

DETERMINANTS AND CONSTRAINTS TO OUTDOOR RECREATION PARTICIPATION IN NASARAWA LOCAL GOVERNMENT, KANO METROPOLIS

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Abstract

This study examined the effects of socioeconomic and demographic determinants and constraints to participation in outdoor recreation in Nassarawa Local Government Area, Kano metropolis. The study is built on the premise that, the determinants do not only affect decisions on participation in outdoor recreation, but also the type of recreation activity to be engaged in, and can consequently either facilitate or pose constraints upon people's desire to participate. Structured questionnaire were used to collect information from 400 residents. Three hundred and eighty-six (386) questionnaires were retrieved and used for the analysis (96.5% response rate). The study adopted multi-stage sampling techniques which employ the use of cluster, systematic and simple random sampling to administer the questionnaire to the target respondents. Descriptive and inferential statistics were used for the analysis. The finding reveals that, of all the socio-economic and demographic determinants studied only gender ($\text{Exp}(\beta) = 2.289, p=0.021$) and age ($\text{Exp}(\beta) = 1.055, p=0.005$) were statistically significant. Among the 20 different perceived outdoor recreation constraints investigated, the study found 'security and personal safety' ($M=3.24$) as the most perceived constraints which was ranked 1st. While, 'having physical disability' ($M=1.92$) and 'having household member with physical disability' ($M=1.80$) were the least perceived constraints ranked, 19th and 20th respectively. However, the study further explained the relationship between the various socio-economic and demographic determinants and participation in 24 different facility-based and non-facility based outdoor recreation activities as well as the constraints to provide the basis for policy recommendations. The result of the study has also been able to identify that, both the choice of outdoor recreation activity and the perception of outdoor recreation constraints are associated with certain socioeconomic and demographic determinants.

Keywords: Recreation, Outdoor, Constraints, Determinants, Planning, Participation

Introduction

Outdoor recreation connotes people's engagement in a leisure pursuit in an open air and mostly outside home. It usually may involve activities undertaken close or away from home or community-requiring travelling to a distance place. Participation in outdoor recreation has become popular since Second World War which has resulted in numerous studies attempting to explain and predict outdoor recreation participation (Hendee, 1969). Participation in outdoor recreation is necessary because of its direct mental, emotional, psychological as well as social significance. Recreation participation is intrinsically motivated in nature (Li and Wang, 2012) but however there may be other externally driven factors which easily determine person's ability to engage in recreational activities and are often referred as determinants.

These factors are age, income, marital status, education level, and personality, relationship with friends, gender, neighbourhood, family, occupation, culture, subculture, ethnicity, environmental attitude and behaviour, among others. All these demographics, social and economic determinants have different impacts on the decision-making process, demand structure, hobbies, lifestyle, and the preferred recreation activity type among others (Ardahan and Mert, 2014). Many researchers have

studied the effect of these determinants on outdoor recreation participation, specific recreation activities and the constraints as well (Lee, Scott, and Floyd, 2001; Romild, Fredman and Wolf-watz, 2011; Ardahan and Mert, 2014; Johnson, Bowker and Cordell, 2001). For example, Lee, Scott and Floyd (2001) found income, education and occupation to have a positive significant effect on participation in outdoor recreation activities. Similarly, Ardahan and Mert (2014) found significant effects of age, gender, income, occupation, education level, marital status, among other factors affecting participating in outdoor recreation activities of cycling, trekking and mountaineering by using Probit Model, as a Turkey case.

According to Romild, Fredman and Wolf-watz (2011) recreational participation can be linked to several types of determinants internally related to the individual, such as demographic, socioeconomic, and situational characteristics (e.g., age, income and time resources) in addition to external factors such as the availability and accessibility of recreation resources. These determinants decide not only the type of recreation activity to be engaged in, but also the level of participation, and they can consequently either facilitate or pose constraints upon people's desires to participate.

There are various researches conducted on constraints to participation in recreation (Crawford and Godbey, 1987; Crawford, Jackson and Godbey, 1991; Johnson, Bowker and Cordell, 2001; Hamidreza, 2014). Lack of time, financial problems, inadequacy of outdoor recreational areas, lack of companion, and health problems are identified as major constraints to participation in recreation in many studies (Kara and Demirci, 2010; Hamidreza, 2014). ABD'Razack, Martins and Bello (2013) also reported lack of time as the most important constraint to enable people participates in outdoor recreational activities. Similarly, Johnson, Bowker and Cordell (2001) studied the effects of socio-demographic factors on constraints to outdoor recreation participation.

Although a number of researches has been conducted on outdoor recreation in Nigeria, for example, (ABD'Razack, Martins and Bello, 2013; Akinyemi and Oduntan, 2015; Akitoye, 2016; and Sulyman and Orliam, 2016). However, the focus of the majority of the researches has largely been on assessing the preferences and behaviours of residents to outdoor recreation by failing to explore the condition or factors that allow residents to or not participate in outdoor recreation. Yet, very few were able to relate the level of participation from the residents perceived constraints. Observations indicated that, Nassarawa is a distinctive Local Government Area of the Kano Metropolis exhibiting some elements of physical planning. The area is strategically planned to depict high, medium and low density developments occupied by people of different socioeconomic background. In addition to that, Nassarawa, has abundant outdoor recreation facilities (both private and public) such as Recreational Parks, Golf Course, Race Course, Polo Field, Football Fields (including mini stadia), Event Centres, Basketball Courts, Lawn Tennis and Volleyball Courts and several other recreational opportunities for bicycling, running, jogging, cycling, visiting museum, zoo, et cetera, that provide the residents with relative opportunity for participation.

It is in view of this, that, this study attempts to investigate the socioeconomic determinants and constraints to participation in outdoor recreation among residents of Nassarawa Local Government Area, Metropolitan Kano. A study like this is very crucial since recreational preferences and behaviours of people vary across cultures and space with respect to socio-demographic characteristics. The result will provide useful information to policy and decision makers in addressing the constraints for effective participation in outdoor recreation as well as in planning for the provision of recreational facilities.

Literature Review

A number of studies (Lee, Scott, and Floyd, 2001; Romild, Fredman and Wolf-watz, 2011; Longo, Badia and Orgaz, 2013; Ardahan and Mert, 2014; Yechen, 2015) have previously examined the relationship between socioeconomic determinants and outdoor recreation. The findings of these studies reveal that, the effects of these determinants vary with context. For example, in the studies of Lee, Scott,

and Floyd (2001); Romild, Fredman and Wolf-watz (2011); Ardahan and Mert (2014) and Yechen (2015) gender, age, income, occupation, education level, were found to have significant influence of individual participation in outdoor recreation. Longo et.al (2013) on the other hand, reported gender to have insignificant effect.

