

**ASSESSMENT OF RESIDENTS' PARTICIPATION IN OUTDOOR RECREATION  
IN NASSARAWA LOCAL GOVERNMENT AREA, KANO STATE-NIGERIA**

**BY**

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**AHMADU BELLO UNIVERSITY, ZARIA**

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**BY**

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE  
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**DEPARTMENT OF URBAN AND REGIONAL PLANNING**

**FACULTY OF ENVIRONMENTAL DESIGN**

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## DECLARATION

I declare that the work in this dissertation entitled ‘Assessment of Residents’ Participation in Outdoor Recreation in Nassarawa Local Government Area, Kano State’ has been performed by me in the Department of Urban and Regional Planning, under the supervision of Mr. Sunday K. Habila and Dr. Ashiru Bello. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

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Name of Student

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Signature

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Date

## CERTIFICATION

This dissertation entitled ‘**Assessment of Residents’ Participation in Outdoor Recreation in Nassarawa Local Government Area, Kano State**’ by **Shafi’u Adamu** meets the regulations governing the award of the degree of Masters of Science (MSc. Tourism and Recreation Planning) of the Ahmadu Bello University, and is approved for its’ contribution to knowledge and literary presentation.

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## **DEDICATION**

To all members of my family-Adamu Abubakar (Tsoho) and Fatima Abdullahi my parents and Mabaruka Bashir my wife and Fatima Shafiu Adamu (Fadeela) my daughter for their good prayers, love and support.

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I cannot go without saying big thanks to my students and to the people who assisted me in data collection processes especially, HOD community (Nassarawa L.G.A, Secretariat). Finally, to my wife go these special thanks for your patience, support and understanding during the course of this research work.

Thank you all, May Allah in his infinite mercy shower his blessings upon you and your family, Ameen.

## ABSTRACT

In spite of the paucity of reliable data on residents' participation in outdoor recreation in developing countries when compared to the developed ones, the fact that engaging in outdoor recreation is immensely beneficial cannot be dismissed. The study aimed at assessing the residents' participation in outdoor recreation in Nassarawa L.G.A. Kano State with a view to revealing pattern and making appropriate recommendations. The specific objectives are to identify outdoor recreation facilities, examine the socioeconomic characteristics of residents, examine the characteristics of outdoor recreation participation and evaluate the pattern of participation and constraints in Nassarawa L.G.A. Kano state. The data for the study were obtained primarily through field observation and administration of 400 copies of questionnaires. Cluster and systematic random sampling techniques were used to administer questionnaire to target respondents. Both descriptive and inferential statistics were used for the data analysis. The result shows that, Nassarawa Local Government, which is a small spatial entity in relation to metropolitan Kano, has 107 numbers of outdoor recreational facilities. The residents participate more (88.1%) in outdoor recreation and mostly in the weekends. The common and popular activity participated among non-facility based recreation includes family and friend visits, jogging and walking for pleasure with participation rate exceeding 50%. Among the facility-based recreation activities, football and park visits were found to be dominant with 67.6% and 27.5%, respectively. Outdoor recreation participation in Nassarawa, Kano also follows the general and global pattern of recreational activity participation which assumed that participation diminishes as age advances. Participation tends to be significantly associated with level of education-with low level of participation among those with lower education, high participation among those with average education and low participation among those with higher degrees. The study ascertained that income level of the respondents is not associated with their ability to participate in outdoor recreation

in the study area. The perception of outdoor recreation constraints is contextually specific rather than general. 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 1<sup>st</sup>. While, 'having physical disability' (M=1.92) and 'having household member with physical disability' (M=1.80) were the least perceived constraints ranked, 19<sup>th</sup> and 20<sup>th</sup>, respectively. Non-participants were more likely than participants to feel constrained in thirteen of twenty constraints. The study also established that the perception of constraints varies with age, genders as well as between participants and non-participants. The study strongly recommends that recreation plan should be prepared and implemented, focusing on provision of a wide range of recreation activities and programs opportunities, targeting particularly older age and females. The study concludes that, provision and availability of facilities in a particular geographical setting is really important to participation in outdoor recreation. This is shown in the contrasting pattern observed in Nassarawa from the common position in the global south.



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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

Recreation has become a universal affair after the Second World War and has increased the mental capacity and prosperity of neighbourhoods, communities and nations (Cordel, Bergstrom, Hartmann, and English, 1990; ABD'Razack, Martins and Bello, 2013). A surge in the recreational ability of people occurred in the late 20th century in developed countries more than it did in the third world (Douglass, 1999). Recreational activities provide healthy lifestyles to whoever participates in them (Dooley, 2016). Recreation freshens human ability and creates better health conditions (ABD'Razack *et al.* 2013). Therefore it is believed that all should participate in outdoor recreation in one form or another, for their health and well-being.

Outdoor recreation is any leisure pursuits engaged outside the confines of buildings; that is, in an open space. In general, recreation can be defined as free time activities which create interaction between participants and nature and enhance individual's health, spiritual and social benefits (Ibrahim and Cordes, 2002). Participation in outdoor recreation implies the process through which individuals/or groups have the opportunity to become actively involved in or related to recreation activities outdoors.

The premise that participation in outdoor recreation is declining has been challenged (Godbey, 2009). The United States Outdoor Recreation Participation Report (2018) revealed that, about 48.4% of the US population participated in an outdoor activity at least once in a year from 2014 to 2015. Outdoor participation slightly increased from 48.4% between 2014 and 2015 to 48.8% and 49.0% in 2016 and 2017, respectively. The maintenance of physically

active leisure-oriented lifestyles has become increasingly important in developed societies (Hamidreza, 2014). However, no comparative data for developing countries like Nigeria that could help in advancing further explanations. Therefore, many possible explanations could be advanced. One may wonder whether residents have no time for outdoor recreation; or perhaps, are not aware of the benefits. Presumably, security challenges may deter people from venturing outside their homes as they return from work and involve in other non-recreational pursuits. It is also possible to assume that, the residents have alternatives to outdoor recreation within their homes; or what is available does not meet up their recreational interests and needs.

The relative rise in people's commitment to outdoor recreation in the developed societies can be attributed to the number of benefits that are perceived to have been associated with it and availability of facilities. These benefits are wide-ranging and they comprise interdependent set of physiological, psychological and sociological benefits that can sustain human growth and development (Asihel, 2005). Recent study by Argan, Argan and Dursun(2018)posits that, the outdoor recreation participation was found to have a positive socio-economic and psychological effect on wellbeing.

Participation in recreation activities is considered by many researchers as an essential component of an individual's sense of well-being (Murphy *et al*, 1991; Argyle, 1996; Baker, and Palmer, 2006).Rodriguez, Latkova, and Sun(2008) specify that, leisure and especially participating in outdoor recreation activities may be an important sign of subjective wellbeing, Life Satisfaction (LS) and quality of life (QOL). Evren (2014) further posits that, another commoninquiry indexfor leisure participation is life satisfaction. This assertion has been proven in previous researches alluding to the fact that outdoor recreation participation has a positive correlation with life satisfaction (Ardahan and Mert 2014; Mert, Zurnaci and Akgun, 2015), quality of life (Lloyd and Auld, 2002).

There are various researches conducted in trying to identify and explain constraints to participation in recreation (Crawford and Godbey, 1987; Crawford, Jackson and Godbey, 1991; Johnson, Bowker and Cordell, 2001; Hamidreza, 2014). Outdoor recreational constraints are defined as factors preventing people from participating in recreational activities or reducing the benefit which is expected from recreational activities (Scott and Jackson, 1996; Johnson *et al.*, 2001; Kara and Demirci, 2010). 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 *et al.* (2013) also reported lack of time as the most important constraint to enable people participate in outdoor recreational activities.

In Nigeria, outdoor recreation participation is not a new phenomenon and it has been in existence since time immemorial. But, the culture of participating in outdoor recreation activities consciously is relatively low (Dickson, 2014). Dickson (2014) further observed that, this may not be unconnected with the economic circumstance prevalent in the country (Dickson, 2014) but there may be other intrinsic or extrinsic factors such as demographic, sociocultural, situational characteristics (e.g. time resources) as well as availability and accessibility of recreation resources.

Recreation participation has been studied using both subjective and objective measures (Baker and Palmer, 2006). The latter are measures such as, how frequently respondents used recreational facilities such as parks, sporting facilities, and services in order to ascertain the level of recreation participation of individuals and/or household, while the former are measures which focused on the satisfaction or attitude toward leisure activities.

## 1.2 Statement of Research Problem

Many studies on recreational participation of urban populations are largely conducted from cities in the global north (Riddick and Stewart, 1994; Payne, Mowen, and Smith, 2002; Kara and Demirci, 2010). The findings of these researches cannot be guaranteed to fully reflect the needs and preferences of the local urban population of developing nations where participation in outdoor recreation has often been reported to be considerably low (ABD'Razack *et al.*, 2013; Dickson, 2014; Aribigbola and Francis, 2016; Akitoye, 2016; Sulyman and Iorliam, 2016).

