

ISSN: 2162-3104 Print/ ISSN: 2166-3750 Online

Volume 8, Issue 2 (2018), pp. 884-900

© *Journal of International Students*

<http://jistudents.org/>

doi: 10.5281/zenodo.1250389

Leisure Constraints to Participation in Competitive Activities and Intramural Sports: Comparing International and Domestic Students

Dongwook Cho

Alcorn State University, USA

Taryn Price

Oklahoma State University, USA

ABSTRACT

The continuous increase in enrollment of international collegiate students into higher education highlights the importance of assessing diverse leisure opportunities that meet the needs of a diverse student population. The current study assessed the influence of leisure constraints on intramural and competitive sport participation rates between domestic and international students. A total of 273 participants were included for analysis (196 domestic students & 77 international students). International students were observed to have significantly higher intrapersonal and structural leisure constraints to participate in intramural sports, while domestic students had significantly lower leisure constraints. Implications of the study's findings are discussed to include unique programming strategies for recreation and university administrators.

Keywords: competitive activities, domestic college students, international college students, intramural sports, leisure constraints

In 2014, enrollment into higher education institutions in the U.S. was 20.2 million and is expected to increase by 15 percent in 2025 (Snyder, de Brey, & Dillow, 2016). Additionally, enrollment of international students has

rapidly increased by 35.4 percent from 2003-04 to 2013-14 academic years (Witherell & Clayton, 2014). As diversity of the student's populations continues to increase, greater effort is needed to meet the known (and unknown) needs of a university's constituency. Opportunities for all collegiate students to engage in healthy lifestyle practices beyond the classroom should become a priority for administrators at higher education institutions (Brandenburg & DeWitt, 2011; Racette, Deusinger, Strube, Highstein, & Deusinger, 2005; Steptoe & Wardle, 2001; Wharton, Adams, & Hampl, 2008; Wu, Garza, & Guzman, 2015).

Focusing on the healthy behaviors of collegiate students is a reflection of research trends that suggest participation in healthy related activities during the collegiate period positively influences students' behaviors toward healthy activities in later adulthood (Leslie, Sparling, & Owen, 2001). In particular, researchers recognize that collegiate students who participate in recreational activities while in college experience reduced levels of stress (Kanters, 2000), are more satisfied with their collegiate experience (Lindsey & Sesson, 2006), and have more positive attitudes toward sports and physical fitness after graduation (Forrester, Arterberry, & Barcelona, 2006). While various outlets exist for collegiate students to develop healthy practices, a primary resource provided by higher education institutions to engage and educate students in healthy behaviors are campus recreation centers.

Campus recreation centers include group fitness classes, personal training, yoga services, and campus recreational sport programs, among other ventures. Each program is consistently recognized to have positive influences on student recruitment, retention, satisfaction, and healthy lifestyle expectations (Lindsey & Sessoms, 2006; Reed, 2007; Rothwell & Theodore, 2006; Sturts & Ross, 2013). Of particular interest, parallel to student enrollment, campus recreation's intramural sport programs have sustained popularity as a co-curricular activity available to all students due to their social, physical, and educational qualities (Allen, Drane, Byon, & Mohn, 2010). Departments of campus recreation centers include intramural sports, sport clubs, wellness programs, and outdoor programs, among other offerings. Glass, Gomez, and Uruza (2014) indicate that intramural sports programs improve students' abilities to work with diverse groups and have been observed to influence and decrease social barriers among collegiate students. However, a distinction exists between domestic and international student participation in intramural sport programming. Forrester (2014)

indicated that 75 percent of students use campus recreation facilities, programs, and services, however, there is a paucity of information to distinguish domestic student participation rates and international student participation rates. Scholars consistently illustrate cultural influences that constrain the leisure pursuits of international students more than domestic students (Glass, 2014; Glass, Gomez, & Urzua, 2014; Guo & Ross, 2014). Specifically considering intramural sports participation rates, Author and Author (2016) observed that approximately 74 percent of international students do not have any experience participating in intramural sports programs in the U.S.. These findings should raise concern regarding the balanced lifestyle university's seek to provide their students. As the population of domestic and international students continues to diversify higher education institutions, adherence to the unique needs of their student body requires a re-evaluation by administrators (Author & Author, 2016).