Recreational constraints are defined as factors preventing people from participating in recreational activities or reducing the benefit which is expected from recreational activities (Kara and Demirci, 2010). Following Henderson (1991), Johnson, Bowker and Cordell (2001) define outdoor recreation constraint as “anything that inhibits people’s ability to participate in leisure activities, to spend more time doing so, to take advantage of leisure services, or to achieve a desired level of satisfaction”. The constraints may be internal such as personal skills, abilities, knowledge, and health problems; or external factors such as lack of money, time, transportation, and inadequate facilities (Jackson, 1988).

Following hierarchical model developed by Crawford and Godbey (1987), Crawford, Jackson and Godbey (1991) identified three constraints categories. They are structural, interpersonal (or internal), and intrapersonal. Structural constraints are those constraints commonly conceptualized as intervening factors in leisure preferences and participation e.g., availability of opportunity, financial resources, work time, season, climate, etc. While, interpersonal constraints come as a result of interpersonal interactions e.g., lack of companion. On the other hand, an intrapersonal constraint has to do with psychological conditions specific to individual. This constraint interacts with preferences rather than intervening in preferences and participation. Consequently, Sulyman and Iorliam (2016) expressed that; the amounts of limitations imposed by the recreational constraints vary from one person to another and often from one society to another depending on social values and traditions. Despite the variations however, these recreational constraints individually or collectively act together to shape people’s recreational behaviours and participation (Sulyman and Iorliam 2016).

It is important to note that, as participation in outdoor recreation activities varies, constraints also vary greatly. The most frequently mentioned constraints include time, gender, income, distance, age, health, lack of companion, lack of knowledge/information and safety among others as indicated in a number of empirical studies. For example, see (Johnson, Bowker and Cordell, 2001; Kara and Demirci 2010; Sulyman and Iorliam 2016; and Abdulrazak, Martins and Bello 2013). But, Akitoye (2016) observed attitude to have more influence on recreational participation other than availability of facilities, safety and security among other major constraints identified by previous studies.

Gender roles have been considered in many studies including recreation. Leisure constraints researches have examined differences in constraints experienced by men and women. Without a question, social norms have influenced roles appropriate for men and women throughout history (Hamidreza, 2014). Outdoor recreational activities have historically been the domain of men and as such women often face real constraints (Dooley, 2016). A number of factors or constraints affect female participation in outdoor recreational activities. They include lack of time due to family responsibility, fear of assault, lack of confidence, safety and security, overcrowding and marital issues among others (Hamidreza, 2014). In Johnson, Bowker and Cordell (2001) gender was significant in four of the constraints equations for participants- ‘personal safety,’ ‘inadequate facilities,’ ‘inadequate information,’ and ‘outdoor pests. Meaning that, women are most likely to feel constrained in four of the constraints than men. Other researches also argued that, despite the numerous constraints that women encounter, the outdoors is no longer the strict domain of men as more women than ever before are participating in various forms of outdoor education, recreation, and adventure (Boniface, 2006; Henderson and Hickerson, 2007; Henderson, Heather, and Gibson, 2013; Dooley, 2016).

Study Area and methods

Nassarawa Local Government Area (L.G.A) is located within Kano Metropolis, Nigeria. It has an approximate area of 63.15km² (6315ha). The area lies between longitude 8°32’E and 8°37’E, as well

as between latitude 12°02'N and latitude 11°58'N. It has a population of 596,411 (2006) and a projected population of 898,218 (2019) at 3.26% growth rate. It shares boundary with Ungoggo L.G. A. to the north, Fagge L.G.A. to the northwest and Gezawa L.G.A. to the East. It is bounded with Tarauni L.G.A. to the south and Kano Municipal to the west and Kumbotso to the southeast (fig. 1.1). The Local Government covers 11 wards and these are: Dakata, Gama, Gwagwarwa, Tudun Wada, Kawaji, Giginyu, Badawa, Kawo, Hotoron Kudu, Hotoron Arewa, and Tokarawa.

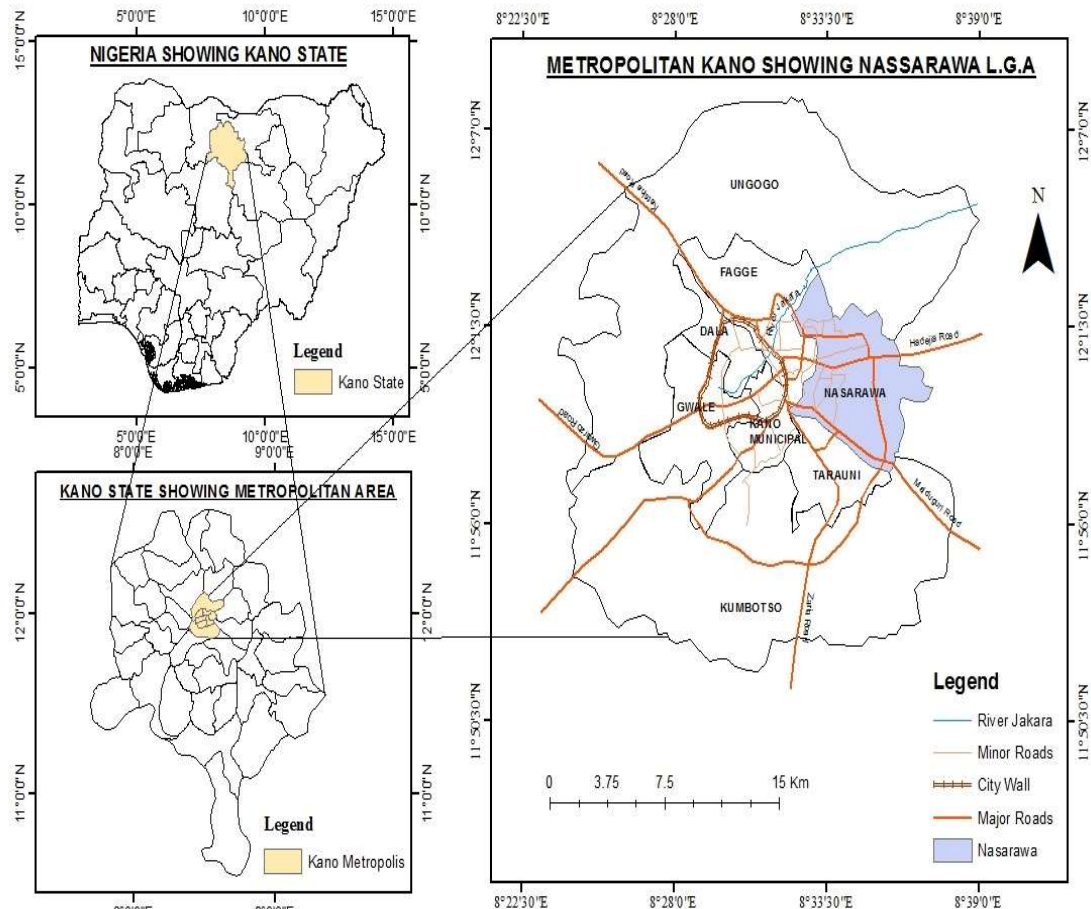


Figure 1: Nassarawa L.G. in The National Context

Source: GIS Lab-URP Dept. KUST, Wudil

Survey research was adopted for the study which employed quantitative method of data collection. The survey covered 11 wards of Nassarawa Local Government Area which were identified as clusters in this study with a total number of 99,137 houses. Sample size was calculated from the formula: $n = \frac{N}{1 + N(e)^2}$ (Yamane, 1967) as $n = 400$. Where; 'n' is the sample size, 'N' population size, and 'e' level of error tolerance represented by the confidence limit of 0.05. Therefore, the sample size obtained using this formula was 399.99 approximated to 400 at 95% confidence level and this represented the total number of respondents that were administered questionnaires. The calculation is demonstrated as follows:

