



**Examining the Leisure Constraints Affecting International Collegiate Students'
Participation in Intramural Sport Programs**

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International Journal of Sport Management Recreation & Tourism, Vol.24, p.22-41, 2016

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To link to this article: <http://dx.doi.org/>

DOI: 10.5199/ijsmart-1791-874X-24b

Examining the Leisure Constraints Affecting International Collegiate Students' Participation in Intramural Sport Programs

Abstract

A primary objective of United States' higher education institutions is the production of well-balanced citizens. Aside from awarded degrees, other primary offerings include leisure opportunities, from campus recreation programs. Campus recreation through intramural sport programs offers students an opportunity to participate in sport and physical fitness activities on campus with and against other collegiate students. Recognizing the continuous increase in collegiate enrollment of international students, many of them are challenged by the various barriers they face in their collegiate experience in regard to education, social relationships, cultural and economic differences, and ethnic discrimination. The current study examines the relationship between leisure constraints (intrapersonal, interpersonal and structural) and participation in intramural sport programs among 198 international students. Analyses indicate that structural constraints were the highest leisure constraint in intramural sport programs among international students. Leisure constraints in intramural sport programs were also observed by the participants based on past participation experience, sex and age. As professionals seek to increase awareness of recreation and intramural sport participation rates among international students, the current study provides insight into strategic options and marketing opportunities that can be enveloped to limit the leisure constraints that influence international students' participation.

Keywords: leisure constraints, international students, intramurals sport programs, campus recreation

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Introduction

The Institute of International Education (2014) reported the number of international students in the U.S. as 886,052 for the 2013-2014 academic years—an eight percent increase from the previous 2012-2013 school year. International students study abroad to gain more experience in their career field, to enhance career opportunities, and to become more independent (Obst, & Forster, 2011). Even so, many international students are challenged by the various barriers they face in their collegiate experience in regard to education, social relationships, cultural and economic differences, and ethnic discrimination (Gebhard, 2010; Shifman, Moss, D'Andrade, Eichel, & Forrester, 2012; Taylor & Doherty, 2005). Based on these concerns, international students have been observed to experience greater unhealthy living and eating habits due to a lack of information, financial instability, (Edwards, Hartwell, & Brown, 2010; Perez-Cueto, Verbeke, Lachat, & Remaut-De Winter, 2009), life stress (Misra, & Castillo, 2004), and emotional health issues, such as being homesick, anxious, confused and frustrated (Gebhard, 2010; Kohl, 2001).

One of the primary resources available to combat these concerns in American collegiate settings are college/university campus recreation programs, which includes intramural sport programs, club sports, wellness departments and outdoor programs. According the Colgate, Feinberg and Angoff (1978), intramurals are defined as “activities carried out under the auspices of a particular institution and in which all the participants are members of the particular institution.” Intramural sport programs offer students an opportunity to participate in sport and physical fitness activities on campus with and against other collegiate students, and have rapidly grown since its inception (Sturts & Ross, 2013). Studying intramural sport participation effects on participants, Artinger and colleagues (2006) concluded that participation in intramural programs improved students' abilities to work with diverse groups of people. Also, Whidschitl (2008) indicated that intramural sport programs participation provides a powerful medium for student interaction that can enhance friendships, help identify study partners and information sharing, and develop support groups. Essentially, participation in intramural sport programs is significantly connected to value clarification of collegiate students that

may encourage a sense of possibility for thoughtful self-direction (Rothwell & Theodore, 2006).