Empirical studies conducted on outdoor recreation indicated an increase in trend of participation in the developed world sequel to provision of diverse facilities (Kara and Demirci, 2010; Romild, Fredman, and Wolf-Watz, 2011; Bergerson, 2018). Whereas, in cities of the developing world such as in Nigeria, studies by Obinna, Owei, Ayodele and Okwakpam (2009), ABD'Razack *et al.* (2013), Dickson (2014), Aribigbola and Francis (2016) and Sulyman and Iorliam (2016) revealed that, outdoor recreation participation is greatly influenced by availability of facilities and socio-demographic characteristics.

Dickson (2014) opined that, the low level of participation in outdoor recreation in Yenagoa, Bayelsa State, is largely influenced by low income, distance to recreational facilities and time constraints. ABD'Razack *et al.* (2013) also reported the level of participation in outdoor recreation among Minna City Dwellers to be relatively low due to poverty, time constraint and apathy to recreation, culture and inadequate recreational facilities in the city. Obinna *et al.* (2009) relate the low levels of participation in Port Harcourt, Rivers State, to the inadequacy of all forms of recreational facilities. Aribigbola and Francis (2016) ascertained that, the low patronage of specific outdoor recreation facilities (parks) in the city of Ondo is largely linked to the level of poverty in the country.

Although, there exist a number of researches on outdoor recreation in Nigeria (Obinna *et al.* 2009; ABD'Razack *et al.*, 2013; Dickson, 2014; Akinyemi and Oduntan, 2015; Akitoye, 2016; Sulyman and Orliam, 2016; Aribigbola and Francis, 2016), the researches however, were largely focused 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. None of the researches was able to investigate the level and as well, the pattern of participation and constraints from the perspective of a smaller spatial unit (area) with relatively abundance facilities.

It is pertinent to note that; smaller spatial entities with abundance of facilities may exhibit contrasting patterns from what may be generally observed in terms of outdoor recreation participation. This may be true even if the entity still shares other attributes with the wider region. Nassarawa Local Government Area (LGA) of Kano state has numerous outdoor recreation facilities which include recreational parks, Polo Field, Race Course, Golf Course, swimming pools, football fields, lawn tennis courts, picnicking spots, basketball courts, event centres and several other recreational opportunities such as running, jogging, cycling, visiting museum and zoological garden. This is attributed to the planned nature of the area as it houses most of the popular Government Reserve Areas (GRAs) of the metropolitan Kano (Nassarawa GRA, and Bompai).

Building on the taken-for-granted notion that participation in outdoor recreation in the developing world is marginal and the context specific nature of this assertion particularly as it relates to availability of facilities therefore, a study towards understanding of residents' participation and constraints in outdoor recreation in Nassarawa, Kano would provide information on resident's participation in outdoor recreation in relation to a facility abundant location within a constrained wider region. Moreover, for a recreational plan of any spatial

unit (city or region) to be sustainable, the patterns of residents' participation as well as the constraints needs to be investigated and understood. It is in this view and consideration of the social, physical, mental and psychological benefits associated with outdoor recreation that, this research deems it necessary to empirically investigate and establish the pattern of participation and constraints in order to provide an input to policy and decision makers for effective planning and provision of recreational facilities to address the varied recreational needs of the people.

### **1.3 Research Questions**

The research is expected to answer the following questions:

- i. How abundant are the outdoor recreation facilities in Nassarawa L.G.A. Kano state?
- ii. What are the socioeconomic characteristics of residents in Nassarawa L.G.A. Kano state?
- iii. What are the characteristics of outdoor recreation participation of Nassarawa LGA, Kano state?
- iv. What are the patterns of resident's participation and constraints in outdoor recreation in Nassarawa LGA in relation to what is already established in the global south?

### **1.4 Aim and Objectives**

#### **1.4.1 Aim**

The aim of this research is to assess the residents' participation in outdoor recreation in Nassarawa, Kano state, with a view to exploring the pattern and making appropriate recommendations.

### **1.4.2 Objectives**

To achieve the above stated aim, the following specific objectives are identified for the study:

- i. To identify available outdoor recreation facilities in Nassarawa L.G.A., Kano state;
- ii. To examine the demographic and socio-economic characteristics of residents in Nassarawa L.G.A., Kano state;
- iii. To examine the characteristics of outdoor recreation participation in Nassarawa L.G.A., Kano state;
- iv. To evaluate the pattern of residents' participation and constraints in outdoor recreation in Nassarawa L.G.A., Kano state.

### **1.5 Scope and Limitation of the Study**

The scope of this study is framed within an assessment of the participation and constraints of residents in outdoor recreation in Nassarawa. Hence, the study covers only modern outdoor recreational activities and opportunities identified within the study area. The Nassarawa L.G.A. Kano covers 11 wards, namely: Dakata, Gama, Gwagwarwa, Tudun Wada, Kawaji, Giginyu, Badawa, Kawo, Hotoron Kudu, Hotoron Arewa and Tokarawa (see Figure 1.2). The focus of this study is to streamline toward objective measures of outdoor recreation which is to ascertain the level of residents' participation and constraints in outdoor recreation. The perception of constraints was measured on a Likert scale of 5 points, (5= strongly agree and 1 strongly disagree) which forms a part of the study limitation.

### **1.6 Significance of the Study**

Understanding the pattern of residents' participation in outdoor recreation is important for cities to have a sustainable recreational plan (Kara and Demirci, 2010). It is only then that



city managers and decision makers will make sure that number of recreational areas and their size, facilities and other characteristics are adequate to meet various recreational needs of residents (Zandersen and Tol, 2008; Jensen and Ouis, 2008; Kara and Demirci, 2010). Theoretically, this study will serve as a reading material for the students and potential researchers who have interest on recreation issues which could be used to carry out further research. Similarly, the findings of this study will be useful to policy and decision makers for effective planning and provision of recreational facilities to address the recreational needs of the people. It will equally serve as a useful document to individuals and corporate bodies that are interested in the supply, provisioning of recreational facilities within the study area.

### **1.7 The Study Area**

Nassarawa L.G.A. is located within Kano Metropolis. It has an approximate area of 63.15km<sup>2</sup>(6315ha). The area lies between latitude 11<sup>0</sup>58'N and 12<sup>0</sup>02'N of the equator as well as between longitude 8<sup>0</sup>32'E and 8<sup>0</sup>37'E of the Greenwich meridian. It has a population of 596,411 (Census, 2006). 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 (Figure 1.1).

Nassarawa L.G.A. is popular in its planned nature in the metropolis as it houses Nassarawa and Bompai GRA which are the major residential areas in the city. As a result, it has many outdoor recreation facilities including recreational park, Polo Field, Race Course, Golf Course, swimming pools, football fields, lawn tennis courts, picnicking spots, basketball courts, event centres and several other recreational opportunities such as running, jogging, cycling.