The imbalanced participation rates between domestic and international students in intramural sports presents one area of concern that needs to be addressed. Consistently international students express lower participation rates. Tsai and Coleman (2009) stated that international students possess different cultural constraints that may modify their collegiate experience. International collegiate students have been identified to possess unique constraints that influence experience based on social relationships, expectation of educational achievement, among other cultural influences, including language barriers (Gebhard, 2010; Taylor & Doherty, 2005). Multileveled constraints expressed by international students show how prioritized obligations associated with their educational studies and job results in feelings of guilt and discomfort when spending time on leisure pursuits (Guo & Ross, 2014; Li & Stodolska, 2006). Walker, Jackson, and Deng (2007) even hypothesized that cultural distinctions may limit the acceptance of new leisure activities among international students.

Examinations of leisure constraints have been conducted to identify unique constraints observed within different international communities. For example, Walker, Jackson and Deng (2007) compared differences in perceived constraints between Canadian and Chinese students. They found that Chinese students were more prone to interpersonal and intrapersonal constraints and Canadian students expressed greater structural constraints. Similarly, Alexandris and Carroll (1996) highlighted how Greek students expressed significant intrapersonal constraints to influence their leisure. However, there is a paucity of research examining leisure constraints

between domestic and international students' intramural participation attending the same institution (Shifman et al., 2011). According to Shifman, Moss, D'Andrade, Eichel, & Forrester (2011) international students and domestic students at the same institution who have experience in intramural sports exhibit significant differences in leisure constraints. International students were observed to have higher interpersonal and intrapersonal constraints in comparison to domestic students. While Young, Ross & Barcelona (2003) identified structural constraints to significantly hinder the participation rates of domestic students. The varying leisure constraints within each domestic and international community requires recreational professionals to be more creative in reaching such a diverse audience for continued sports participation.

A central purpose of the collegiate experience is to promote balanced lifestyle choices. Campus recreation centers are a primary contributor to this effort. There is a greater need to further examine the role and dynamics recreation plays among domestic and international collegiate students. Specifically, campus recreation programming, intramural sport participation, and non-university sport participation needs to be examined to assess the differences in constraints between domestic and international students. To further understand this issue, the hierarchical model of leisure constraints was employed to assess the leisure constraints on participation among international and domestic students in competitive activities (non-university affiliated) and intramural sport programs (university affiliated).

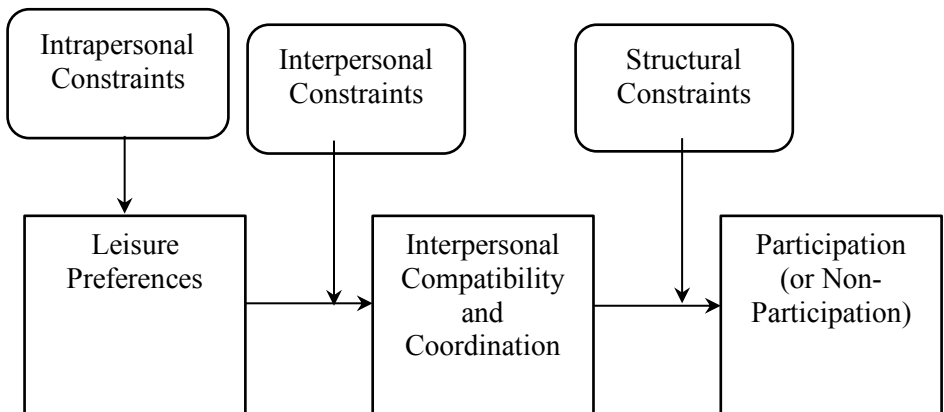


Figure 1. A Hierarchical Model of Leisure Constraints (Adapted from Crawford, Jackson, and Godbey, 1991)