Research centered on students' participation in campus recreational programs, correlate a link between campus recreational programs and positive outcomes for students and the university (Artinger et al., 2006). Identified positive outcomes include, but are not limited to, an increase in student recruitment, retention and satisfaction during their collegiate career (Artinger et al., 2006; Lindsey & Sessoms, 2006; Rothwell & Theodore, 2006; Sturts & Ross, 2013). Of the various campus recreation programs, Lindsey and Sessoms (2006) identified intramural sport programs as being increasingly attractive and popular co-curricular activities to incoming and current collegiate students (Dugan, Torrez, & Turman, 2014). But even though researchers have noted intramural sport programs' ability to enhance students' overall well-being (Artinger et al., 2006; Rothwell & Theodore, 2006; Sturts & Ross, 2013), they are often untapped resources among various populations, particularly among international students (Misra & Castillo, 2004; Guo & Ross, 2014; Park, Yoh, & Park, 20105). As such, it is important to understand intramural sport programs' function within higher education among international collegiate students who may experience diverse participation barriers.

Given the numerous benefits of intramural sport programs, research conducted on intramural sport participation often overlooks the limitations and constraints of different groups of people from participation. The constraints on intramural sport participation has not been examined for international students in America who are recognized to have difficulty finding a balance between their academic achievements and their overall well-being, theoretically framed as leisure constraints (Park et al., 2015). These findings highlight the relevance of using the leisure constraints model in identifying specific barriers needed to overcome international student's lack of participation in intramural sport programs in America (Chick, & Dong, 2003; Crawford & Godbey, 1987; Shifman et al., 2012). However, few researches have been explored this issue, although the number of international students has been rapidly increased (Institute of International Education, 2014). Furthermore, the leisure constraints model was employed to gain a better understanding of international students' barriers that limit their participation in intramural sport programs.

Theoretical Framework - Leisure Constraints Theory

Leisure constraints are defined by Jackson (1988) and Jackson and Henderson (1995, P31-32) as "anything that inhibits people's ability to participate in leisure activities,

to spend more time doing so, or to take advantage of leisure services, or to achieve a desired level of satisfaction.” Leisure constraints are barriers for people who desire to participate in leisure activities for their satisfaction level. To expand on the leisure constraints’ applicability, Crawford and Godbey (1987) introduced the most widely utilized theoretical model of leisure constraints, which was later elaborated as a hierarchical model of leisure constraints (Crawford, Jackson, & Godbey, 1991) (Figure 1).

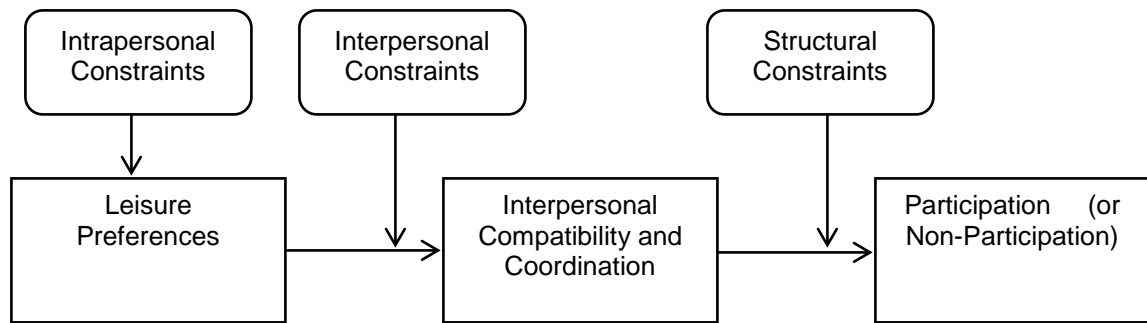


Figure 1. A hierarchical model of leisure constraints. Adapted from “A Hierarchical Model of Leisure Constraints,” by D.W. Crawford, E. L. Jackson and G. Godbey, 1991, *Leisure Sciences*, 13(4), P. 313.