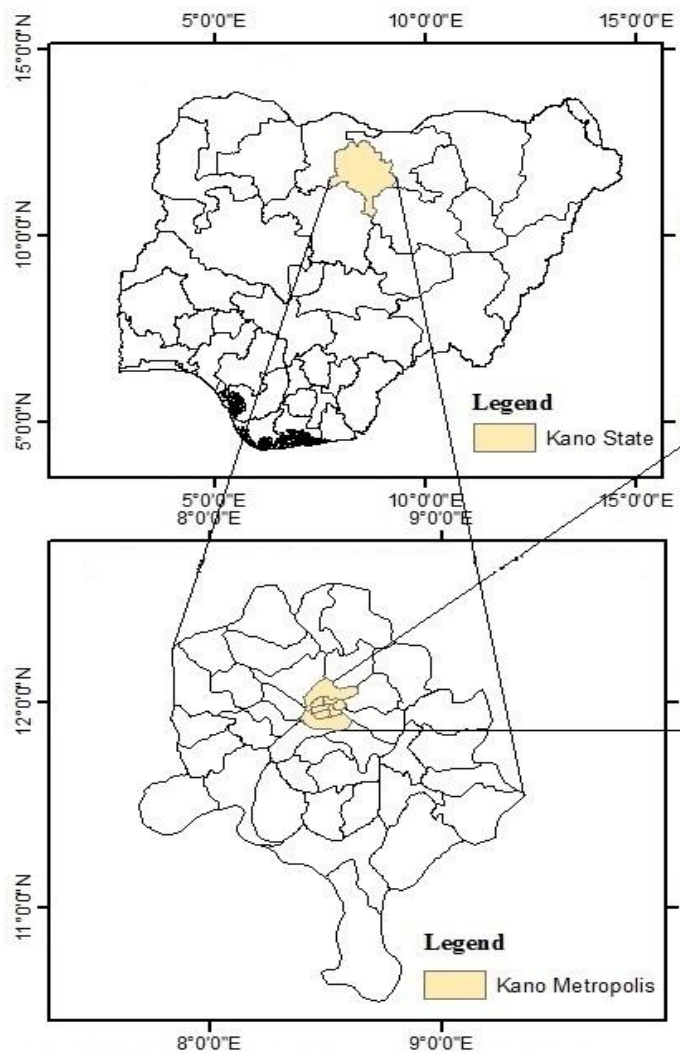
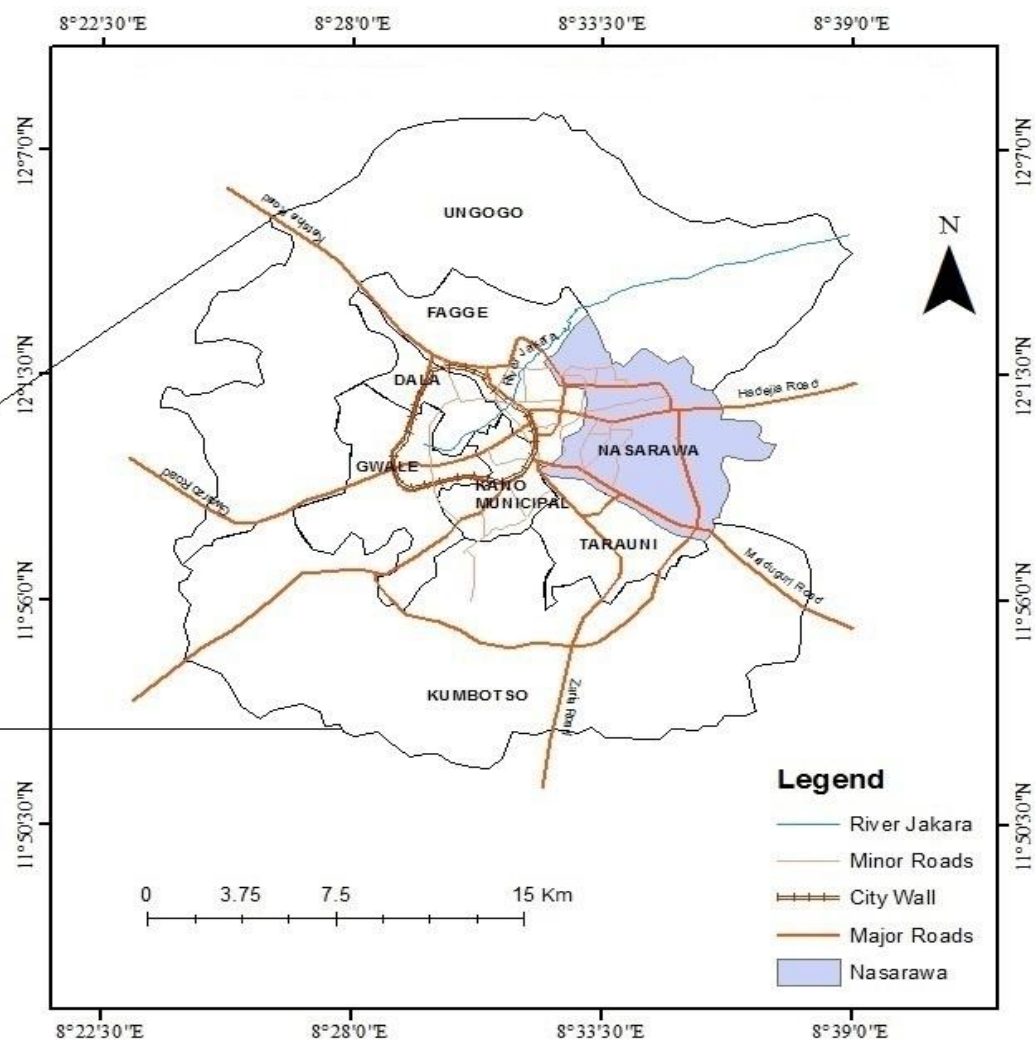


Figure 1.1: Nassarawa LGA in the National Context



Source: GIS Lab. URP-Dept. KUST, Wudil

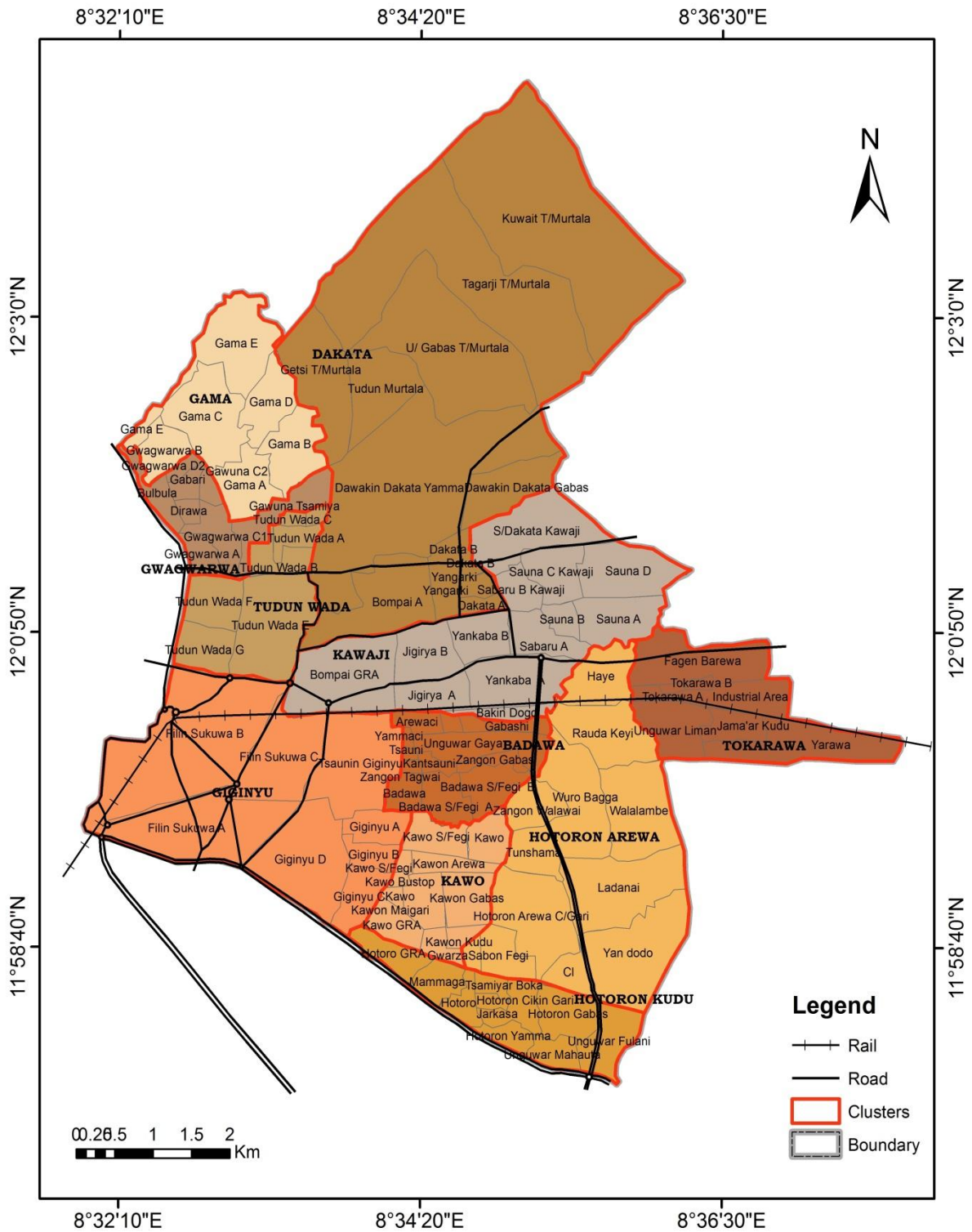


Figure 1.2: Map of Nassarawa Local Government, Kano Metropolis  
 Source: GIS Unit Ministry of Land and Physical Planning, Kano

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This section focuses on review of relevant literature that helps to form a theoretical basis that is useful to the study. The section reviews the concept of recreation, determinant of outdoor recreation participation, outdoor recreation and benefits, health and social benefits of outdoor recreation participation; outdoor recreation participation constraints, standards and principles which will equally complement the much-needed support to achieve the research goal.

#### 2.2 Concept of Recreation

Recreation is a concept which does not render itself for easy definition. It has been defined differently by different people. Moreover, there is no general consensus with regards to its definition. As such, there is no single definition of the concept that is unanimously accepted universally. Okoli (2001) sees recreation as old as man and everybody needs it. This is due to its vast and fundamental importance. It plays an important role in physical, economic, and socio-cultural development of mankind. It is defined by Broadhurst (2001) as an activity which people choose to engage in during their leisure period. It is multifaceted, comprising physical, cognitive, emotional and social components. Kara and Demirci (2010) see recreation to involve activities that people do for enjoyment, usually to refresh the body and mind. This simply implies that, participating in recreational activities is of great importance for maintaining mental and physical health of individuals, families, and communities (Neuvonen *et al.*, 2007).