Leisure Constraints Theory

Leisure constraints can be described as anything that inhibits people's time and ability to participate in leisure activities and services, or to achieve individual's satisfaction (Jackson, 1988; Jackson & Henderson, 1995). Crawford and Godbey (1987) introduced the most widely used three leisure constraints factors as 1) interpersonal, 2) intrapersonal or 3) structural leisure constraints. Crawford, Jackson and Godbey (1991) expanded the model as a hierarchical model of leisure constraints (Figure 1). Intrapersonal constraints refer to the individual's psychological barriers that arise within the individuals such as personality, attitudes or moods. Interpersonal constraints are connected to interactions through social relationships with others such as family, friends, coworkers and neighbors. Structural constraints include factors such as external conditions, the lack of opportunities, time barriers, or the financial limitations (Crawford, Jackson, & Godbey, 1991). As such, the hierarchical ordering of the model proves relevant when assessing specific constraints on participation. The presence of leisure constraints does not result in non-participation but induces the need for negotiation or alternative participation practices to overcome identified barriers (Alexandris & Stodolska, 2004).

Shifman, Moss, D'Andrade, Eichel, and Forrester (2012) created the survey "Interpersonal, Intrapersonal, and Structural Constraints for International Students" based on Crawford, Jackson, and Godbey's (1991) hierarchical model of leisure constraints and referred to previous studies to measure these constraints (Beggs, Elkins, & Powers, 2005; Young, Ross, & Barcelona, 2003). However, few studies have compared campus recreation intramural sport program participation rates between domestic and international students to include alternative physical activity opportunities students may participate. Previous studies have utilized the hierarchical model on leisure constraints to examine collegiate students' leisure constraints based on participation in campus recreational sport programs (Guo & Ross, 2014; Park, Yoh, & Park, 2015; Walker, Jackson, & Deng, 2007). The current study utilizes the hierarchical model of leisure constraints to determine whether significant participation differences exists in competitive activities (non-university affiliated) and intramural sport programs (university affiliated), and which leisure constraints (intrapersonal, interpersonal, and structural) affect participation between domestic and international students.

RESEARCH METHOD

Participants

A convenience sample was utilized for an exploratory comparison of domestic and international students from one university located in the southwest region of the United States. The university provides more than 25 intramural sport programs throughout the fall and spring semesters of a school year for an approximate total of 26,000 students with 1,800 (7%) international students and representing 100 countries. According to a university survey, about 3,500 students participated in intramural sport program throughout the academic year in 2012-2013. A total of 291 participants responded to this survey in the 2013-2014 school year, but 18 surveys were removed due to incompleteness. With the removal of invalid surveys the final tally of respondents is based on 273 participants. Analyses of respondent demographics indicated that there were 121 females and 152 male students. Seventy-seven participants self-identified to be international students and 196 participants self-identified as domestic students. All students were informed of the anonymity of the study and proper approval was obtained from the Institutional Review Board of the higher education institution of the researchers.

Participants were recruited through the university's online active research system which contained a direct link to the survey's website via email to domestic and international students. To increase international students' response rate, the authors contacted the International Student Affairs administrator who sent an e-mail of the survey link directly to international students at the university. Recognition of the participants' anonymity agreement and voluntary participation were provided and confirmed by their clicking on the entry link to the survey.