The leisure constraints model (see Figure 1) classifies leisure constraints into three factors— interpersonal, intrapersonal or structural. Intrapersonal constraints are recognized to be the most powerful determinant of participation in a leisure activity (Crawford et al., 1991). Intrapersonal constraints refer to individual psychological attributes and barriers that interact with leisure preferences, such as attitude, stress, depression, personality factors, morality, anxiety, religiosity, or sense of safety (Crawford & Godbey, 1987; Crawford et al., 1991; Mannell & Kleiber, 1997). Interpersonal constraints deal with conditions that are subject to interactions with others, or with individuals’ characteristics such as family commitment, and peer, neighbor or coworker pressures (Crawford & Godbey, 1987; Mannell & Kleiber, 1997). Lastly, structural constraints are encountered, if interpersonal constraints are coordinated or negotiated (Crawford et al, 1991). Structural constraints are factors between leisure preference and participation that include external conditions in the environment, such as lack of finances, opportunity or time, transportation, season, or climate (Crawford et al, 1991; Mannell & Kleiber, 1997). This model enables researchers to investigate and examine various leisure constraints that individuals may possess in an effort to counteract barriers that limit leisure participation.

The constraints model initially examined family leisure but was later modified to a hierarchical model to better examine how constraints affect leisure choice (Crawford & Godbey, 1987; Crawford et al., 1991). The expansion of the model increased its theoretical relevance among diverse populations, such as for non-traditional populations. For example, Guo and Ross' (2014) research instrument followed Crawford et al.'s (1991) hierarchical model of leisure constraints to examine international collegiate students' barrier to participate in campus recreational sports. Also, Park, Yoh and Park (2015) tested the construct validity of the leisure constraints model in context of Asian international college students. Their results indicated that the leisure constraints model is useful and relevant when examining non-traditional populations, based on the model's ability to explore demographical and contextual influences. Continuing the trend to expand the theoretical relevance of the model for non-traditional populations, the current study also employed the modified constraints model (Crawford et al., 1991).

The understanding of international students' participation (or lack thereof) in America's higher education intramural sport programs is an unexplored topic that has received little attention among scholars (Elkins & Beggs, 2007; Shifman et al, 2012; Sturts & Ross, 2013). Considering the continuous increase in enrollment of international students in higher education it is important for campus recreation administrators to research students' wants, needs and potential constraints that limit their participation through one of higher education's most beneficial resources—intramural sport programs in campus recreation centers.

Therefore, the purpose of current study was to determine 1) how the leisure constraints of international collegiate students influences their participation in intramural sport programs, 2) the relationship between the three leisure constraints and participation or non-participation of intramural sport programs, 3) the relationship between leisure constraints and demographic variables (sex, age, and years lived in the U.S.) in intramural sport programs.

Methodology

Sample

To better understand international students' leisure constraints through intramural sport participation, a convenience sample was utilized from a population of international students in two different regional public four-year universities located in the southeast and southwest regions of the United States. Both universities, where the surveys were

implemented, provide more than 20 intramural sports are offered every fall and spring semester. The survey was administered by email to approximately 2900 international students from 120 countries. From that sample, there were 250 responses, but 52 were removed due to an incompleteness of survey questions. A total of 198 student surveys were examined and used for analysis, which correlated an overall response rate of 8.62 percent. Analyses of respondent demographic showed that the study population was comprised of 44.9 percent of women, and 55.1 percent men.

Questionnaire

To examine the leisure constraints of international students, Shifman et al.'s (2011) instrument, "Interpersonal, Intrapersonal, and Structural Constraints for International Students" was modified to match the needs of the current study's investigation. The original instrument consisted of twenty-five questions, but the authors decided to eliminate some questions of the survey to meet the needs of this study. The questions were modified to indicate whether the participants had any previous or continued involvement in university intramural sport during general leisure outings. In result, the survey was reduced to seventeen question based on the authors' decision of convenience and clarity of participants due to the nature of the study.

The survey template consisted of participation questions, leisure constraint questions, and demographic questions, divided into the three leisure constraints groups (4 intrapersonal, 3 interpersonal and 10 structural constraints). Each item was measured on a five-point Likert-scale (with 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree) as a means to determine which constraints were thought by the students to be the most reoccurring restrictions to their participation in campus related activities, namely intramural sport. Questions included "I prefer to spend my leisure time doing other less competitive activities," "My friends do not participate in intramurals, so I do not," and "Studying takes up too much of my time to participate in intramurals." The only demographical questions asked were centered on sex, age and length of time living within the United States. And even though nationality of participants was collected on the survey the authors chose not to include this information for analysis because it did not match the objectives of this study.