$$n = \frac{99137}{1 + 99137(0.05)^2} = 399.99$$

The research employed a Multi-stage sampling technique where: Cluster sampling was first used which divided the population of the study area into 11 clusters according to wards; second, systematic sampling (at 5th interval) was used in selecting the household from within each sub cluster; and third, randomly selecting the respondents from each systematically selected household. This technique is important for this study as the population of the study area is distributed in sub clusters. The copies of questionnaires to be distributed in each cluster were determined by multiplying the percentage of houses of each cluster with total number of questionnaires divided by 100 as shown in the Table 1.

Table 1 Summary of Questionnaire Distribution and Retrieval

S/N	Wards	Total number of houses*	Percentage of the total houses	No. of Questionnaires Administered	No. of questionnaire s retrieved
1	Kawaji	9,739	9.82	39	39
2	Dakata	13,039	13.15	53	53
3	Giginyu	3,451	3.48	14	13
4	Gama	16,249	16.39	66	58
5	Hotoron Arewa	28,456	28.70	115	114
6	Hotoron Kudu	6,535	6.59	26	25
7	Tudun Wada	1,433	1.46	6	6
8	Gwagwarwa	2,787	2.81	11	11
9	Badawa	6,806	6.87	27	24
10	Tokarawa	2,063	2.08	8	8
11	Kawo	8,579	8.65	35	35
TOTAL		99,137	100	400	386

*Source: Kano State House Numbering and Street Naming Data (2013)

A total of 400 copies of questionnaire were distributed across 11 clusters in the study area. The targeted respondents were any adult member of the household (age 15 and above) who is living in the study area. Three hundred and eighty-six (386) copies of questionnaire were retrieved and used for the analysis of this study (96.5% response rate). The total number of houses in each cluster was taken into consideration in determining the number of questionnaires to be distributed. Both descriptive and inferential statistics were used for the analysis of data in this study. The perception of constraints was measured on a Likert scale of 5 points, where 5 denotes strongly agree and 1 denotes strongly disagree.

Results and Discussion

The result of the socioeconomic characteristics of the respondents (Table 2) shows that 78.2% are males, while females account for 21.8% of the study sample. The larger proportion of male responses compared to that of the female was largely as a result of the fact that, men were usually the household heads. According to Ayeni (2012) in Nigerian culture “men tend to take important decisions concerning the households. It is not an overstatement to say that housewives would usually keep questionnaires of this nature for their husbands or ask the researcher to come back when their husbands are available”. This can affect participation in outdoor recreation as their participation may be influenced by their husband’s decision. Regarding age, 85.8% of the respondents were between the ages of 15-45 years (M=32.92, SD=12.09). Given that the majority of the respondents are within

active age of 15-45, it could be presumed that, the respondents have a high tendency to participate in outdoor recreation as age has effect on the ability of individuals to actively engage in outdoor recreation.

Marital status and household or family size are one of the important factors that could determine individual ability to engage in outdoor recreation. The marital status in the table 2 reveals that, majority of the respondents are single representing 51.6% of the total responses while 42.7% indicated married status. Although, the percentage of widow and divorced was insignificant compared to that of single and married it could also have effect on outdoor recreation participation. Moreover, the household size of 1-3 members constitutes the majority of the respondents representing 57.0%. It is, however, not strange to see that, more than half of the respondents fall within the category of 1-3 persons in a family which form the majority of the respondents. This larger percentage was possibly constituted by youthful respondents who are usually single and this could influence the level of outdoor recreation participation in the study area.

Educational attainment and employment status influence one's ability to participate in outdoor recreation as education exposes individual to a wide-range of recreation benefits, while employment status could have effect on individual's ability to have more time to engage in. Table 2 also reveals that majority of the respondents are literate with 30.6% having Senior Secondary Certificate (SSCE) and 23.6% ND/NCE certificates. The former are usually students with minimum of secondary certificate who are yet to possess or finish their studies at various colleges and Universities. Also, about 33.2% holds no lower than Higher National Diploma and/or Bachelor degree.

Table 2: Socio-economic Characteristics of Respondents

Socioeconomic Characteristics	Frequency (N)	Percentage (%)
Gender	Male	78.2
	Female	21.8
Age Ranges (years) Mean=32.92 SD=12.09	15-25	29.8
	26-35	36.8
	36-45	19.2
	46-55	7.5
	56-65	4.9
Marital Status	66 and above	1.8
	Single	51.6
	Married	42.7
	Widow	2.8
	Divorcee	2.8
Household Size	1-3	57.0
	4-6	18.1
	7-9	11.1
	10-12	6.7
	13 and above	7.0
Education Status	No formal education	6.7
	Primary	6.0
	SSCE	30.6
	ND/NCE	23.6
	HND/BSc	22.3
Employment Status	PG to Masters	8.3
	PhD	2.6
	Private sector/self employed	40.2
	Public/civil sector	22.3
	Unemployed	15.0
Monthly Income (₦) Mean= ₦73,821.84	Retiree	3.1
	Students	19.4
	≤20,000.00	49.2
	21,000-40,000	16.1
	41,000-60,000	13.7
	61,000-80,000	4.9
	81,000 and above	16.1

Source: Field Work, 2019

On the other hand, the findings also revealed that, Nassarawa Local Government of Kano Metropolis is the area that has high percentage of literate people with only 6.0% and 6.7% of those with primary and those with no any formal education correspondingly. This is unsurprised because it's the area that comprises different cluster of high and middle class people of the city with high standard of living. About 62.5% of the respondents are employed. Students also constitute 19.4% which is a larger percentage compared to that of unemployed and retirees with 15.0% and 3.1% respectively. Furthermore, it can be reiterated that employment and educational status of the respondents could have effect on outdoor recreation participation.

Nearly 50.0% of the respondents earned ≤₦20,000.00 while only 16.1% earned monthly income above ₦81,000.00. The mean monthly income of ₦73,821.84 indicated that, the Nassarawa local

government of metropolitan Kano is an area of people with high standard of living and this could influence their participation in outdoor recreation. This is because income level of people may impel their ability to spend for recreation.

