benefits of natural environments. *Frontiers in psychology*, 5, 1178.

[http://zc9gn3am3j.search.serialssolutions.com/?ctx\\_ver=Z39.88-2004&ctx\\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\\_id=info:sid/summon.serialssolutions.com&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=The+great+outdoors%3F+Exploring+the+mental+health+benefits+of+natural+environments&rft.jtitle=Frontiers+in+psychology&rft.au=Pearson%2C+David+G&rft.au=Craig%2C+Tony&rft.date=2014&rft.eissn=1664-1078&rft.volume=5&rft.spage=1178&rft\\_id=info:pmid/25374550&rft.externalDocID=25374550&paramdict=en-US](http://zc9gn3am3j.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=The+great+outdoors%3F+Exploring+the+mental+health+benefits+of+natural+environments&rft.jtitle=Frontiers+in+psychology&rft.au=Pearson%2C+David+G&rft.au=Craig%2C+Tony&rft.date=2014&rft.eissn=1664-1078&rft.volume=5&rft.spage=1178&rft_id=info:pmid/25374550&rft.externalDocID=25374550&paramdict=en-US)

"Retention Rates." *NMU Institutional Research*. N.p., n.d. Web. 15 Oct. 2015.

<<http://www.nmu.edu/institutionalresearch/retention-rates>>.

Scott, C. B. (2014). *The effect of university campus recreation programs on student retention* (Order No. 3665362). . (1640769294). Retrieved from

<http://search.proquest.com/docview/1640769294?pq-origsite=summon&http://ezpolson.nmu.edu:2048/login?url=accountid=2745>

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89–125

Tinto, V. (1990). Principles of effective retention. *Journal of Freshmen Year Experience*, 2, 35–47.

Tyrväinen, L., & Ojala, A. (2014, June). The influence of urban green environments on stress relief measures: A field experiment. *Journal of Environmental Psychology*, 38, 1-9.  
<http://www.sciencedirect.com/science/article/pii/S0272494413000959>

VanKim, N. A., & Nelson, T. F. (2013). Vigorous physical activity, mental health, perceived stress, and socializing among college students. *American Journal of Health Promotion*, 28, 7-13.  
<http://www.ajhpcontents.org/doi/abs/10.4278/ajhp.111101-QUAN-395>

Wade, B. K. (1991, April). A profile of the real world of undergraduate students and how they spend discretionary time. Paper presented at the Annual Meeting of the American Educational Research Association (Chicago). (ERIC Document Reproduction Service No. ED 333 776)