Process

To generate participation, the students were contacted through their respective campus' office of International Students Affairs. Each university's international office allocated the surveys in a corresponding e-mail outlining the purpose and objective of

the study with a link to the survey. The link contained entry to the surveys which were uploaded and administered online through a website dedicated to survey creation, administration and data collection (e.g. Survey Monkey). Before entering the survey, the participants were informed of their anonymity in the study as their agreement to participate was designated by their clicking on the entry link of the survey in the e-mail.

Data Analysis

The software of Statistical Package for the Social Science 20 (SPSS 20) was utilized to analyze data reliability, the descriptive statistics of participation, the mean of leisure constraints, and regression coefficient. Validity of the instrument was confirmed by a panel of leisure and recreation experts and academicians that specialize in statistics and survey instruction. Reliability of the modified survey was confirmed by a Cronbach alpha coefficient measurement ($\alpha = 0.868$). To calculate the internal consistency of the 17 item leisure constraints survey, the Statistical Package for the Social Sciences 20 (SPSS 20) was implemented. Measurements for independent t-test to compare mean difference by participation or non-participation in Intramural sport programs on leisure constraints and one-way ANOVA to determine mean difference by demographic characteristics on leisure constraints were also examined by the statistical software. In this particular research, alpha was adjusted using a Bonferonni correction to control for the inflation of type I error rate. The traditional level of significance (.05) was divided by the number of comparisons which resulted in an adjusted $\alpha \leq .016$.

Results

Based on the results of the study, as shown in Table 1, there were 89 female and 109 male students in this study. The age group of 21 to 25 (40.8 %) and 26-30 (30.1 %) made up the majority of the respondents. In addition, of those international students who had been living in the United States, "Less than 6 months" or "6 months to 1 year" consisted of approximately 40 percent of the sample (Table 1).

Table 1. Demographic Characteristics Profile of Respondents.

| Demographic Characteristics | Frequency | Percentage (%) |
|-----------------------------|-----------|----------------|
| Sex | | |
| Female | 89 | 44.9 |
| Male | 109 | 55.1 |
| Total | 198 | 100 |

| Age | | |
|--|-----|------|
| -20 | 9 | 4.6 |
| 21-25 | 80 | 40.8 |
| 26-30 | 59 | 30.1 |
| 31-35 | 29 | 14.8 |
| 36-40 | 10 | 5.1 |
| 41- | 9 | 5.6 |
| Total | 198 | 100 |
| Length of time living within the United States | | |
| Less than 6 months | 38 | 19.2 |
| 6 months-1 year | 38 | 19.2 |
| 1 year-1 year 6months | 14 | 7.1 |
| 1 year 6months- 2 years | 33 | 16.7 |
| 2 years-2 year 6months | 4 | 2.0 |
| 2 year 6months-3years | 15 | 7.6 |
| 3 years-3 year 6months | 4 | 2.0 |
| 3 year 6months-4 years | 13 | 6.6 |
| More than 4 years | 36 | 18.2 |
| Missing | 3 | 1.5 |
| Total | 198 | 98.5 |

The descriptive statistics of participation analyses presented in Table 2 displays their responses to frequency of participation in competitive sport activities (general) and experience of intramural sport programs (specific). The results indicated that about 70 percent of international students do not or rarely participate in leisure time competitive sports activities at all, while less than 8 percent participate 3 or more times a week. However, fifty-three international students indicated having participated in intramural sport programs (26.8%), while 145 participants stated that they had never participated in intramural sport programs (73.2%).