Socioeconomic Characteristics as Determinants of Outdoor Recreation Participation

Table 3 present a Binary Logistic Regression of participation in outdoor recreation. Based on one or more independent variables, binary logistic regression is used to predict the likelihood that something happens or falls into one of the two dichotomous categories of a dependent variable (Yechen, 2015). With this, two categories of dependent variable (participants and non-participants) coded as '0' and '1' were used respectively. Others such as gender, age, monthly income, qualification, employment status, marital status and household size were used as independent variables. For the purpose of this analysis, variables with more than two categories such as qualification and employment status were recoded into two categories. For instance, respondents who had lower than Bachelor Degree were grouped as Non-graduates while those BSc or higher were regarded as Graduates coded '0' and '1' respectively. For employment status, respondents who are working with private sector or self-employed and public sector were grouped as 'employed' while retirees, students and unemployed are grouped as 'unemployed' also coded as binary (Employed=0, Non-employed=1).

The model (Binary Logistic Regression) was significant, $X^2=27.093$, $p<0.001$, explaining 13.1% Nagelkerke R^2 . However, of all the socio-economic and demographic determinants tested, only gender ($\text{Exp}(\beta)=2.289$, $p=0.021$) and age ($\text{Exp}(\beta)=1.055$, $p=0.005$) were statistically significant. Others such as monthly income, qualification, employment, marital statuses and household size were found to have insignificant effects on participation in outdoor recreation. This is in contrast with the findings of the previous studies (Lee, Scott and Floyd, 2001; Ardahan and Mert, 2014; and Yechen, 2015) who found income, education and occupation and marital status to have a significant effect on participation in outdoor recreation. The finding of this study only agrees with Ardahan and Mert (2014) on age and gender factors. On the contrary, Longo, Badia and Orgaz (2013) found gender to have insignificant effect of participation in recreation among Spanish children and adolescents.

Table 3: Logistic Regression predicting the likelihood of someone participating in outdoor recreation based on socioeconomic and demographic determinants

	β	S.E.	Wald	df	Sig.	$\text{Exp}(\beta)$	95% C.I. for $\text{EXP}(\beta)$	
							Lower	Upper
Gender	.828	.359	5.332	1	.021*	2.289	1.133	4.623
Age	.053	.019	7.820	1	.005*	1.055	1.016	1.095
Monthly Income	.000	.000	2.054	1	.152	1.000	1.000	1.000
Qualification	-.126	.407	.096	1	.756	.881	.397	1.957
Employment Status	.544	.364	2.235	1	.135	1.724	.844	3.519
Marital Status	-.056	.460	.015	1	.902	.945	.384	2.329
Household Size	.027	.043	.402	1	.526	1.028	.944	1.118
Constant	-4.148	.691	36.003	1	.000	.016		

Note: Reference Category=1, n=386, Nagelkerke $R^2=0.131$, Model $X^2=27.093$, * $p\leq(0.05)$, ** $p\leq(0.01)$

To further explain the relationship between outdoor recreation participation and the above socioeconomic factors, Multinomial Logistic Regression was estimated for participation in 24 different recreational activities (Table 4). According to the result, gender was significant in almost two-third of the activities surveyed in which male were more likely to participate in jogging, running, motorcycling, bicycling, horse-back riding, swimming, football, gymnastics and other games plays outdoor (cards, snooker, table tennis); while, less likely to participate in relaxing or hanging out, attending outdoor live concerts, visiting family and friends, going to park, taking children to park, volleyball and

basketball. The only activities that are not significantly affected by gender are walking for pleasure, driving for pleasure, badminton, lawn tennis, golf, picnicking and polo.

Respondents' ages between 15-65 years were more likely to participate in activities such as bicycling, driving for pleasure, visiting family and friends, and tennis. While walking for pleasure, jogging, running, motorcycling, horse-back riding, relaxing, attending live concerts, football, basketball, volleyball, swimming, badminton among others were not significantly affected by age. However, participants who were 66 years and above were not significant in any of the 24 outdoor recreational activities studied compared to other age groups. This implies that, the finding of this study is in line with general assumption that, participation in outdoor recreation diminishes as the age advances. This is expected because age itself is a factor that may affect the participation of individual in any activity including recreation.

With respect to marital status, single respondents are more likely to participate in horse-back riding, swimming, basketball, volleyball, Golf, picnicking, polo and gymnastics. While, married were more likely to participate only in 'taking-children-to the park' only.

Income level was found to be insignificant (in Table 4) as those with lower income were more likely than those with higher income to participate in different recreation activities. Moreover, respondents earning between ₦21,000-40,000 monthly were more likely to participate in activities such as walking for pleasure, football, lawn tennis and taking children to the park. Income was significant for driving for pleasure in which those that earned between ≤₦20,000.00 were less likely to participate in driving for pleasure. On the other hand only visiting family and friends was significant among those earning ₦61,000-80,000 monthly. None of the activities found significant among those earning ₦80,000 and above. This could be linked to the level of person's engagement or security concerns.

The analysis also reveals that, retired respondents, students and public sector employees were not significant in any of the activities while unemployed and private employees were significant for horse-back riding, football and going to park respectively. The odd ratios less than 1 indicates that, unemployed were more likely into horseback riding, and less likely into football and going to park. Moreover, qualification has significant effects on participation in different outdoor recreation activities in which those with no formal education and primary were less likely than those with higher education to participate in walking for pleasure, jogging, relaxing, horseback riding, and golf. Though, common activities that were significant among those either with or without formal education are jogging, relaxing/hanging out, going to park and taking children to the park.

Those with university degree or equivalent are more likely into horse-back riding, going to park, golf and less likely in 'taking children to the park'. While those having higher degrees were not significant in almost all the activities studied. Moreover, one may conclude from the findings depicted in Table 4 that, participation in different type of outdoor recreational activities in Nassarawa Local Government Area of Metropolitan Kano decreases with increasing age, income level and education.