Arnold (1985) viewed recreation to represent the recreation of the individual after participation in a certain activity. A value or worth is attributed to recreation in the sense that creativity is often viewed as good and non-creativity is bad. While, Burton (1970) defined

recreation as “an activity which man engaged in during his free time which does not include work, nor does it include certain personal and social obligation that all people have, such as sleeping and washing”. This means that, recreation is any form of activity which the individuals engage in during their free time without compulsion and does not necessarily attract any personal gain or reward. However, in the same line, Awosaki (1977) defined recreation as “an activity which is not consciously performed for the sake of any reward beyond itself which offers man outlet for physical, mental or creative powers in which he engages because of inner desire and not because of outer compulsion”. Conversely, ABD’Razacket *al.* (2013) viewed recreation to include activities that lead to enjoyment, relaxation and profession for some who use it as means of livelihood. Oak (2010) reported that, recreation is the expenditure of time with the intent to gain some refreshment. It is a break from monotony and a diversion from the daily routine. It is a positive change from the stereotype lifestyle and involves an active participation in some entertaining activity (Kingsley, 2014; and Akitoye, 2016).

**Table 2.1:** Typology of Recreation based on Epistemological Focus

S/N	Definition Focus	Authors
1	Nature of engagement	Broadhurst, (2001); Burton (1970); Pilgrim, (1983).
2	Reasons for engagement	Kara and Demirci (2010); Oak (2010); Pilgrim, (1983).
3	Endogenous drive	Arnold (1985); Awosaki (1977); Pilgrim, (1983).
4	Exogenous drive	Okoli (2001); ABD’Razacket <i>al.</i> (2013)

From epistemological perspective, recreation can be broadly defined as the ‘activities of leisure’. When examined in broad sense, it may look misleading in the sense that it may

embrace every forms of leisure activity that people engage in inclusive of those who use it primarily as a means of their livelihood as observed by ABD'Razacket *al.* (2013). But when view in a more restricted and technical sense, recreation can be considered as an activity voluntarily undertaken and primarily for pleasure and satisfaction during leisure time as suggested by Pilgrim, (1983). Therefore, recreation for the purpose of this work is any activity voluntarily undertaken by the people for pleasure, fun, relaxation, exercise, and self-expression or to relax from boredom of work and wearing which is physically and psychologically rejuvenating because it is different from the essential routine of one's life other than those to which people have high commitments.

### **2.2.1Forms of Recreation Activities**

A review of various literature indicates that there are various forms of recreation activity as there are definitions. This is due to its complex nature and diversity. It can be passive or active, indoor or outdoor, solitary or group, free or monetary, organised or unorganised, traditional or modern, among others. The different forms of recreational activities are not mutually exclusive. The classes often overlap one another (Table 2.2).

Studies indicate that, the active recreational activities are usually done outdoor while the passive are usually indoors. The level and degree of people partaking in both active and passive recreational activities vary between gender. For example, Obinna *et al.* (2009) studied the patterns and determinants of recreational behaviour. They found that, males engaged more in active recreation than females. However, while males engaged more in active outdoor forms, females participated more in active indoor forms in Port Harcourt, Rivers State, Nigeria.

**Table 2.2:** Classification of Recreation Activities

S/N	Classification Classes	basis&	Types of activities	Distance travel	
1	Degree of activity	Active	dancing, football, tennis, athletics, horse etc.	Relatively distance	short
		Passive	Listening to music, watching TV, live concert and festivals, Reading etc.	Relatively distance	short
2	Location of activity	Indoor	Pool Swimming, Gymnastics, and other form of recreation in a roofed area etc.	Relatively distance	short
		Outdoor	Sporting Activities (e.g. Basketball, Football, Volleyball etc.), Tennis, Hockey, Golf, Polo, Jogging, Cycling, Bicycling,	Relatively distance	short
3	Nature of activity	Traditional	Any type of recreation activity specific to a particular culture.	Relatively distance	short
		Modern	Presently recognised activities which required the use of facilities e.g. sporting activities.	Relatively distance	short
4	Organisation	Organised	Football, basketball, polo, volleyball, tennis, etc.	Relatively distance	short
		Unorganised	Walking for pleasure, jogging, visiting museum and other historic site, hiking kayaking etc.	Relatively distance	short
5	Operation	Free	Walking, jogging, running, hunting, swimming, fishing,	Relatively distance	short
		Monetary	Any type of activity that a recreationist has to pay before engagement.	Relatively distance	short
6	Participation	Solitary	Jogging, walking, bicycling, motorcycling, fishing, hunting, reading, dancing etc.	Relatively distance	short
		Group	Football, volleyball, playing snooker and other board games etc.	Relatively distance	short
7	Resource-based		Picnicking, Kayaking, Pond/lake swimming, Fishing, Boating, Camping, hiking, Hunting, skiing.	Usually distance	longer

However, in view of the Table 2.2recreation can further be classified into three broad major categoriesas indoor, outdoor and resource-based (Figure 2.1).Outdoor recreation activities have been defined according to Queensland Government (2009) as those activities that:

- i. Are undertaken outside the confines of buildings (i.e., outdoors);
- ii. Do not involve organized competition or formal rules;
- iii. Undertaken without existence of any built facility or infrastructure;
- iv. Require large areas of land, water and/or air; and
- v. Require outdoor areas of predominantly unmodified natural landscape.

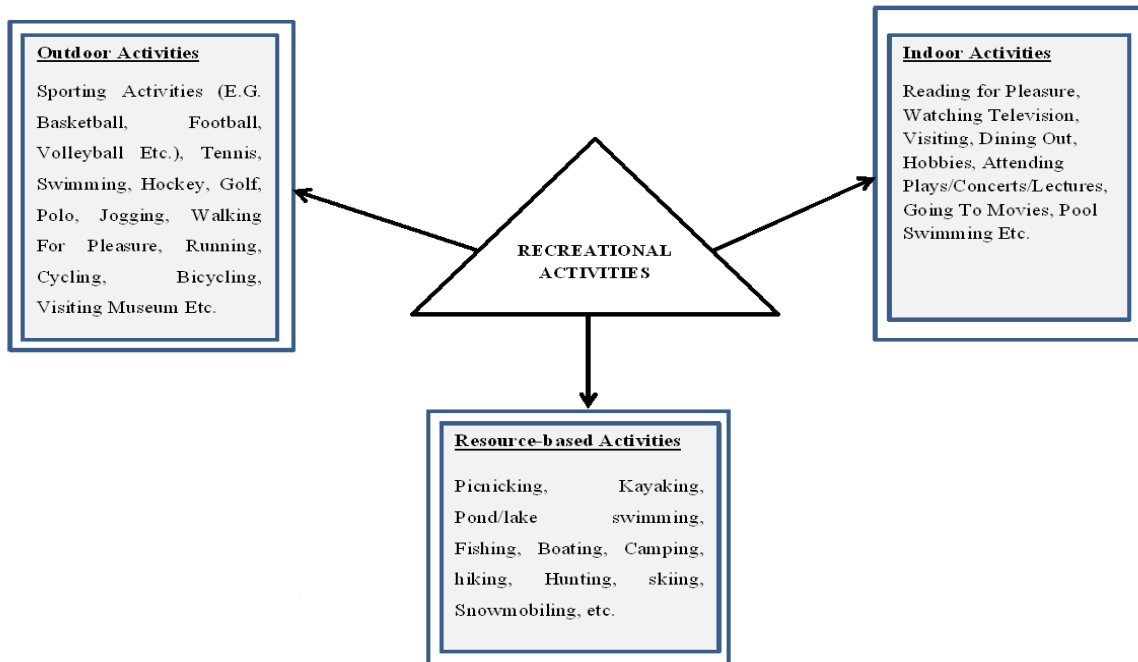


Figure 2.1: Major Classification of Recreational Activities

Therefore, going by the above definition, outdoor recreational activities comprise every form of leisure activity done in an open area and it may involve activities undertaken close or away from home or community-requiring travelling to a distance place. Outdoor recreation includes activities such as walking, jogging, hiking, swimming, golf, horse riding, sport, tennis, picnicking, playground, visiting historic sites, parks, zoo, event centres et cetera. The element of travelling has been clearly captured in the definition made by Tourism British Columbia (2013) thus: “outdoor activities that take place in a natural setting, as opposed to a highly cultivated or managed landscape such as a playing field or golf course”. However, when these activities are farther away, and people must travel some distance to participate in



them, they are often described as adventure tourism. More broadly, outdoor recreation means recreation outside. It refers to “activities that people undertake outdoors in places where they can access nature or green areas, both in urban or rural environments, mainly as part of their daily or weekend routines” (McCullough, Bergsgard, Collins, Muhar, and Tyrväinen, 2018).

### **2.3 Determinants of Outdoor Recreation Participation**

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, 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). According to Romildet *al.* (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.

Many researchers have studied the effect of these determinants on outdoor recreation participation, specific recreation activities and the constraints as well (Johnson *et al.*, 2001; Lee, Scott, and Floyd, 2001; Romildet *al.*, 2011; Longo, Badia and Orgaz, 2013; Ardahan and Mert, 2014; Yechen, 2015). The findings of these studies reveal that, the effects of these determinants vary with context. For example, Lee *et al.* (2001); Romildet *al.* (2011) found income, education and occupation to have a positive significant effect on participation in

outdoor recreation activities. Similarly, in Ardahan and Mert (2014) and Yechen (2015) gender, age, income, occupations, 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.