Table 2. Participation on Competitive Sports Activities and Intramural Sport Programs.

| Participation (%) | Frequency | Percentage |
|--|-----------|------------|
| How often do you participate in competitive sports activities? | | |
| Frequently (3 or more a week) | 15 | 7.6 |
| Occasionally (1~3 a week) | 43 | 21.7 |

| | | |
|--|-----|------|
| Rarely (1~2 a month) | 57 | 28.8 |
| Never | 83 | 41.9 |
| Total | 198 | 100 |
| Have you ever participated in intramural sports? | | |
| Yes | 53 | 26.8 |
| No | 145 | 73.2 |
| Total | 198 | 100 |

Recognizing that there were more non-intramural participants, the researchers wanted to understand how leisure constraints influence their lack of participation. In order to examine how leisure constraints of international college students influence their participation in intramurals, the mean importance constraint scores were reported in Table 3. The items that received the highest mean ratings were; “Studying takes up too much of my time to participate in intramurals,” (structural) “My work takes up too much my time,” (structural) and “I do not know how to register for intramurals” (structural). In contrast, the lowest mean ratings of items were “Religious obligations keep me from participating in intramurals,” (interpersonal) “Language barriers keep me from participating in intramurals,” (intrapersonal) and “I have family commitments that are more important than intramurals” (interpersonal). These results indicate which of the constraint variables were rated as being the most restrictive to international students participating in intramural sport programs. Among the three leisure constraints, structural constraints ($M = 2.84$, $SD = .77$) were found to be the most powerful leisure constraints for college students to participate in competitive intramural activities, intrapersonal constraints ($M = 2.42$, $SD = .83$), and lastly, interpersonal constraints ($M=2.04$, $SD = .77$).

Table 3. Mean Importance Score on Constraints.

| Constraints | Mean | Std. Dev |
|---|------|----------|
| <i>Intrapersonal Constraints</i> | | |
| I prefer to spend my leisure time doing other less competitive activities | 2.87 | 1.31 |
| I do not understand the rules of the intramural activities | 2.60 | 1.32 |
| I do not like the intramural activities | 2.27 | 1.06 |
| Language barriers keep me from participating in intramurals | 2.00 | 1.11 |
| <i>Interpersonal Constraints</i> | | |
| My friends do not participate in intramurals, so I do not | 2.39 | 1.24 |

| | | |
|--|------|------|
| I have family commitments that are more important than intramurals | 2.24 | 1.23 |
| Religious obligations keep me from participating in intramurals | 1.49 | 0.79 |
| <i>Structural Constraints</i> | 2.84 | 0.77 |
| Studying takes up too much of my time to participate in intramurals | 3.48 | 1.31 |
| My work takes up too much my time | 3.32 | 1.31 |
| I do not know how to register for intramurals | 3.25 | 1.15 |
| I do not know where the intramural facilities are | 2.88 | 1.48 |
| I do not have own the proper equipment to play | 2.71 | 1.30 |
| The intramural website is too hard to navigate in order to get information | 2.65 | 0.94 |
| The intramural activities happen too late in the day | 2.64 | 0.89 |
| I have never heard of intramurals | 2.50 | 1.54 |
| I do not have transportation to intramurals | 2.50 | 1.30 |
| I do not have enough money for intramurals | 2.49 | 1.14 |

Note: Individuals were asked to indicate how important each constraint item was on a 5-point Likert scale ranging from 1 “strongly disagree” to 3 “neutral” to 5 “strongly agree”

In an attempt to identify differences in leisure constraints between international students who had experience in intramural sports participation and of those who did not, independent sample t-test analyses were conducted to compare sports their mean differences (Table 4). The results determined that if the mean value of participation and non-participation of intramural sport programs among international students were statistically significant based on leisure constraints. The difference between participants and non-participants of intramural sport programs in all three leisure constraints, intrapersonal [$t(196) = 7.423, p < .001$], interpersonal [$t(196) = 4.418, p < .001$] and structural [$t(196) = 7.848, p < .001$] constraints, were statistically significant and different. Mean comparison between participation and non-participation in intramural sport programs on leisure constraints indicated that non-participants had significantly higher means on all three constraints.