Table 4: Multinomial Logistics Regression for Participation in Outdoor Recreation Activities

Activity	Gender	Age	Qualification	Income level	Employment Status	Marital Status
Walking for pleasure			No form.: (.119)*	₦21,000-40,000 (2.858)*		
Jogging	Male (2.24)**		No form.: (.063)* Primary: (.112)*			
Running	Male: (2.51)*					
Skating						
Motorcycling	Male: (10.9)**					
Bicycling	Male: (4.76)***	15-25: (1.17)*** 26-35: (9.72)*** 36-45: (1.18)*** 46-55: (1.85)*** 56-65: (3.04)***				
Horse-back riding	Male: (9.79)*		Primary: (1.0)*** SSCE: (3.5)*** ND/NCE: (1.8)*** BSc: (1.2)***		Unemployed: (3.2)*	Single: (3.6)***

Driving for pleasure		15-25: (5.2)** * 26-35: (5.0)*** 36-45: (8.2)*** 46-55: (5.9)***		≤N20,000: (.282)*		
Relaxing/hanging out	Male: (.554)*		No form.: (.116)* SSCE: (.151)*			
Attending outdoor concerts, fairs, etc	Male: (.273)***					
Visiting family and friends	Male: (.440)**	15-25: (6.36)*** 26-35: (4.96)*** 36-45: (6.55)*** 46-55: (1.86)*** 56-65: (5.52)***		N61,000- 80,000: (4.75)*		
Other game but play outdoors (cards, chess, snooker etc).	Male: (4.15)***					
Swimming	Male: (3.02)*					Single: (2.8)***

Football	Male: (24.4)***			₦21,000-40,000: (4.45)*	Unemployed: (.321)*	
Basket ball	Male: (.428)*					Single: (6.8)***
Volleyball	Male (.340)*					Single: (4.9)***
Badminton						
Lawn tennis		15-25: (1.42)*** 26-35: (8.34)*** 36-45: (3.96)*** 46-55: (1.36)*** 56-65: (6.25)***		₦21,000-40,000: (.125)*		
Golf			SSCE: (.048)* ND/NCE: (.030)*			Single: (1.5)***
Going to park	Male: (.285)***		No form: (1.0)*** Primary: (1.7)*** SSCE: (1.56)*** ND/NCE: (2.4)*** BSc: (1.64)***		Priv.: (.243)** Unemployed: (.203)**	

Picnicking						Single: (6.8)***
Taking children to the park	Male: (.176)***		No form.: (.051)* SSCE: (.072)* BSc: (.111)*	₦21,000- 40,000: (6.1)**		Married: (4.5)*
Polo						Single: (5.9)***
Gymnastics	Male: (3.1)*					Single: (3.26)**

_Only Odd Ratios (OR) of the p-values are shown.

Note: *p=(≤0.05), **p=(≤0.01), ***p=(≤0.001); No form. = No formal Education, Priv. = Private sector/self-employed.

Constraints to Participation in Outdoor Recreation

To understand the major constraints perceived by the residents in the study area, respondents were asked to state the degree to which they agree or disagree with the statement in relation to the major barriers or factors that limit or reduce their participation in outdoor recreation activities. Table 5 shows the mean scores for each of the twenty (20) constraints studied.

Table 5: Respondents' Perception of Outdoor Recreation Constraints

I do not frequently participate in outdoor recreation because:	SD Freq(%)	D Freq(%)	UD Freq(%)	A Freq(%)	SA Freq(%)	Mean	Rank
Security and personal safety	35(9.1)	102(26.4)	62(16.1)	109(28.2)	78(20.2)	3.24	1 st
Inadequate outdoor recreation facilities	48(12.4)	113(29.2)	53(13.7)	106(27.5)	66(17.1)	3.08	2 nd
Places for outdoor recreation are too crowded	41(10.6)	126(32.6)	49(12.7)	108(28.0)	62(16.1)	3.06	3 rd
Facilities are poorly maintained	43(11.1)	113(29.3)	70(18.1)	102(26.4)	58(15.0)	3.05	4 th
Places for outdoor recreation are too far away	46(11.9)	126(32.6)	51(13.2)	106(27.5)	57(14.8)	3.01	5 th
Lack of social encouragement	49(12.7)	135(35.0)	49(12.7)	84(21.8)	69(17.9)	2.97	6 th
Too busy with work	81(21.0)	110(28.5)	27(7.0)	89(23.1)	79(20.5)	2.94	7 th
Too busy with family responsibilities	69(17.9)	121(31.3)	57(14.8)	69(17.9)	70(18.1)	2.87	8 th
Am afraid of getting hurt or injured by other people	49(12.7)	152(39.4)	52(13.5)	85(22.0)	48(12.4)	2.82	9 th
Places for outdoor recreation cost too much	72(18.7)	131(33.9)	57(14.8)	83(21.5)	43(11.1)	2.73	10 th
I do not have enough information	73(18.9)	163(42.2)	44(11.4)	68(17.6)	38(9.8)	2.57	11 th
I don't have enough money	98(25.4)	139(36.0)	46(11.9)	67(17.4)	36(9.3)	2.49	12 th
Have no way to get to places of outdoor recreational facilities	75(19.4)	168(43.5)	57(14.8)	54(14.0)	32(8.3)	2.48	13 th
I do not have the skills or abilities	91(23.6)	176(45.6)	30(7.8)	38(9.8)	51(13.2)	2.44	14 th
Have alternative recreation at home	109(28.2)	152(39.4)	49(12.7)	46(11.9)	30(7.8)	2.32	15 th
I do not have anyone to participate with	105(27.2)	173(44.8)	32(8.3)	43(11.1)	33(8.5)	2.29	16 th
Poor health condition	120(31.1)	150(38.9)	43(11.1)	37(9.6)	36(9.3)	2.27	17 th
Am not aware of the benefits	121(31.3)	171(44.3)	28(7.3)	42(10.9)	24(6.2)	2.16	18 th
Have physical disability	163(42.2)	149(38.6)	33(8.5)	23(6.0)	18(4.7)	1.92	19 th
Have household member with physical disability	166(43.0)	171(44.3)	22(5.7)	15(3.9)	12(3.1)	1.80	20 th

Note: SD=Strongly Disagree, D=Disagree, UD=indecisive, A=Agree, SA=Strongly Agree

The result (Table 5) shows that 'personal security and safety' (M=3.24) was agreed the most among perceived constraints and closely followed by 'inadequate outdoor recreational facilities' (M=3.08) which were ranked 1st and 2nd respectively. About 28.0% and 16.1% of the respondents with mean score of 3.06 agreed and strongly agreed that they don't frequently participate in outdoor recreation because places of outdoor recreation are too crowded. The constraints 'facilities are poorly maintained', 'places of outdoor recreation are too far away', and 'lack of social encouragement' ranked 4th, 5th and 6th with mean score of 3.05, 3.01 and 2.97 respectively. On the other hand, lack of time due to busy work schedules and busy with family responsibility were ranked 7th and 8th among the residents' most perceived constraints to effective participation in outdoor recreation.

This clearly indicates that, the result shown here is in contrast with the previous findings of Kara and Demirci (2010) and Romild, Fredman, and Wolf-Watz (2011) who reported lack of time as the most important constraint of outdoor recreation participation in Istanbul, Turkey and Sweden respectively. Similarly, ABD'Razack, Martins and Bello (2013) also found lack of time to be the most perceived constraint to outdoor recreation in Minna, Nigeria. Other constraints such as 'lack of money or financial problems', 'lack of information', 'lack of partner', 'afraid of getting hurt or injured by other people' and 'poor health' among others were perceived to have less impact as majority of the respondents disagreed with the statements. The inferences drawn here are that majority of the respondents disagreed with the statement that they don't frequently participate in outdoor recreation because of the constraints ranked from 6th to 20th.