Research Instrument

Shifman et al.'s (2012) version of the leisure constraint model were employed for the current study. Shifman et al.'s (2012) instrument consists of twenty-five questions that were modified to sixteen leisure constraint questions based on the authors' decision of convenience and clarity for participants to match the objectives of the current research study. The questions were removed and assessed in a pilot study of 10 participants to ensure clarity of the modified questions. Additional questions were included

to identify whether the domestic or international student had any previous or continued involvement in intramural sports in their general leisure outings. In result, the survey consisted of three main sections (leisure constraints model) and three participation questions were added to assess degree of involvement in competitive leisure activities in general or university intramural sports. There were three questions to assess intrapersonal constraints, three questions for interpersonal constraints, and ten questions to assess structural constraints for a total of sixteen leisure constraints questions. The questions were rated on a five point Likert type scale where 1 = "strongly disagree", 2 = "disagree", 3 = "neutral", 4 = "agree", and 5 = "strongly agree" as means to determine which constraints would be the most reoccurring barriers to participation. Questions included "I do not like the intramural activities," "I have family commitments that are more important than intramurals," and "Studying takes up too much of my time." Lastly, demographic questions to classify students by sex and age were included, but these findings were not presented due to their lack of significance to the current study's objectives.

Data Analysis

Data was analyzed by Statistical Package for the Social Sciences 20 (SPSS 20) to measure to analyze the descriptive statistics of participation, data reliability, the frequency of participation in competitive sports activities and experience of intramural sports, the mean of leisure constraints and data reliability.

Validity of this instrument was based on 16 constraint questions, which was confirmed by a panel of scholars who have experience working with recreation and intramural sport participants (Author & Author, 2016; Park et al., 2015). Mainly, the insertion of 'intramural sport' was added to questions to narrow the participant's focus to a specific aspect of leisure. Reliability was evaluated by Cronbach alpha which is an accepted method when using the Likert scale. A Cronbach's alpha coefficient within 0.70 to 0.95 is considered an acceptable value of alpha for studies in the social sciences (Nunnally & Bernstein, 1994). SPSS 20 indicated that the internal consistency of the 16 leisure constraints items were reliable by Cronbach's alpha coefficient measurement ($\alpha = 0.893$).

SPSS 20 was implemented to measure the mean differences between international and domestic students' participation rates in competitive activities, and experience of intramural sports by utilizing Chi-

squared test. In addition, the Mann-Whitney U non-parametric analysis was utilized to compare the mean scores of leisure constraints between international and domestic students' participation with pre-determined alpha set a $p < .05$.

RESULTS

The frequency of participation in competitive sports activities (general) and experience of intramural sports (specific) between domestic and international students were identified (Table 1).

Table 1. Frequency, Mean, Standard Deviation, and Chi-squared Test Scores for Competitive Sports Activities and Experience of Intramural Sports: Comparison International and Domestic Students

	International		Domestic		
	<i>FRQ</i>	%	<i>FRQ</i>	%	
How often do you participate in competitive sports activities?					
Never	27	35.1	56	28.6	
Rarely (1~2 a month)	27	35.1	45	23.0	
Occasionally (1~3 a week)	20	26.0	60	30.6	
Frequently (3 or more a week)	3	3.9	35	17.9	
Have you ever participated in intramural sports?					
Yes	22	28.6	92	46.9	
No	55	71.4	104	53.1	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	χ^2
Participation in Competitive Activities	2.06	.98	2.37	1.08	18.824***
Experience in Intramural	1.71	.46	1.54	.50	7.418**

Note. *FRQ* = Frequency, % = Percent. * $p < .05$; ** $p < .01$; *** $p < .001$

Table 2. Means, Standard Deviation, and Mann-Whiney U Test Scores for Leisure Constraints: Comparison International and Domestic Students