## **2.4 Outdoor Recreation Participation and Benefits**

Participation in outdoor recreation has been identified to have a number of benefits. These benefits can be health, social, as well as environmental and they comprise interdependent set of physiological, psychological and sociological benefits that can sustain human growth and development (Asihel, 2005).

### **2.4.1 Health benefits of outdoor recreation participation**

Historically, public parks and outdoor recreation areas, particularly in cities, were developed for health purposes (Godbey, 2009). Numerous studies show how exercise, physical activity and even mentally recalling outdoor recreation activities can have positive effects on depression, stress, self-esteem and reduced suicide rate (Siegenthaler, 1997; Landers, 1997; Tarrant, Manfredo, and Driver, 1994; California State Park, 2005). Participating in recreation can influence ones' life, especially women, toward increases in self- sufficiency, perspective shifts, connection to others, and mental clarity (Pohl, Borrie, and Patterson, 2000). Studies have found that outdoor recreation and leisure activities can help prevent and treat many forms of depression by exposing someone to the social environment as well as natural wilderness. Participating in outdoor recreation activities provides people with experiences they look forward to and enjoy. It also helps to reduce alienation, loneliness and isolation, all of which contribute to depression which could certainly aggravate to a serious illness. Thus, outdoor recreation provides a social atmosphere that draws people out of their houses and into community life.

Positive correlation between outdoor recreation activities and health improvement has been established by Health and Human Services report of 2001. In their report, Health and Human Services(2001) an assertion has been made that obesity can be reduced in communities through the provision of adequate parks and recreation opportunities and recognition of the benefits of increased physical activity. Outdoor recreational activities also significantly reduce the risk of many serious diseases such as cardiovascular diseases, heart attack, high blood pressure, Type II diabetes, colon cancer among others (California State Park, 2005). According to Health and Human Services (1996) a Surgeon General report states that millions of Americans suffer from diseases that can be prevented or the symptoms improved through increased physical activity. Recreation activities, such as running, brisk walking, swimming and cycling are excellent for elevating the heart rate and lowering the incidence of heart disease, obesity and diabetes, if done regularly (California State Park, 2005). McCarthy (2002)states that, walking three or more hours per week cuts a woman's risk of heart disease by 30%, and five or more hours cuts it by 40% as found in a Boston New England Journal of Medicine study of over 120,000 women (California State Park, 2005).

American Heart Association (AHA) (2002) reported that, more than 2,600 Americans die from Cardiovascular Diseases each day, with an average of one death every 33 seconds. However, regular participation in outdoor recreational activities helps to reduce the occurrences of these diseases significantly. This was succinctly pointed out in a study of American Heart Society (AHS) (2004) that, those who do not exercise are twice more likely to have coronary heart disease than those who did according to 43 separate studies conducted by the Centre for Disease Control. Quality of Life and Life Satisfaction are frequently used to evaluate the general well-being of individuals and societies (Li and Wang, 2012), as such several studies highlighted how outdoor recreation participation was found to have positive

correlation with Life Satisfaction and Quality of Life (see: Li and Wang, 2012; Ardahan and Mert 2013; Mert *et al.* 2015; Lloyd and Auld, 2002; Baker and Palmer, 2006).

It is well known that outdoor recreation not only brings physical health and mental benefits to people, but also increased social interactions, refresh the senses and provide wise and Pro-Environmental Behaviour (PEB). Godbey (2009) emphasised that outdoor recreation touches on all those aspects of health and can enhance not only physical health but also emotional well-being. Just being outdoors, for example, has been shown to confer health benefits (Godbey, 2009).

#### **2.4.2 Social benefits of outdoor recreation participation**

As indicated earlier recreation activities provide best ways to lower tense feelings, reduce anxiety, and manage the stresses from emotional, work-induced, economic or physical causes. Recreation activities particularly outdoors improve people's health condition, and further provide a natural way to stay healthy in life. Recreation helps people to develop positive relationships among members of social groups. People who share common interests in recreation activities may also share cheerful feelings and promote positive social interactions (Li and Wang, 2012). As indicated in the literature (California State Park 2005) outdoor recreation participation helps address and improve social issues. Recreation opportunities and parks are essential for strengthening and maintaining a healthy community.

California State Park (2005) reported that, "recreation opportunities can have positive impacts on our society". Department of Park and Recreation (2002) affirmed that, recreation brings neighbours together, encourages safer and cleaner neighbourhoods, and creates a livelier community atmosphere. Parks and recreational facilities also help improve a community's image, socioeconomic status and enhance the area's desirability.

Numerous studies have indicated how outdoor recreation participation drastically aids in strengthening community (DPR, 2002), reduces crime rates and juvenile delinquency (TPL, 1994), creates sense of place, encourages Volunteerism (Busser & Norwalk, 2001) as well as promotes stewardship (ARC, 2000). For example, Busser & Norwalk (2001) reported that, adults who use parks, recreation and cultural facilities and participate in recreation programs are more willing to volunteer than those who do not use these services, according to a case study of 640 adults. Trust for Public Land (TPL) (1994) stated that, The burglaries and thefts in a Philadelphia precinct dropped 90%, after police helped neighbourhood volunteers clean up vacant lots and plant gardens, falling from 40 crimes each month before the clean-up to an average of only four per month afterward (TPL, 1994).

#### **2.4.3 Environmental benefits of outdoor recreation participation**

Anthropological and psychological evidences suggest that humans have a primal need to connect with nature (California State Park, 2005). Numerous studies support the link between participation in outdoor recreation and increased concern for the environment. Nowadays, researchers have taken great notice of nature-based recreation research constructs due to their possible link to environmental behaviours and potential to resolve conflicts within outdoor recreation contexts (Hutson, Montgomery, and Caneday, 2010). Pro-environmental behaviours (PEB) are actions that generate positive environmental impacts, promote environmental quality, and result in sustainable use of natural resources (Stern, 2000; Monroe, 2003; Steget *et al.* 2014; Cooper *et.al*, 2015). However, many studies (Backlund, 2014; Cooper *et.al*, 2015) examined the relationship between outdoor recreation participation and pro-environmental behaviours and attitudes. The studies have shown that participation in outdoor recreation particularly nature based such as park visit, garden and wildlife recreation developed positive environmental behaviours, awareness and attitudes in the mind of the participants. A positive association between wildlife recreation and environmental

conservation behaviours was found by Cooper *et.al* (2015). Also, McDonald & Schreyer (1991) observed that, optimal outdoor recreation experiences can result in a state of connectedness with the earth and its creatures, which in turn, can result in a greater sense of appreciation for the environment and the community of life.

It has been observed that apart from improved academic performance, physical health and cognitive growth, outdoor recreation (nature-based) experiences during childhood may also foster environmental behaviour later in life (Chawla, 2007; James and Bixler, 2010; Larson, Whiting and Green 2013). In a related development, however, studies have shown that, positive associations with outdoor settings developed during childhood are among the most significant predictors of adults' pro-environmental orientations and increased outdoor recreation participation (Asah, Bengston and Westphal, 2012; Bixler, Floyd and Hammitt, 2002; Larson, Whiting and Green, 2011; Thompson, Aspinall and Montarzino, 2008). Outdoor recreation at childhood or early ages gives someone a natural instinct to perceive the significance of environment and thus, developed positive environmental behaviours. Wells and Lekies (2006) found that, children who frequently interacted with wild nature (i.e., participated in resource-based outdoor recreation activities such as camping, hunting, or hiking) before age 11 displayed stronger environmental attitudes and pro-environmental behaviours as adults. Hence, children's outdoor recreation and park use could also lead to indirect benefits of enhanced stewardship and environmental literacy (Larson, Whiting and Green 2013).

## **2.5 Participation Levels and the Benefits Derived: Global North versus Global South**

A numbers of research have been conducted on participation in outdoor recreation across the world because of the positive impact it has on human well-bring. The level of participation and the overall benefits derived is critical in outdoor recreation studies. Perhaps a certain level

of participation should be exercised for the benefits to be attained. Figure 2.2 displays the conceptual link between participation and outdoor recreation benefits. Neuvonen, *et.al* (2007) claims that, for any individual or group of individuals to achieve maximum level of satisfaction and benefits, they have to participate extensively on recreational activities. This implies the relative importance of time spent, duration and degree of engagement in reaping the benefits. Romild *et al.* (2011); Bergerson (2018) further lament that the degree of such experiences in meeting certain expectations of outdoor recreation will result in a level of satisfaction and certain benefits to individuals and the society.



Figure 2.2: Conceptual Model of Outdoor Recreation Benefits

Researches have documented outdoor recreation participation to be high in developed countries while marginal in third world or developing countries (Kara and Demirci, 2010; Romild *et al.*, 2011; ABD'Razack *et al.*, 2013; Dickson, 2014; Aribigbola and Francis 2016; Bergerson, 2018). This is due to availability of facilities/resources and accessibility which are the major motivators of outdoor recreation participation that are grossly inadequate in developing countries compared to developed nations. In addition to that, the differences in socio-economic and cultural characteristics play significant role because outdoor recreation participation in developed societies is a typical reflection of their education, and income, as well as their social way of living translated as their recreation opportunities.