Factor Analysis of Outdoor Recreation Constraints

These 20 different constraints were, however, reduced into three constraints categories using Exploratory Factor Analysis (EFA) with principal components extraction and Varimax rotation as presented in Table 6. Recreational constraints are groups into different categories according to literature. For example, Jackson (1988) identifies two categories of constraints (internal and external) while Crawford, Jackson and Godbey (1991) identify three constraints categories-structural, interpersonal (or internal), and intrapersonal. However, this study adapted Jackson (1988) classification and come up with three constraints categories as: internal, external and interactional. According to the result, the Kaiser-Meyer-Olkin Measure (KMO) of sample adequacy was 0.887, and the Bartlett's Test of Sphericity is significant at 0.001. The total variance explained from these three factors was 53.21% in which factor 1 (external factor) explained 33.18%, factor 2 (internal factor) explained 10.91% and factor 3 (interactional factor) explained 9.12% of variance.

Table 6: Exploratory Factor Analysis of Outdoor Recreation Constraints

Constraints	Factor		
	External	Internal	interactional
12- Places for outdoor recreation are too crowded	.775		
16- Inadequate outdoor recreation facilities	.766		
10- Facilities are poorly maintained	.730		
13- Security and personal safety	.702		
11- Places for outdoor recreation are too far away	.688		
17- Lack of social encouragement	.639		
1- Too busy with work	.514		
2- Too busy with family responsibility	.505		
14- Afraid of getting hurt or injured by other people	.468		
7- Not aware of the benefits		.747	
4- Do not have enough money		.710	
9- Have no way to get to places of outdoor recreation		.706	
5- Do not have anyone to participate with		.699	
8- Do not have enough information		.649	
6- Do not have the skills or abilities		.634	
15- Places for outdoor recreation cost too much	.494	.496	
19- Have physical disability			.716
3- Poor health condition			.655
20- Have household member with physical disability			.651
18- Have alternative recreation at home			.617
Eigenvalue	6.64	2.18	1.82
%Variance	33.18	10.91	9.12

Note: Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

To examine the effects of these numbers of external, internal and interactional constraints to participation in outdoor recreation among residents of Nassarawa Local Government Area, Kano Metropolis, Logistics Regression Models of each constraint category was evaluated according to their socioeconomic and demographic variables.

Logistic Regression for Outdoor Recreation Constraints

The perception of constraints was measured on a Likert scale of 5 points, (5= strongly agree and 1 strongly disagree) which was the study limitation. However, to estimate the possibility whether the subgroups of the socioeconomic and demographic variables of the residents were more (or less) likely to be constrained in participation in outdoor recreation than others, the 5-Point Likert Scale responses were split into two: disagree (strongly disagree and disagree) and agree (agree and strongly agree).

The middle point (neither agree nor disagree) was discarded for this analysis. Previous researches use similar method (e.g. Backlund, 2014; Yechen, 2015).

The findings (Table 7) revealed that, gender was significant in eight of the twenty constraint items tested- 'too busy with family responsibility' 'do not have anyone to participate with' 'do not have the skills or ability' 'not aware of the benefits' 'do not have enough information' 'security and personal safety' 'afraid of getting hurt or injured by the other people' and 'lack of social encouragement'. The positive coefficients greater than 1 indicate that, female were more likely than male to feel constrained per these items of internal and external constraints. Similarly, age was significant in only three out of twenty constraints. In this case, the odd ratios greater than 1 implies that older respondents were more likely than younger ones to feel constrained by 'too busy with family responsibility' 'do not have anyone to participate with' and 'have a physical disability'. In other word, the perception of these constraints is more likely to increase with increasing age. This is in consistent with findings of Johnson, Bowker and Cordell (2001) who found lack of information, and personal safety, lack of partner, to have significant relationship with age and gender.

Also, three constraints were statistically significant for qualification- 'do not have enough money' 'not aware of the benefit' and 'have alternative recreation'. With regard to the employment status, respondents who are unemployed were less likely than employed to feel constrained for-'too busy with work', and more likely to feel 'poor health condition', 'do not have anyone to participate with' and 'having physical disability' constrained their participation in outdoor recreation. Income was only significant in two external constraints, 'security and personal safety' and 'afraid of getting hurt or injured by other people'. Respondents who were single were less likely than married to feel constrained by 'too busy with family responsibility' and 'having physical disability'. But, household size was statistically insignificant across all constraints.

Table 7: Logistic Regression Estimates for the Likelihood of being constrained in outdoor recreation (Odd Ratios)

Constraints	N	Constant	Gender	Age	Qualification	Employment	Income	Marital Status	Household Size	Participation	X ² ₈	%	R ²
1-Too busy with work	359	1.793	1.269	.986	.954	.249***	1.000	.730	1.020	3.517***	60.749	63.2	.208
2-Too busy with family responsibilities	329	.134	2.376**	1.061**	.902	.932	1.000	.256***	1.001	4.014***	126.032	77.8	.428
3-Poor health condition	343	.096	1.108	1.023	.743	2.447**	1.000	.569	.987	4.431***	37.609	80.5	.161
4-Do not have enough money	340	.425	1.354	.990	.445*	1.273	1.000	1.643	1.004	5.287***	57.238	75.3	.219
5-Do not have anyone to participate with	354	.025	3.264** *	1.048*	.672	1.886*	1.000	1.591	.924	6.274***	58.424	82.2	.235
6-Do not have the skills or abilities	356	.057	3.184** *	1.033	.708	1.258	1.000	1.172	1.005	7.647***	65.456	80.1	.249
7-Not aware of the benefits	358	.134	2.248*	1.019	.343*	.702	1.000	1.128	.978	8.173***	60.915	84.9	.254
8-Do not have enough information	342	.098	1.800*	1.032	.609	1.037	1.000	1.954	.986	3.586***	31.334	71.1	.123
9-Have no way to get to places of outdoor recreational facilities	329	.258	1.642	.999	.713	.937	1.000	1.497	1.006	3.307***	-	75.1	.106