Table 4. Mean Difference by Participation or Non-participation in Intramural Sport Programs on Leisure Constraints.

| Constraints | df | t | Participation | | Non-participation | |
|---------------|-----|----------|---------------|-----|-------------------|-----|
| | | | M | SD | M | SD |
| Intrapersonal | 196 | 7.423*** | 1.79 | .80 | 2.67 | .71 |
| Interpersonal | 196 | 4.418*** | 1.65 | .68 | 2.18 | .77 |
| Structural | 196 | 7.848*** | 2.22 | .74 | 3.07 | .65 |

Note: *** $p < .001$

Similarly, an independent sample t-test was utilized to determine the mean differences between leisure constraints and sex. The results, as presented in table 5, revealed that the difference between females and males was not statistically significant for all three constraints based on a Bonferonni correction.

A one-way ANOVA was performed to analyze the data of the mean difference by age and length of time living within in the United States on leisure constraints. Results suggested that the mean difference by age did exist on intrapersonal constraints [$F(5, 190) = 3.281, p < .01$]. However, there was no statistical mean difference by length of time living within in the United States for any of the leisure constraints. As such, due to the statistically significant F-test on intrapersonal and structural leisure constraints, a Tukey post-hoc analysis was conducted comparing the six age group means in pair-wise contrasts. This analysis indicated intrapersonal constraints were only significantly higher for the age group of 31 to 35-year-old international students ($M = 2.75, SD = .88$) than for the age group students less than 20 years old ($M = 1.67, SD = .67$).

Table 5. Mean Difference by Sex, Age and Length of time living within in the United States on Leisure Constraints.

| | Leisure Constraints | | | | | |
|--------------|---------------------|-----|---------------|-----|------------|------|
| | Intrapersonal | | Interpersonal | | Structural | |
| Sex | | | | | | |
| <i>df</i> | 196 | | 196 | | 196 | |
| <i>t</i> | 2.487 | | -0.062 | | 0.139 | |
| | M | SD | M | SD | M | SD |
| Female | 2.59 | .80 | 2.03 | .67 | 2.85 | .73 |
| Male | 2.30 | .84 | 2.04 | .86 | 2.84 | .81 |
| Age | | | | | | |
| <i>df</i> | 190 | | 190 | | 190 | |
| <i>F</i> | 3.281** | | 2.439 | | 1.921 | |
| | M | SD | M | SD | M | SD |
| Less than 20 | 1.67 | .67 | 1.63 | .35 | 2.11 | .60 |
| 21 – 25 | 2.42 | .79 | 1.94 | .40 | 2.81 | .76 |
| 26 – 30 | 2.31 | .84 | 2.01 | .86 | 2.89 | .78 |
| 31 – 35 | 2.75 | .88 | 2.36 | .82 | 3.00 | .68 |
| 36 – 40 | 2.73 | .61 | 2.47 | .79 | 2.94 | .68 |
| More than 40 | 2.72 | .79 | 2.11 | .69 | 2.84 | 1.08 |

Length of time living within in

| the United States | | | | | | |
|---------------------|------|------|------|------|-------|-----|
| <i>df</i> | 186 | | 186 | | 186 | |
| <i>F</i> | .699 | | .659 | | 1.710 | |
| | M | SD | M | SD | M | SD |
| Less than 6 months | 2.61 | .60 | 2.06 | .65 | 3.12 | .69 |
| 6 months – 1 year | 2.43 | .84 | 2.06 | .71 | 2.82 | .79 |
| 1 year – 1 ½ month | 2.26 | .86 | 1.90 | .81 | 2.71 | .79 |
| 1 ½ month – 2 years | 2.50 | .81 | 1.96 | .70 | 2.87 | .50 |
| 2 years – 2 ½ month | 2.75 | .74 | 2.67 | .82 | 3.56 | .37 |
| 2 ½ month – 3 years | 2.17 | .88 | 2.11 | .84 | 2.54 | .79 |
| 3 year – 3 ½ month | 2.25 | .84 | 2.50 | 1.55 | 2.90 | .80 |
| 3 ½ month – 4 years | 2.46 | .85 | 1.90 | .86 | 2.74 | .79 |
| More than 4 years | 2.28 | 1.02 | 2.06 | .89 | 2.68 | .94 |