Building on the earlier mentioning that, the benefits can only be realised after certain amount of participation; consequently, the benefits are only derived in developed societies than the

developing ones. The level of participation and the amount of time spent on outdoor recreation in developing countries is relatively low to confer benefits comparative to that of developed nations. As such, it can be argued that, numerous attempts by the researchers to explain outdoor recreation participation benefits are unclear because of the absence of defined clear specifications regarding the level of engagement or amount of participation that is required to confer benefits.

In other words, there are no clear explanations in the differences on outdoor recreation participation between the two regions. In this case, the notion of generalising the benefits as documented by numerous researchers (e.g. Asihel, 2005; Godbey, 2009; California State Park, 2005; and Li and Wang, 2012) may be conjectural. This is because, what is perceived as benefits in the developed world may not be considered beneficial in the developing ones. Increase in participation in developed nations is invariably the product of their perception of the benefits as well as the availability of resources, while it is merely by chance or opportunity in the developing countries. The clear rationale for the differences between developed and developing nations' in outdoor recreation derived benefits is that of the theories based on rural versus urban population densities on outdoor recreation participation suggested by Hendee (1960) as "opportunity theory". The theory implies that participation in different forms of outdoor recreation depends simply on their availability.

To clearly understand the differences in terms of the derived benefits of outdoor recreation participation between the two regions, the following gaps need to be addressed:

- 1- Methodological gap- there is need for generally accepted criterion, or scale for measuring the level of participation or amount of time required for outdoor recreation activity to confer benefits (health, social and environmental). The standards for moderate and vigorous physical activity proposed by Pate *et.al.*(1995) as 30 minutes



per day for five or more days per week for moderate and 20 minutes per day for three or more days per week for vigorous activity may not fully address the diverse and complex recreation issues. Godbey (2009) stated that, “we can’t manage what we don’t measure, however, and measuring physical activity in outdoor recreation and other setting is complex”. The California State Park (2005) narrated that, recreation activities, such as running, brisk walking, swimming and cycling are excellent for elevating the heart rate and lowering the incidence of heart disease, obesity and diabetes, but, if done regularly. However, majority of the researches do not measure duration and often assess frequency of participation crudely. Godbey (2009) further argues that, outdoor recreation studies vary greatly in methodology, sampling techniques, and methods of analysis. Since length of time spent in an outdoor recreation activity is a critical variable for dealing with obesity, stress reduction, and other health issues, the results from these surveys are of limited help in assessing health outcomes (Godbey, 2009).

- 2- Conceptual gap- studies on outdoor recreational behaviour are needed to fully understand, explain and define the scope of outdoor recreation with respect to developing countries. In developing countries, the scope of outdoor recreation is still difficult to define; for example, activities such as walking, cycling, fishing, hunting among others are no longer a recreation to them but rather routine activities in considering the economic status of the nations. This simply means that the benefits derived from these activities as advanced by the previous researches are just the product of their hustle up and down for economic gain than outdoor recreation participation. It is obvious that residents would be overrepresented in outdoor recreation and perhaps most significantly these activities, but many outdoor recreation studies in developing countries especially in Sub-Saharan Africa attached little

importance to these activities and often discard them despite being the simplest form of outdoor recreation activities. This can be proven in the work of Obinna *et al.* (2009), Sulyman and Iorliam (2016); while in the work of ABD'Razack *et al.* (2013) walking merely accounted for 6.66% (50 out of 750 respondents) among residents of Minna, Nigeria. Conversely, Romildet *et al.* (2011) reported walking for pleasure or exercise as the most common outdoor recreation activity in 43 activities studied among the Swedish population accounting for 92.1% in a survey of 1792 people. It also accounted for 83.2% among residents of Oregon, United States according to a survey of 17,016 residents.

## **2.6 Outdoor Recreation Participation and Constraints**

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). Johnson *et al.* (2001) defined 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”. Jackson (1988) earlier advanced that, the constraints include internal constraints such as personal skills, abilities, knowledge, and health problems; and also external factors such as lack of money, time, transportation, and inadequate facilities. A number of residents, however, are limited in participating in recreational activities due to various constraints.

Crawford *et al.* (1991) identified three categories of constraints: structural, interpersonal (or internal), and intrapersonal. Structural constraints are those constraints commonly conceptualized as intervening factors in leisure preferences and participation. Examples of structural constraints include availability of opportunity, financial resources, season, climate, the scheduling of work time, and reference group attitudes concerning the appropriateness of

certain activities (Crawford and Godbey, 1987; Hamidreza, 2014). Interpersonal constraints come as a result of interpersonal interactions such as lack of companion and lack of encouragement. 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 a 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. However, the most frequently mentioned constraints include time, gender, income, distance, age, health, lack of companion, lack of knowledge/information and safety among others (Johnson *et al.* 2001; Neuvonen *et al.*, 2007; ABD'Razack *et al.* 2013; Hamidreza, 2014; Sulyman and Iorliam, 2016). For example, lack of time, financial problems, inadequacy of outdoor recreational areas, lack of companion, and health problems are identified by Kara and Demirci (2010) as the major constraints affecting residents' participation in outdoor recreation in Istanbul. They further indicated lack of time as the most important recreational constraint accounting for 74.8% of the respondents who think that they do not participate enough. Sulyman and Iorliam (2016) reported lack of enough time as the most important and identified constraint people perceived to have to enable them partake in outdoor recreational activities. Similarly, ABD'Razack *et al.* (2013) identified lack of time as the most important constraint. However, they further highlighted level of poverty in the country as the major cause for residents' lack of participation as 'people views recreation as waste of time and if

those times are spent on venture that can provide money they prefer it rather than wasting the time on recreation' (ABD'Razacket *al.*, 2013).

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). Previous empirical studies indicated that females usually participate in outdoor recreational activities less frequently than males (Henderson and Bialeschki, 1991; Johnson *et al.* 2001; Wearing and Wearing, 1988; Hamidreza, 2014). Outdoor recreational activities have historically been the domain of men and as such women often face real constraints because of their gender identity (Dooley, 2016). A number of factors or constraints affect female participation in outdoor recreational activities such as lack of time due to family responsibility, fear of assault, lack of confidence, safety and security, overcrowding and marital issues among others. This is because they have more responsibility than males for their families so they keep themselves busy with housework and they fear from assaults and being raped (Henderson, 1991; and Hamidreza, 2014).

Other research 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 and Gibson, 2013). Various studies also identified level of income/financial problems (Johnson *et al.*, 2001; Kara and Demirci, 2010; ABD'Razacket *al.* 2013), distance to recreational facilities (Neuvonen *et al.*, 2007; Dickson, 2014), pollution and lack of facilities (ABD'Razacket *al.*, 2013) are the other essential constraints to participation in outdoor recreation. Akitoye (2016) on the other hand, observed attitude to have more influence on recreational participation other than availability of facilities, safety and security among other major constraints identified by the previous

studies. Some researches emphasised that income level of people plays a prominent role in access to recreation than any other constraints, because it determines the role of individual in partaking in recreational activities (Shores, Scott and Floyd, 2007; Johnson *et al.*, 2001).

Neuvonen *et al.* (2007) further identified design and facility characteristics of recreational areas as other significant factors affecting participation in recreational activities. People do not usually prefer recreational areas where facilities do not provide them with enough opportunities to engage in various activities (Neuvonen *et al.* 2007). Thus, outdoor recreation planning principles and standards are critical because of the impact that it generates, as the effective and/or adequate provision and distribution of recreational resources encourage people participation.

It is important to note that, constraints are not to be seen as fixed barriers that lead to non-participation. Rather, participation in leisure activities is dependent on a successful negotiation through the different types of constraints, often including a modification of the level of participation and leisure preferences (Crawford & Godbey, 1987; Jackson *et al.*, 1993; White, 2008; Romild *et al.*, 2011). In other words, 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 (Hamidreza, 2014).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter explains the method adopted in carrying out the research. This includes research design, types and sources of data required, method and instruments of data collection, sample size and techniques, administration of the instrument as well as analysis and presentation of the data.

#### **3.2 Research Design**

The study adopted mixed-method research design which warrants the use of both quantitative and qualitative approaches. The empirical nature of the study indicates that the information available with residents' requires responses that can easily be answered through descriptive survey techniques (Simon, 2015). This provides a quantitative description of the issues by studying a sample using questionnaire. While, the qualitative approach (observation and informal interview) was used to validate the quantitative data.

#### **3.3 Data Required and Sources**

Both primary and secondary data sources were used for this study. The primary data were obtained through field observation, questionnaire and interview. While the secondary data were obtained from published and unpublished materials such as journals, textbooks, internet searches, dissertations and theses, among others.

##### **3.3.1 Data from primary sources**

- a. **Socio-demographic characteristics of the residents:** This includes the data elements such as age, gender, income level, occupation, marital status, educational status, etc.

These variables are important to establish the pattern of participation and also determine how they influence the residents' participation in outdoor recreation. This type of data was collected using questionnaires.