10-Facilities are poorly maintained	316	.427	1.673	1.009	1.038	1.010	1.000	1.420	1.026	.972	-	58.5	.063
11-Places for outdoor recreation are too far away	335	.534	1.734	1.019	.800	.812	1.000	.967	1.004	1.534	-	57.6	.050
12-Places for outdoor recreation are too crowded	337	.474	1.734	1.009	.921	.701	1.000	1.452	1.042	1.296	-	58.8	.061
13-Security and personal safety	324	.394	7.098** *	.997	.724	.795	1.000**	1.459	1.068	4.226**	85.427	70.7	.312
14-Afraid of getting hurt or injured by other people	334	.340	1.894*	.991	.903	1.049	1.000*	1.566	1.046	4.217***	34.701	65.6	.133
15-Places for outdoor recreation cost too much	329	.915	1.213	.989	.635	.835	1.000	.975	1.041	2.050*	-	63.5	.073
16-Inadequate outdoor recreation facilities	333	.754	1.515	1.016	.767	.755	1.000	.839	.981	2.062	-	56.2	.053
17-Lack of social encouragement	337	.386	2.729** *	1.005	.851	.732	1.000	1.634	1.060	1.366	-	62.0	.093
18-Have alternative recreation at home	337	.261	1.465	.987	2.043*	1.476	1.000	.743	1.018	1.105	-	78.6	.081
19-Have a physical disability	353	.024	.584	1.056*	1.489	5.959** *	1.000	.276*	.881	4.144***	37.385	88.7	.196

20-Have household member with physical disability	364	.142	.621	.970	1.018	2.026	1.000	.631	1.082	1.218	-	92. 6	.043
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Note: *p= (0.05), **p= (0.01), ***p= (0.001); R^2 = Nagelkerke R^2 ; only Model X²₈ significant at 0.001 reported; %=correctly classified cases.

Participation was statistically significant for 13 of 20 constraints. In the other word, respondents who indicated non-participation in outdoor recreation were more likely than participants to feel constrained for: 'too busy with work' 'too busy with family responsibility', 'poor health condition', 'do not have enough money', 'do not have anyone to participate with', 'do not have skills or ability', 'not aware of the benefits', 'do not have enough information', 'have no way to get to the places of outdoor recreation', 'security and personal safety', 'afraid of getting hurt or injured by other people', 'places of outdoor recreation cost too much', and 'having physical disability'. Corroborating this finding with literature indicates that, constraints can be seen as fixed barrier that lead to non-participation. This however, disagreed with Hamidreza (2014) which states that, a high level of constraints experienced by people does not necessarily lead to reducing their participation nor does the elimination of constraints definitely lead to increased participation.

Summary and Conclusion

This study examined the effects of socioeconomic and demographic determinants and constraints to participation in outdoor recreation in Nassarawa Local Government Area, Kano metropolis. The finding of the study is in some way consistent and contrasts to the previous studies. The study is built on the premise that, the determinants do not only affect decisions on participation in outdoor recreation, but also the type of recreation activity to be engaged in, and can consequently either facilitate or pose constraints upon people's desires to participate. The study reveals that, of all the socio-economic and demographic determinants studied only gender ($\text{Exp}(\beta) = 2.289$, $p = 0.021$) and age ($\text{Exp}(\beta) = 1.055$, $p = 0.005$) were statistically significant.

According to the findings, gender was found to be statistically significant in almost two-third of the activities surveyed in which male were more likely than female to participate in majority of the activities. Single respondents were more likely than any other category to participate in horseback riding, swimming, basketball, volleyball, picnicking, gymnastics, polo and golf. Respondents' ages between 15-65 years were more likely to participate in four of twenty-four activities. None of the activities was significant among the respondents age 66 years and above. Those with lower income ($\leq \text{₦}20,000.00$ and $\text{₦}21,000-40,000$) were more likely to participate in walking for pleasure, football, lawn tennis and taking children to the park than those with higher income while less likely in driving for pleasure. Only visiting family and friends was significant among those earning $\text{₦}61,000-80,000$ monthly. None of the activities were found to be significant among those earning $\text{₦}80,000$ and above. Qualification has insignificant effects in which those with lower or had no formal education were more likely than those with formal education to participate in some different outdoor recreation activities. In other word, those having higher degrees were not significant in almost all the activities studied. With this, the study was also able to establish that, participation in different type of outdoor recreational activity in Nassarawa Local Government Area of Metropolitan Kano decreases with increasing age, level of income and education.

Among the 20 different perceived outdoor recreation constraints investigated, the study found 'security and personal safety' ($M = 3.24$) and 'inadequate recreational facilities' ($M = 3.08$) as the most perceived constraints which were ranked 1st, and 2nd respectively. While, 'having physical disability' ($M = 1.92$) and 'having household member with physical disability' ($M = 1.80$) were the least perceived constraints ranked, 19th and 20th respectively. Exploratory Factor Analysis (EFA) with principal components extraction and Varimax rotation was used to reduce the constraints into three categories as: internal, external and interactional. The study adapted Jackson (1988) classification because the components of external and internal constraints (factor 1 and 2) here

characterised the ones identified by Jackson (1988) however the name 'interactional' was given to the factor 3 because it characterise the items of both internal and external constraints.

Furthermore, the study estimated the Logistics Regression Model of each item of these constraint factors according to socio-economic and demographic variables (determinants). The finding reveals that, female respondents were more likely than male to feel constrained in eight of the twenty constraint items. Similarly, the study also found the perception of constraints- 'too busy with family responsibility' 'do not have anyone to participate with' and 'have a physical disability' more likely to increase with increasing age. Graduate respondents were less likely than non-graduates to feel constrained for- 'do not have enough money' and 'not aware of the benefits' while more likely to feel 'having alternative recreation at home' constrained their participation in outdoor recreation.

Also, unemployed respondents were less likely than employed to feel constrained for-'too busy with work', and more likely to feel 'poor health condition', 'do not have anyone to participate with' and 'having physical disability' constrained their participation in outdoor recreation. Likewise, Income was only significant in two external constraints, 'security and personal safety' and 'afraid of getting hurt or injured by other people'. Non-participants were more likely than participants to feel constrained in 'too busy with work' 'too busy with family responsibility', 'poor health condition', lack of money', 'lack of partner', 'do not have skills or ability', 'not aware of the benefits', 'do not have enough information', 'have no way to get to the places of outdoor recreation', 'security and personal safety', 'afraid of getting hurt or injured by other people', 'places of outdoor recreation cost too much', and 'having physical disability'. With this, the study establishes that, as the income level of the respondents does not have any effect on their participation in outdoor recreation, it also has any effect on their perception of constraints. In addition, outdoor recreational constraints were just a set of fixed barriers leading to non-participation.

With respect to constraints categories, internal factor remains the most common significantly related constraints. The constraints 'too busy with family responsibility', 'security and personal safety', 'do not have anyone to participate with', 'not aware of the benefits' and 'having physical disability' were the most commonly significantly related external, internal and interactional constrained respectively. However, external constraints related to recreational place or facilities were not significant across all socioeconomic and demographic variables. From the key findings and the forgoing discussion therefore, this study further established that, the influence of socioeconomic and demographic determinants on outdoor recreation participation and perception of constraints is context specific rather than general. For instance, giving that, 'security and personal safety' found to be the most agreed and among the most common significantly related constraints limiting residents' participation in outdoor recreation in the study area which is within the larger geographical setting with high security threat like Nigeria.