Note: ** $p < .01$

Among the participants in this study, structural constraints were the highest constraint that imposed on their ability to participate in intramural sport programs. International students who had experience participating in intramural sport programs had significantly lower leisure constraints than non-experienced students. The mean comparison of demographic variables on leisure constraints showed that sex and age were significantly different on intrapersonal constraints, and the mean difference of age existed on intrapersonal constraints. However, the results interestingly indicated that there were no significant differences between leisure constraints and length of time living within in the United States. Furthermore, the results of this study suggest that international students were significantly affected by the examined leisure constraints to participate in intramural sport programs based on their experience of participation in intramural sports, sex and age.

Discussion and Conclusion

The purpose of this study was to investigate which leisure constraints affected international college students' participation from their university's intramural sport programs. The study implemented Crawford, Jackson and Godbey's (1991) classification of leisure constraints, which includes intrapersonal, interpersonal, and structural constraints to frame this issue. Based on the results, we found that international students who participated in the current study have certain leisure constraints to participate in

intramural sport programs based on their experience with intramural sports and demographical characteristics, such as sex and age. To accommodate the large number of international students seeking greater interest in US' higher education system, it is important to understand the various range of leisure constraints that limit their participation in intramural sport programs. Addressing their leisure constraints enhances their ability to obtain an overall better quality of campus life beyond their classroom efforts.

Based on our results, about 70 percent of international students never or rarely (1~2 a month) participated in competitive sport activities, and of those participants, 73 percent have never participated in intramural sport programs due to their leisure constraints. These results reflect the purpose of this study as we sought to compare the general participation rates among international students versus their intramural participation rates that are based from their higher education institution. These results mirror Cho and Velasco's (2015) study, which described the participation rates between competitive sports and intramural sport programs among international student participants as similar where international and non-international students are 29 percent and 46.5 percent, respectively. In America, international student's significantly lower rate in competitive and intramural sport programs participation in comparison to non-international students is a significant finding that needs to be addressed. This finding is problematic when considering host international collegiate students recreational sport participation is always higher when they attend their nation's higher education institutions versus when international students travel abroad to America (Cheng et al., 2004; Masmanidis, Gargalianos, & Kosta, 2009). The researchers believe cultural differences regarding sport participation leads to a main limitation for physical activity upon their entry into American higher education institutions. This assumption is supported by Walker, Jackson and Deng (2007) who examined the effects of culture on participation and found that leisure constraints are a main hindrance to the initiation of new leisure activity among international students.

Based on the three leisure constraints measured, structural leisure constraints were the most powerful constraint on international students' participation in intramural sports. This finding supports previous research that has found that structural constraints are one of the main barriers to participation in campus recreation activities, especially among international students (Shifman et al., 2012). The structural leisure constraints, studying and working, were identified as being the main source for international

student's proclamation of inactivity. This finding reflects previous research efforts who have identified that lack of time due to work, family, or study obligation are often the highest leisure constraints to participation in intramural sport programs among international students (Guo, & Ross, 2014; Shifman et al., 2012). However, another study by Hashim (2012) revealed structural barriers were the lowest leisure constraints to participate in recreation sport participation among international students that was opposed results of this current study. Future study should investigate the specific and relevant questionnaires to examine all three leisure constraints to participate in intramural sports among international students.

It is important to note that structural leisure constraints were prevalent among both groups of international students, those who had participated in intramural sports and those who had not. However, when considering the prevalence of intramural sport programs participation between participants and non-participants, another major difference was observed: mean score results. Examining the mean scores of leisure constraints who participated in intramural sports, the results show that the participants had significantly fewer leisure constraints. In a study conducted by Masmanidis, Gargalianos, and Kosta (2009), they found that 23 percent of students who participated in campus sport programs indicated they would like to participate more often, which supports the results of the current study. These findings could presume that if international students have an opportunity to experience intramural sports, they may be more likely to participate in the future.