Constraints	International		Domestic		U score
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Intrapersonal	2.43	.95	2.06	.89	5751.0**
I prefer to spend my leisure time doing other less competitive activities	2.86	1.18	2.54	1.28	6527.0
I do not understand the rules of the intramural sports	2.32	1.35	1.86	1.09	6172.0*
I do not like the intramural sports	2.10	1.06	1.77	.96	6184.5*
Interpersonal	2.02	.82	1.89	.76	6938.0
My friends do not participate in intramurals	2.43	1.37	1.99	1.10	6215.5*
I have family commitments that are more important	2.12	1.34	2.23	1.24	6980.0
Religious obligations keep me from participation	1.52	.82	1.43	.80	7035.5
Structural	2.68	.77	2.16	.77	4769.0***
Studying takes up too much my time	3.45	1.38	2.90	1.31	5734.5**
My work takes up too much my time	3.36	2.58	2.72	1.37	5557.5**
I do not know how to register for intramurals	2.69	1.43	2.11	1.18	5856.0**
I do not know where the intramural facilities are	2.47	1.36	1.98	1.19	6026.5**
I do not have own the proper equipment to play	2.77	1.17	2.23	1.19	5640.0**
The intramural website is too hard to navigate in order to get information	2.56	1.00	2.01	.95	5249.0***
The intramurals happen too late in the day	2.58	.91	2.61	1.18	7534.0
I have never heard of intramurals	2.22	1.40	1.57	1.16	5308.0***
I do not have transportation to intramurals	2.31	1.20	1.63	.90	5022.0***
I do not have enough money for intramurals	2.38	1.18	1.85	1.05	5650.5**

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”

*p < .05; **p < .01; *** p < .001

Results revealed that more than 70 percent of international students never or rarely participated in competitive sports activities, while around 52 percent of domestic students did participate in competitive sport activities. Comparing participation rates showed that 18 percent of domestic students participated in competitive sports activities frequently, but only 4 percent of international students participated at that rate. Similarly, more than 70 percent of international students had never participated in intramural sports, while approximately 53 percent of domestic students did not have any experience in intramural sports. Lastly, the chi-squared test showed that there were statistical differences between international and domestic students, where international students had significantly lower frequency of participation in competitive sports activities and lower experience in intramural sports.

In order to determine how leisure constraints influence participation in intramural sports, and if there were significant differences between international and domestic students, the mean importance constraints scores were evaluated (Table 2).

Among 16 items, the highest mean rating observed for both international and domestic students was: "Studying takes up too much of my time," (structural) and "My work takes up too much my time" (structural). However, the third highest mean rating was "I prefer to spend my leisure time doing other less competitive activities" (intrapersonal) for international students, and "The intramurals happen too late in the day" (structural) for domestic students. Among the three leisure constraints for both international and domestic students, structural constraints were found to be the most powerful followed by intrapersonal constraints, and lastly, interpersonal constraints. The results also revealed that the mean of all three leisure constraints were higher among international students and international students had significantly higher intrapersonal and structural constraints than domestic students.

DISCUSSION AND IMPLICATIONS

The current study compared participation rates in intramural sport and competitive sport offerings, and explored which leisure constraints influenced participation rates between domestic and international students at the same institution. Based on the results, more than 70 percent of international students never or rarely participated in competitive sports

activities and did not have any experience in intramural sports in comparison to roughly 50 percent of domestic students. This is an important indication as distinctions in leisure constraints greatly influence awareness and participation in intramural sport programming and competitive sport participation between both social groups. The lower participation rates among international students in comparison to domestic students shows that greater attention to engaging international students in competitive and intramural sport participation is still needed. The continued imbalance in participation rates among research findings leaves the researchers to believe that international students may lack an understanding of intramural and competitive sport participation's collective benefit. Faced with varying educational, social, and psychological pressures when entering American higher education institutions creates greater barriers for international students to overcome. The continued identification of increased constraints to international student's intramural and competitive leisure participation should add pressure to higher education and recreation administrators. Campus recreation managers should partner with University administrators and community recreation programmers in the development of strategies to increase intramural sport programs' attractiveness and accessibility. Specifically, campus recreation administrators and university international service administrators should collaborate to advertise the benefits of participation and encourage participation in intramural sport offerings that allow domestic and international students to network.