Recommendation

In view of the above discussions and conclusion, the study made the following recommendations:

- i. Security should be tightened around recreation areas to safeguard the life of the potential recreationists within the study area. This will further encourage more participation especially among people of high income or calibre.
- ii. There should be regular and proper maintenance of recreational areas and/or facilities.

- iii. The study finding implies that the available facilities do not meet up their recreational interest and needs. Therefore, additional facilities should be provided more specifically within the neighbourhoods.
- iv. There should be provision of pedestrian, jogging/running track especially along the roads/streets in order to encourage people participating in those activities.
- v. There should be a provision of age and gender specific recreation facilities as this would encourage elderly and female participation.
- vi. Advocacy and awareness should be promoted through effective media campaign about the importance of outdoor recreation participation.

References

- ABD'Razack, N.T.A., Martins, V.I and Bello, L.O (2013). An Assessment of Preference and Behaviour of Minna City Dwellers to Outdoor Recreation. *International Journal of Humanities and Social Science Invention*. Vol. 2(3). Retrieved 18 October 2018, 12:56:02 from www.ijhssi.org.
- Akinyemi, A.F. and Oduntan, O.O., (2015). Recreation participation and conservation attitudes of tourists and residents of Lagos Mainland, Nigeria. *African Journal of Hospitality, Tourism and Leisure* Vol. 4 (2) - (2015) Retrieved 18 October 2018, 12:58:55 @ [http://: www.ajhtl.com](http://www.ajhtl.com)
- Akitoye, M.O., (2016). Recreational Activity Participation Among Academic Staff of Ahmadu Bello University, Zaria Kaduna State. *Unpublished MSc Thesis* submitted to the Department of Urban and Regional Planning, ABU, Zaria.
- Ardahan, F., and Mert, M., (2014). The Factors Affecting Individuals' Participation In Cycling, Mountaineering and Trekking Activities: An Application Of Probit Analysis For Turkey Case. *Pamukkale Journal of Sport Sciences (PJSS)* 2014, Vol.5, No.1. Retrieved 18 October 2018, 12:06:14
- Ayeni, A. D., (2012). Enhancing the Nigerian Tourist Attractions through Landscaping for Sustainable Tourism Development. *American Journal of Tourism Research* Vol. 1, No. 2, 2012. Retrieved 27 March 2018, 00:17:04.
- Boniface, M. (2006). The Meaning of Adventurous Activities for 'Women in the Outdoors. *Journal of Adventure Education and Outdoor Learning* 6(1):9-24. <https://doi.org/10.1080/14729670685200711>
- Backlund, E.A (2014). Recreation Participation, Community, and Resource Management Policy Support of Adirondack Park Residents. *Northeastern Recreation Research Symposium Proceedings (NERR)*. Retrieved 18 October 2018, 13:05:01
- Crawford, D. and Godbey, G. (1987). Re-conceptualizing Barriers to Family Leisure. *Leisure Sciences*, (9), 119-127. <http://dx.doi.org/10.1080/01490408709512151>
- Crawford, D.W., Jackson, E.L., and Godbey, G., (1991). "A Hierarchical Model of Leisure Constraints." *Leisure Sciences* (13), 309-320. <http://dx.doi.org/10.1080/01490409109513147>
- Dooley, J., (2016). Young, Wild, and Female: Gendered Experiences at an Outdoor Adventure Camp. *Undergraduate Honors Theses*. University of Wyoming, Wyoming Scholars Repository. Retrieved 15 August 2018, 16:41:47
- Hamidreza M., (2014). Constraints to Participation in Physical Activity and Sport: A Comparative Study between Hungarian and Iranian Students. *PhD Thesis*, Doctoral School of Sport Sciences Semmelweis University.
- Hendee, J.C., (1969). Rural Urban Differences Reflected in Outdoor Recreation participation. *Note 16p: paper presented at annual of the Rural Sociological Society (San Fransisco, California) August, 1969*. Retrieved 4/12/2019, 02:13pm
- Henderson, K. A. and Benjamin H. (2007). Research Update: Women and Recreation Opportunities. *Journal of Parks and Recreation*. 26-29.
- Henderson, K. A. and Heather J. G. (2013). An Integrative Review of Women, Gender, and Leisure: Increasing Complexities. *Journal of Leisure Research* 45(2):115-135.

Jackson, E. L. (1988) Leisure Constraints: A Survey of Past Research. *Leisure Sciences*, (10). Vol. 10, No. 3, pp. 203-215. DOI: [10.1080/01490408809512190](https://doi.org/10.1080/01490408809512190)

Johnson, C., Bowker, J. and Cordell, H., (2001). Outdoor Recreation Constraints: An Examination of Race, Gender, and Rural Dwelling. *Southern Rural Sociology*, (17), 111-133. Retrieved 30 August 2018, 21:18:29

Kara, F., and Demirci, A., (2010). An assessment of outdoor recreational behaviors and preferences of the residents in Istanbul. *Scientific Research and Essay Vol. 5 (1)* Retrieved 08 April 2019, 11:27:33 from <http://www.academicjournals.org/SRE>

Lee, J., Scott, D. and Floyd, M.F. (2001). Structural inequalities in outdoor recreation participation: A multiple hierarchy stratification perspective. *Journal of Leisure Research*, 33(4), 427-449.

Li, C., and Wang, C., (2012). The Factors Affecting Life Satisfaction: Recreation Benefits and Quality of Life Perspectives. *Sports & Exercise Research Vol. 14, No. 4*, DOI:10.5297/ser.1404.001 Retrieved 17 October 2018, 17:57:05

Longo, E., Badia, M. and Orgaz, B.M. (2013). Patterns and Predictors of Participation in Leisure Activities Outside of School in Children and Adolescents with Cerebral Palsy. *Research in Developmental Disabilities*, Vol. 34, No. 1.

Romild, U., Fredman, P., and Wolf-Watz, D., (2011). Socio-economic Determinants, Demand and Constraints to Outdoor Recreation Participation in Sweden. *A Forsknings programmet Friluftsliv i förändring Rapport nr 16* ISBN: 978-91-86694-35-7 Mars 2011 Retrieved 02 July 2019, 14:18:47 from <http://www.friluftsforskning.se/>

Sulyman, A.O., and Iorliam, S.T., (2016). Outdoor Recreational Behaviours and Preferences of Abuja Residents, Nigeria. *Ethiopian Journal of Environmental Studies & Management* 9(5). Retrieved 08 April 2019, 12:03:13

Yamane, T. (1967). *Statistics: An Introductory Analysis*, 2nd Edition, New York: Harper and Row Publishers.

Yechen, Y., (2015). Leisure and Life Satisfaction among Tai Chi And Public Square Dance Participants In Hong Kong. *A thesis submitted in partial fulfillment of the requirements for the Degree of Master of Philosophy in Social Sciences*, Lingnan University.