- b. **Inventory of outdoor recreational facilities:** This involves the identification of existing outdoor recreational facilities such as race course, golf course, football field, polo field; and recreational opportunities such as jogging, cycling, running, walking, and their usage. This was useful in establishing the availability, spatial locations and characteristics of each recreation facility, types, number and sizes as well as the time of use. This type of data was collected from field observation.
- c. **Nature of the facilities used by residents for outdoor recreational activities:** such as public facilities, private facilities, and institutional facilities. This was used to determine the ownership characteristics of the facilities used by the residents and how it can influence the level of their participation. This type of data was collected using questionnaires.
- d. **Types of outdoor recreational activity(s) usually engaged in by the residents:** The specific data elements include walking for pleasure, jogging, cycling, horse riding, driving for pleasure, football, volleyball, tennis, basketball, BBQ/picnics/social gatherings, golf, and swimming. This was used to establish whether the types of outdoor recreational activity residents engage in may explain the pattern of participation. This type of data was also collected using questionnaires.
- e. **Frequency of participation:** That is how often the residents visit and participate in the outdoor recreation. The options include daily, fortnightly, monthly, annually. This was used to determine the level of residents' participation in outdoor recreation. This type of data was also collected using questionnaires.

- f. **Period of participation:** This data relates to the time in which residents participate in outdoor recreation such as morning, afternoon, and evening. This will help in establishing the temporal pattern of resident's participation in outdoor recreation.
- g. **Distance travelled:**The data measures the minimum distance the residents travel to participate in outdoor recreation (1km, 2km, 3km,etc). This specific data element is important as they may reveal the constraints to residents' participation. It was used to determine whether distance to facilities affect the residents' participation. The instrument used for the collection of this data was questionnaire.
- h. **Mode of Transport:** This explains the various mode of transport the participants' uses to reach outdoor recreation facilities or venue(s). The specific data elements include foot, car bicycle, motorcycle, tricycle, bus or taxi etc.
- i. **Source of Information:**That is how the participants know about outdoor recreationactivities or facilities. The options include friends, family, school, social media (Facebook, twitter, WhatsApp,etc), Radio, Television etc.
- j. **Reasons for participation in outdoor activities:** This was also used to determine whether resident'sreasons of participation may explain their level of participation in outdoor recreation. This will measure reasons such as fun, social interrelation, mental relaxation, economic purpose, physical fitness, etc.This type of data was also collected using questionnaires.
- k. **Constraints or major barriers that limit residents' participation:** the data elements include personal health reasons, inadequate information, inadequate facilities, not enough time, security, marital issues, high cost of participation, overcrowding, etc. This was used to identify the various constraints and how they affect residents' level of participation in outdoor recreation.This type of data was also collected using questionnaires.



### 3.3.2 Secondary data

- a. **Existing spatial features of the study area through a base map:** This was used to know the neighbourhoods and wards that make up the Local Government Area and the delineation of the study area. It was also be used to indicate the location of existing outdoor recreational facilities in the study area.
- b. **Number of houses in the study area:** This data is very important in determining the sample size and also assists in the distribution of questionnaires to target representative of the entire population. This data was collected from the relevant government agency.

The specific data required and sources for this study are summarised in Table 3.1.

**Table 3.1:** Summary of the Types, elements, sources and relevance of data required in the study

Objectives	Data type	Data elements	Source of data/Instrument	Relevance
Objective 1 & 2	Inventory of outdoor recreational facilities	Recreation facilities availability, type, capacity, location, functionality and ownership	Observation/field survey	Identified the spatial locations and characteristics of each facility, type, number and sizes as well as the ownership
	Inventory of outdoor recreational centers	Identification of outdoor recreational centres and opportunities	Observation/field survey	Identified available recreational centres their locations, and major facilities found within them as well as their ownership status
	Socio-demographic characteristics of the respondents	Age, gender, income level, educational status, occupation, marital status, family sizes, etc.	Field survey/questionnaire	Help Established the pattern of participating and also determine how it influenced the residents' participation in outdoor recreation.
Objective 3	Frequency of participation	Daily, weekly, fortnightly, monthly, bi-annual, annually	Field survey/questionnaire	Determined the level of resident's participation in outdoor recreation.
	Types of Recreation activities	Walking, jogging, cycling, horse riding, going to park, relaxing, football, golf, polo, basketball, tennis etc.	Field survey/questionnaire	Established whether the types of outdoor recreational activity residents engage in may explain the pattern of participation.
	Nature of facilities used by the residents	Public, private, or institutional facilities.	Field survey/questionnaire	Determined the characteristics of the facilities used by the residents and how it influences the level of their participation.
	Period of participation	Morning, afternoon, evening, night.	Field survey/questionnaire	Established the temporal pattern of resident's participation in outdoor recreation.
	Distance travel and mode of transport	1km, 2km, 3km...; foot, bicycle, motorcycle, car, bus, etc.	Field survey/questionnaire	Determined whether distance, leisure time, and choice of facilities affect the residents' participation
	Reasons for participation in outdoor recreation	Fun, social interaction, mental, relaxation, economic purpose, physic fitness etc	Field survey/questionnaire	know the motive for residents participation and establish whether the perceived benefits influences their level of participation in outdoor recreation.
	Source of information and accompanies	Friends, family, radio, social media, school etc.; alone, with friend, both family and friend	Field survey/questionnaire	Exploredhow the residents source of information and accompanies can influence the level of their participation

**Table 3.1 Cont.**

<b>Objectives</b>	<b>Data type</b>	<b>Data elements</b>	<b>Source of data/Instrument</b>	<b>Relevance</b>
<b>Objective 3</b>	Constraints or major barriers that limited residents participation	Personal health reasons, inadequate information, inadequate facilities, not enough time, security issues, marital issues, overcrowding etc.	Field survey/questionnaire	identified the various constraints and how they affect residents level of participation in outdoor recreation
	This involve interrelating objectives 2 and 3 for evaluating the pattern			
<b>Objective 4</b>	Information on the study area	Base map of Nassarawa L.G, map of recreational facilities	Kano State Ministry of land and Physical Planning	Identified the neighbourhoods/wards that make up the L.G.A as well as location of facilities
	House Numbering and Street Naming Data	Total Number of houses in the study area (Census Database)	Community Department, Planning Research and statistics (PRS) Department, Nassarawa L.G.A Secretariat	Determined the sample size and also assist in the sampling distribution of questionnaires to stand as the representative of the entire population
<b>Secondary Data</b>				

### 3.4 Sampling

#### 3.4.1 Sample frame

Sample frame is the list of all items or elements in a study population. Therefore, to determine the sample frame of this study; the total number of all houses in 11 clusters of the Nassarawa L.G.A of Kano Metropolis were obtained from Kano State House Numbering and Street Naming Data, 2013. The Nassarawa L.G.A. has eleven (11) wards which were identified as clusters in this study with a total number of 99,137 houses as at 2013. These are: Dakata, Gama, Gwagwarwa, Tudun Wada, Kawaji, Giginyu, Badawa, Kawo, Hotoron Kudu, HotoronArewa, and Tokarawa (see Figure 1.2).

#### 3.4.2 Sample size

Given the total number of houses as 99,137, the 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 houses that were administered questionnaires. The calculation is demonstrated as follows:

$$n = \frac{99137}{1 + 99137(.05)^2} = 399.99$$

#### 3.4.3 Sampling techniques

The research used Multi-stage sampling technique (Obinna *et al.* 2009) where: Cluster sampling was first used to divide the population of the study area into 11 clusters according

to wards. Second, systematic sampling was used in selecting households from within each sub cluster (every 5<sup>th</sup> house). Thirdly, respondents were selected randomly from each systematically selected household. This technique is important for this study as the population of the study area is divided in sub clusters. The total number of houses or residents in each cluster was determined by adding the total number of houses in each neighbourhood (sub clusters).

### 3.4.4 Questionnaire administration

The totals of 400 copies of questionnaires were administered across 11 clusters in the study area. However, the number of questionnaires to be distributed in each cluster was determined by multiplying the percentage of houses of each cluster with total number of questionnaires divided by 100 as shown in the Table 3.2.

**Table 3.2:** Questionnaires administered and retrieved

S/N	Wards	Total number of houses	Percentage of the total houses	No. of Questionnaires Administered	No. of questionnaires 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	HotoronArewa	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
<b>TOTAL</b>		<b>**99,137</b>	<b>100</b>	<b>400</b>	<b>386</b>

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

### **3.4.5 Target respondents**

The targeted respondents were any adult member of the household (age 18 and above) who is living in the study area.

## **3.5 Data Collection Instruments**

### **3.5.1 Reconnaissance survey**

Reconnaissance survey was carried out which enable the researcher to familiarise himself with the environment and relevant stakeholders as well as determining better ways of obtaining information. Reconnaissance survey helps the researcher in identifying various outdoor recreational facilities and opportunities within the study area which facilitated the inventory of the facilities in the area.