Assessing leisure constraints between domestic and international students, the researchers echo previous findings and observed that domestic students had significantly lower and distinctly different leisure constraints in comparison to international students (Shifman et al, 2011). Evaluating the extent of leisure constraints between international and domestic students, the results showed that international students had significantly higher intrapersonal and structural leisure constraints than domestic students. These findings support previous studies that have shown differences of perceived constraints by students from different cultures (Chick & Dong, 2003; Dong & Chick, 2012; Li & Stodolska, 2006; Walker & Wang, 2008). Campus recreational administrators may consider reducing international students' structural constraints by revamping the structure and availability of intramural sport offerings. The researchers propose providing short duration activity programs or activities that occur later in the evening or during the

weekends may be more beneficial to international students' intramural sport participation.

Also, intramural administrators might consider sponsoring competitive sport programs that can attract diverse populations to alleviate intrapersonal constraints. In some cases, developing recreational sport programs that are more familiar to international student demographics could increase participation rates. In addition, the increased availability of popular cultural sporting activities provides greater opportunities for domestic students to participate in non-traditional sport programs. As such, it is important for practitioners at each institution to review some of their programming strategies and administer a survey to better understand the demographics of their institution to determine interest in specific competitive activities.

Lastly, while not a significant finding, interpersonal constraints was also higher among international students than domestic students. Increased efforts to engage international and domestic students is needed. As international students exhibit a lower population rate in comparison to domestic students, intramural and competitive sport opportunities is a great opportunity for both groups to interact, learn, and engage with one another. Developing educational leagues that enmeshes domestic and international students in various intramural sport and competitive programs can assist in this effort. For example, the adoption of more educational leagues has the ability to alleviate potential embarrassment of being unfamiliar with common leisure practices while learning and engaging with other students to enhance social cohesion among both social groups.

CONCLUSIONS AND LIMITATIONS

The current study provides insight into the leisure constraints affecting international and domestic students' intramural and competitive sport participation in university intramural programs. International students consistently possess higher intramural and competitive sport leisure constraint levels when compared to domestic students. Campus recreation professionals and various campus entities, such as Student Affairs and International Studies offices, are in need of creating partnerships that allow for the increased accessibility and educational sport program offerings of various intramural and competitive sport programs that can attract international and domestic students alike. Non-traditional programming

efforts are needed to ensure a well-rounded collegiate experience for international and domestic student's engagement throughout their collegiate careers. Campus recreation centers afford diverse social interactions, enrich the collegiate experiences, and provide long term personal and professional value that cannot be overlooked. As such, campus recreation professionals are uniquely positioned to contribute to this effort through intramural programming.

As with many research studies, the current study is provided with limitations. Due to the low participation rate, the study cannot be generalized to international students at all American colleges, but it does create opportunities for additional research efforts. The inclusion of other institutions would bolster the generalizability of the current research findings. Future research efforts should consider examining cultural differences in leisure constraints, and how these affect the motivation of international students to participate in intramural sport programs, among other campus recreation programming opportunities. Also, qualitative inquiries can be employed to understand cultural and international distinctions in leisure constraints international students may observe within American universities. In the same vein, understanding the leisure constraints of American students that attend college abroad should be considered. Understanding the experience of international and American students at international institutions can provide a more holistic view of this concern. Lastly, the current study did not specify any demographical differences on leisure constraints. Examination of demographical distinctions, such as duration of stay, gender, can also provide greater understanding to the cultural influence on leisure constraints in competitive sport and intramural sport programming.

REFERENCES

- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies, 16*, 107-126.
- Alexandris, K., & Stodolska, M. (2004). The influence of perceived constraints on the attitudes toward recreational sport participation. *Society and Leisure, 27*, 197-217.
- Allen, J. T., Drane, D. D., Byon, K. K., & Mohn, R. S. (2010). Sport as a vehicle for socialization and maintenance of cultural identity: International students attending American universities. *Sport Management Review, 13*, 421-434.