Lastly, examining leisure constraints among international students based on demographical characteristics, the current study found that there were notable differences based on participants' age. Intrapersonal leisure constraints negatively affected participation in the intramural sport programs of their respective campuses when examining the participant's age. The older age group of international students had significantly higher intrapersonal constraints to participate in intramural sport programs than younger students. Based on this finding, it can be assumed that it is hard to find similar age groups to participate in intramural sport programs together as they age. Older age grouped individuals may have family commitments that limit their participation in intramural sport altogether. Further study need to determine the difference of leisure constraints based on the commitments of international students' study or academic work obligation between undergraduate and graduate students.

This study examined leisure constraints to participate in intramural sports among international students in U.S. While the findings of this study, there are limitations that to be acknowledged. One of the primary limitations is the low participation rates of international students. This small sample size might not allow researchers to generalize the results of international students' participation in intramural sports. The next concern is, as it is mentioned, this current study was conducted in two universities in the southeast and southwest regions of the U.S. Furthermore, this study might not be generalized due to the specific setting of geography that international students' experience might vary based on the different geographic locations within the U.S. Lastly, one of issues with the sample is the lack of knowledge about the participants that this study did not indicate international students' classification. Based on the age range, some of participants are graduate students that should have more limitation to participate in intramural sports.

However, the objective of the current study was to allow for a better understanding the types of leisure constraints limit international students from participating in intramural sport programs in America. By understanding international students' leisure constraints to participate in intramural sports, campus recreation program administrators may be able to minimize the influence of leisure constraints on international students and facilitate their participation in intramural sport programs. As professionals seek to increase the awareness of recreation and intramural sport participation rates among international students, the current study provides insight into areas that can be developed.

To explain these phenomena, it is important to understand that the main intent of an international student to travel abroad to attend a higher education institution and may regard extracurricular activities as unnecessary. For example, many international countries do not even offer intramural sports programs in the university setting, which also limits their interactions with such customs. Considering varying cultural differences, intramural professionals might create several new programs for increasing participation in intramural sport programs that reflect numerous cultural sensitivities. Hence more reasoning as to why it is important for campus recreation administrators to focus more energy on marketing to international students and create more strategies to increase their ability and awareness of campus recreation and intramural sport programs opportunities. Future studies are needed to examine more leisure constraints on participation of general competitive sport activities and intramural sports within higher

education among international students. To further understand this phenomena, researchers could inquire about acceptable and/or attractive levels of competition to determine if competition level is a major factor that contributes to the decision making process between a competitive sport and a non-competitive activity as a leisure choice between boys and girls.

There is also a need to find better methods of educating international students about rules and norms of first-time experienced activities, such as intramural sport programs. Positive recreational endeavors, which include intramural sport programs, are an integral part of the collegiate experience and can also advance international students' acclimation to different cultures. As such, it behooves campus recreation administrators to create new outlets that can help explain what intramural sport programs are and how international students can utilize these opportunities. For example, the use of for-credit classes that teach the basics of the competitive sports could potentially improve the participation rates of international students in intramural sports programs. However, programs must take into account that in most higher education institutions, international students pay out-of-state tuition that makes taking activity classes an expensive endeavor. To counteract such instances, intramural sport programs in conjunction with the university recreation departments could develop mini-term, free courses to teach the basic skills, regulations, and etiquette of the sports offered in the intramural programs. Also, campus recreation administrators should understand the kinds of sports activities that are more familiar to international students, and add these sports to intramural sports programs that encourage international student participation.

Lastly, in response to the current study's results, it should be noted that more short-term or one-day intramural sport tournaments may be helpful in increasing the number of older international students. Seeking to attract older aged international students, it might be also beneficial to divide the participants with different groups based on participants' age, especially for the popular intramural sports. Even with the results showing that age also plays a major factor in participation, an interesting finding from the current study shows that there was no relationship between leisure constraints and length to time living within U.S. As such, the relationship between leisure constraints and time living within the U.S. is needed in future studies.

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