- Artinger, L., Clapham, L., Hunt, C., Meigs, M., Milord, N., Sampson, B., & Forrester, S. (2006). The social benefits of intramural sports. *National Association of Student Personnel Administrators Journal*, 43, 69-86.
- Beggs, B. A., Elkins, D. J., & Powers, S. (2005). Overcoming barriers to participation in campus recreational sports. *Recreational Sports Journal*, 29(2), 143-155.
- Brandenburg, U., & de Wit, H. (2011). The end of internationalization. *International Higher Education*, 62, 15-17.
- Chick, G., & Dong, E. (2003). *Possibility of refining the hierarchical model of leisure constraints through cross-cultural research*. Paper presented at the 2003 Northeastern Recreation Research Symposium. Lake George, NY. Retrieved from
- Cho, D., & Price, T. (2016). Examining the leisure constraints affecting international college students' participation in intramural sport programs. *International Journal of Sport Management, Recreation and Tourism*, 24(b), 22-41.
- Crawford, D. W., & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure sciences*, 9(2), 119-127.
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure sciences*, 13(4), 309-320.
- Dong, E., & Chick, G. (2012). Leisure constraints in six Chinese cities. *Leisure Sciences*, 34(5), 417-435.
- Forrester, S. (2014). *The benefits of campus recreation*. Corvallis, OR: NIRSA
- Forrester, S., Arterberry, C., & Barcelona, B. (2006). Student attitudes toward sports and fitness activities after graduation. *Recreational Sports Journal*, 30(2), 83-94.
- Gebhard, J. G. (2010). *What do international students think and feel? Adapting to US college life and culture*. Ann Arbor, MI: University of Michigan Press.
- Glass, C. R., Gómez, E., & Urzua, A. (2014). Recreation, intercultural friendship, and international students' adaptation to college by region of origin. *International Journal of Intercultural Relations*, 42, 104-117.
- Gomez, E., Urzua, A., & Glass, C. (2014). International student adjustment to college: Social networks, acculturation, and leisure. *Journal of Park and Recreation Administration*, 32, 7-25.
- Guo, Q., & Ross, C. M. (2014). An exploratory study of Asian international students' campus recreational sports participation. *Recreational Sports Journal*, 38(1), 55-68.
- Hashim, H. A. (2012). Perceived barriers to recreation sport participation in university students: A comparison between international and local students in the United States. *Pertanika Journal of Social Science and Humanities*, 20(1), 197-203.

- Jackson, E. L. (1988). Leisure constraints: A survey of past research. *Leisure sciences, 10*, 203-215.
- Jackson, E. L., & Henderson, K. A. (1995). Gender-based analysis of leisure constraints. *Leisure Sciences, 17*, 31-51.
- Kanters, M. A. (2000). Recreational sport participation as a moderator of college stress. *Recreational Sports Journal, 24*(2), 11-24.
- Knight, J. (2013). The changing landscape of higher education internationalisation— for better or worse?. *Perspectives: Policy and practice in higher education, 17*(3), 84-90.
- Leslie, E., Sparling, P. B., & Owen, N. (2001). University campus settings and the promotion of physical activity in young adults: lessons from research in Australia and the USA. *Health Education, 101*(3), 116-125.
- Li, M. Z., & Stodolska, M. (2006). Transnationalism, leisure, and Chinese graduate students in the United States. *Leisure Sciences, 28*(1), 39-55.
- Lindsey, R., & Sessoms, E. (2006). Assessment of a campus recreation program on student recruitment, retention, and frequency of participation across certain demographic variables. *Recreational Sports Journal, 30*(1), 30-39.
- Nunnally, J. C., & Bernstein, L. (1994). *Psychometric theory (3rd ed.)*. New York, NY: McGraw Hill.
- Park, Y., Yoh, T., & Park, M. (2015). Testing a leisure constraints model in the context of Asian international students. *International Journal of Sport Management, Recreation and Tourism, 20*, 58-83.
- Racette, S. B., Deusinger, S. S., Strube, M. J., Highstein, G. R., & Deusinger, R. H. (2005). Weight changes, exercise, and dietary patterns during freshman and sophomore years of college. *Journal of American College Health, 53*(6), 245-251.
- Reed, J. (2007). Perceptions of the availability of recreational physical activity facilities on a university campus. *Journal of American College Health, 55*(4), 189-194.
- Rothwell, E., & Theodore, P. (2006). Intramurals and college student development: The role of intramurals on values clarification. *Recreational Sports Journal, 30*(1), 46-52.
- Shifman, R., Moss, K., D'Andrade, G., Eichel, J., & Forrester, S. (2012). A comparison of constraints to participation in intramural sports between international and noninternational students. *Recreational Sports Journal, 36*(1), 2-12.
- Snyder, T. D., de Brey, C., & Dillow, S. A. (2016). Digest of Education Statistics 2015, NCES 2016-014. *National Center for Education Statistics*. Institute of Educational Sciences, U.S. Department of Education. Washington, DC.
- Step toe, A., & Wardle, J. (2001). Health behaviour, risk awareness and emotional well-being in students from Eastern Europe and Western Europe. *Social*

- Science and Medicine*, 53(12), 1621-1630. doi: [http://dx.doi.org/10.1016/S0277-9536\(00\)00446-9](http://dx.doi.org/10.1016/S0277-9536(00)00446-9)
- Sturts, J. R., & Ross, C. M. (2013). Collegiate intramural sports participation: Identified social outcomes. *International Journal of Sport Management, Recreation and Tourism*, 11, 25-41.
- Taylor, T., & Doherty, A. (2005). Adolescent sport, recreation and physical education: experiences of recent arrivals to Canada. *Sport, Education and Society*, 10(2), 211-238.
- Tsai, E. H. L., & Coleman, D. J. (2009). The influence of constraints and self-efficacies on participation in regular active recreation. *Leisure Sciences*, 31(4), 364-383.
- Walker, G. J., Jackson, E. L., & Deng, J. (2007). Culture and leisure constraints: A comparison of Canadian and mainland Chinese university students. *Journal of Leisure Research*, 39, 567-590.
- Walker, G. J., & Wang, X. (2008). The meaning of leisure for Chinese/Canadians. *Leisure Sciences*, 31(1), 1-18.
- Wharton, C. M., Adams, T., & Hampl, J. S. (2008). Weight loss practices and body weight perceptions among US college students. *Journal of American College Health*, 56(5), 579-584.
- Walker, G. J., Jackson, E. L., & Deng, J. (2007). Culture and leisure constraints: A comparison of Canadian and Mainland Chinese university students. *Journal of Leisure Research*, 39(4), 567-590.
- Witherell, S., & Clayton, E. (2014). Open Doors 2014: International students in the United States and study abroad by American students are at all-time high. *Institute of International Education*. Retrieved from <http://www.iie.org/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2014/2014-11-17-Open-Doors-Data#.WBIVJ9UrJpg>
- Wu, H., Garza, E., & Guzman, N. (2015). International student's challenge and adjustment to college. *Education Research International*, 2015, 1-9.
- Young, S. J., Ross, C. M., & Barcelona, R. J. (2003). Perceived constraints by college students to participation in campus recreational sports programs. *Recreational Sports Journal*, 27(2), 47-62.

DOGNWOOK CHO, Ph.D. is an assistant professor in the Department of Health, Physical Education, and Recreation, Alcorn State University. The primary areas of his research interest are physical and leisure activities, recreation, exercise, and sport participation with different age groups, racial minorities, and ethnic groups. E-mail: dcho@alcorn.edu

TARYN PRICE, Ph.D. is an assistant professor in the School of Kinesiology, Applied Health and Recreation, Oklahoma State University.

Her current research interests include youth sport leadership development, recreational sport for youth development, leadership, and social issues related to race and gender in recreation and sport. E-mail: taryn.price@okstate.edu

Manuscript submitted: June 1, 2017

Manuscript revised: October 1, 2017

Accepted for publication: November 1, 2017