### **3.5.2 Use of questionnaire**

This involves collecting primary data through the assessment of peoples' responses to inquiries in a questionnaire. This method has the advantages of increased speed of data collection, low cost of administration and higher levels of objectivity compared to many other alternative methods of primary data collection. In this research, some set of questions were asked to inquire about residents' participation and constraints in outdoor recreation. The questionnaire contained questions requiring close ended response (with some questions using Likert scale) so as to obtain information on socio-demographic characteristics of the residents such as age, sex, educational attainment, income level, occupation; frequency of participation, reasons, and period of participation, type of activities, distance travelled to partake in activity as well as the constraints or barriers to their participation (see appendix D).The content of the questionnaire was first validated by the research supervisors and other external researchers before data collection. The approved draft version of the questionnaire

was subjected to pilot study in which 25 copies of the questionnaire were administered to randomly selected respondents within the study area. The Cronbach's alpha reliability coefficient was 0.806 which indicate acceptable internal consistency (Pallant, 2011). For this research, four hundred (400) questionnaires were administered to sample respondents across all clusters and out of the total; three hundred and eighty six (386) (96.5%) were retrieved and used for the analysis (Table 3.2). In administering the questionnaires, the researcher employed the use of five (5) trained field assistants including himself and maps were used for easy navigation within the study area.

### **3.5.3 Use of Informal interview(unstructured)**

Unstructured Informal Interviews were conducted with staff of the Kano State Ministry of Environment, Ministry of Works, Housing & Transport, and Ministry of Youth, Sport and Culture to provide the researcher with additional information for the study. The interview supports the researcher with some insight on the provision and management of the outdoor recreational facilities within the study area. Table 3.3 shows the schedule of the interview conducted.

### **3.5.4 Observation**

Observation is important in collecting additional information about issues under study which is difficult to obtain by other means. Using this method, the researcher observed some opportunities and constraints in outdoor recreation participation. One of the purposes of this method is to obtain first-hand data needed to supplement, or verify and describe the aspect of the variable under study for more accurate description and interpretation. In the observation process, cameras were used to capture images which gave visual touch of the situation for better understanding of the research.

**Table 3.3:** Interview Schedule

<b>Attribute</b>	<b>Description</b>	<b>Target</b>	<b>Target respondents</b>
Outdoor recreational facilities	Categories, conditions, number location, etc.	Nassarawa Secretariat	L.G. HOD Nassarawa Secretariat Community, L.G.A
Provision of facilities	Method of supply, ownership (private, public), policies, management etc.	Kano State Ministry of Environment, KNUPDA; Ministry of Youth, Sport and Culture.	Director Urban Planning KNUPDA; Director Sport, Ministry of Youth, Sport and Culture, Kano.

### **3.6 Method of Data Analysis and Presentation**

Different types of statistical analyses can be used in a research work depending on the questions that are being addressed and the nature of the data that the study possesses (Pallant, 2011; Simon, 2015). Therefore, both descriptive and inferential statistics were used for the analysis of data in this study. Each of the statistical analysis carried-out is appropriate to achieve a particular research objective or a combination of them. The specific analyses used are further discussed below:

#### **3.6.1 Descriptive statistics**

The analyses used were frequencies, mean, standard deviation, scores ranking and cross-tabulation to describe and/or summarise the data. The reasons for participation as well as the constraints to participation were measured on a 5-point Likert Scale (1-Strongly Disagree to 5-Strongly Agree) refer to appendix I; which the mean scores were ranked from highest to the lowest. Chi-Square Test of independence was used to determine the association between gender and outdoor recreation participation.



### 3.6.2 Inferential statistics

The analyses used were Exploratory Factor Analysis (EFA), and Logistic Regressions.

- The Exploratory Factor Analysis (EFA) with Principal Component Extraction and Varimax rotation was used to reduce the 20 items measuring constraints of participation into three factors to determine the group of commonly related constraints perceived by the residents.
- Logistic Regressions (both Binary and Multinomial) were also used to estimate the likelihood of participation in 24 different outdoor recreation activities; as well as the possibility of whether the subgroup of the socioeconomic and demographic characteristics of the residents were more (or less) likely to be constrained in participation in outdoor recreation. This technique is important and perhaps the most appropriate way of evaluating the interrelationship among the variables. It is the most applicable and composite in consideration of the number of variables the study possessed as against simple cross-tabulation.

The data was presented using tables, bar graphs as well as pictures for quantitative and visual presentation of information respectively.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter presents the analysis of the collected field data. The study assessed the residents' participation in outdoor recreation with a view to examine the level and establish the pattern of residents' participation. In doing so, the study identified the available outdoor recreation facilities, assessed demographic and other socio-economic characteristics of residents, as well as their level and characteristics of outdoor recreation participation in the study area. These include the frequency of participation, types of activities and facilities the residents' use for outdoor recreation, the reasons for participation, the time of participation, the distance travel and mode of transport as well as the factors or constraints that limit the residents' participation in outdoor recreational activities. The chapter also presents the pattern of participation and constraints in outdoor recreation in the study area.

#### **4.2 Inventory of Outdoor Recreation Facilities in Nassarawa Local Government Area, Kano State**

It has been observed from Table 4.1 that, Nassarawa L.G.A. of Kano state is a facilities abundant area. These facilities are of different hierarchy ranging from local to regional. The presence of these facilities provided residents with the opportunities to engage in different forms of recreational activities and served as an impetus to their participation. It has also been discovered that, some facilities are available in each cluster while some are only available in specific areas such as Government Residential Areas (e.g. parks, sport centres, lawn tennis courts, golf courses etc.). Apart from the individual recreation facilities, Nassarawa L.G.A. also has a number of recreational centres with different facilities.

Table 4.1 reveals that Nassarawa L.G.A. as a small spatial entity in Kano metropolis, Kano state has a total of 107 different outdoor recreational facilities. The result shows that Giginyu and Tudun Wada clusters have the highest numbers of facilities with a total of 39 and 18, respectively. HotoronArewa and Tokarawa are the clusters with the least numbers of facilities with totals of 2 and 3, respectively.

**Table 4.1:** Outdoor Recreational Facilities in Nassarawa L.G.A. Kano State

S/N	Facilities	Clusters											Sub Total
		KJ	DK	GY	GM	HA	HK	TD	GGW	BDW	TKR	KW	
1	Recreational park	-	-	4	-	-	-	1	-	-	-	-	5
2	Football field	3	4	-	4	1	1	1	1	1	1	3	20
3	Mini stadium (5-aside)	1	1	6	-	-	-	2	-	-	-	1	11
4	Basketball court	-	-	1	1	-	-	1	-	-	-	-	3
5	Volleyball court	1	-	2	1	-	-	1	1	-	1	-	7
6	Badminton court	-	-	1	-	-	-	1	-	-	-	-	2
7	Lawn tennis court	-	-	2	-	-	1	4	-	-	-	-	7
8	Race course	-	-	1	-	-	-	-	-	-	-	-	1
9	Golf course	-	-	1	-	-	-	-	-	-	-	-	1
10	Polo field	-	-	-	-	-	-	1	-	-	-	-	1
11	Event ground	1	-	6	-	-	1	-	1	-	-	-	9
12	Swimming pool	2	-	8	-	-	-	2	-	-	-	-	12
13	Handball field	-	-	1	-	-	-	-	1	-	-	-	2
14	Other games e.g. table tennis, snooker etc.	1	1	5	3	1	1	3	1	3	1	4	24
15	Play ground	-	-	1	-	-	-	1	-	-	-	-	2
16	<b>Sub-total</b>	<b>9</b>	<b>6</b>	<b>39</b>	<b>9</b>	<b>2</b>	<b>4</b>	<b>18</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>8</b>	<b>107</b>
17	<b>Total</b>	<b>107</b>											

KJ=Kawaji, DK=Dakata, GY=Giginyu, GM=Gama, HA=HotoronArewa, HK=Hotoron Kudu, TD=Tudun Wada, GGW=Gwagwarwa, BDW=Badawa, TKR=Tokarawa, KW=Kawo

Source: Author's Field Work, 2020

Table 4.1 also reveals that, Giginyu and Tudun Wada are the only clusters with unique regional outdoor recreation facilities; which includes the golf and race course, polo field and other recreational centres.

#### **4.2.1 Outdoor Recreational Centres in Nassarawa L.G.A. Kano State**

Nassarawa L.G.A. has a number of outdoor recreational facilities as shown in Table 4.1. However, majority of these facilities are only present in recreational centres, just a few are located in public institutions and neighbourhoods, for example, football fields. It is important to note that, a higher number of these facilities presence in Nassarawa are largely as a result of the prevalence and development of commercial sports and recreational centres within the metropolis.

Table 4.2 shows the recreational centres within Nassarawa L.G.A., their locations, and major facilities found within them as well as their ownership status (Figure 4.1). The Lebanon Club is a recreational centre with ten (10) different outdoor recreational facilities while, Kano Club has five (5) facilities. It can be inferred that, each and every outdoor recreational centre in Nassarawa possesses a unique facility that differ it from others within the same locality. Therefore, differing recreational activities takes place at different recreational facilities. For instance, Kano Race Course is known for horse riding while Kano Club is known for Golf playing. This gives the residents relative opportunities to engage in different recreational activities of their choices.

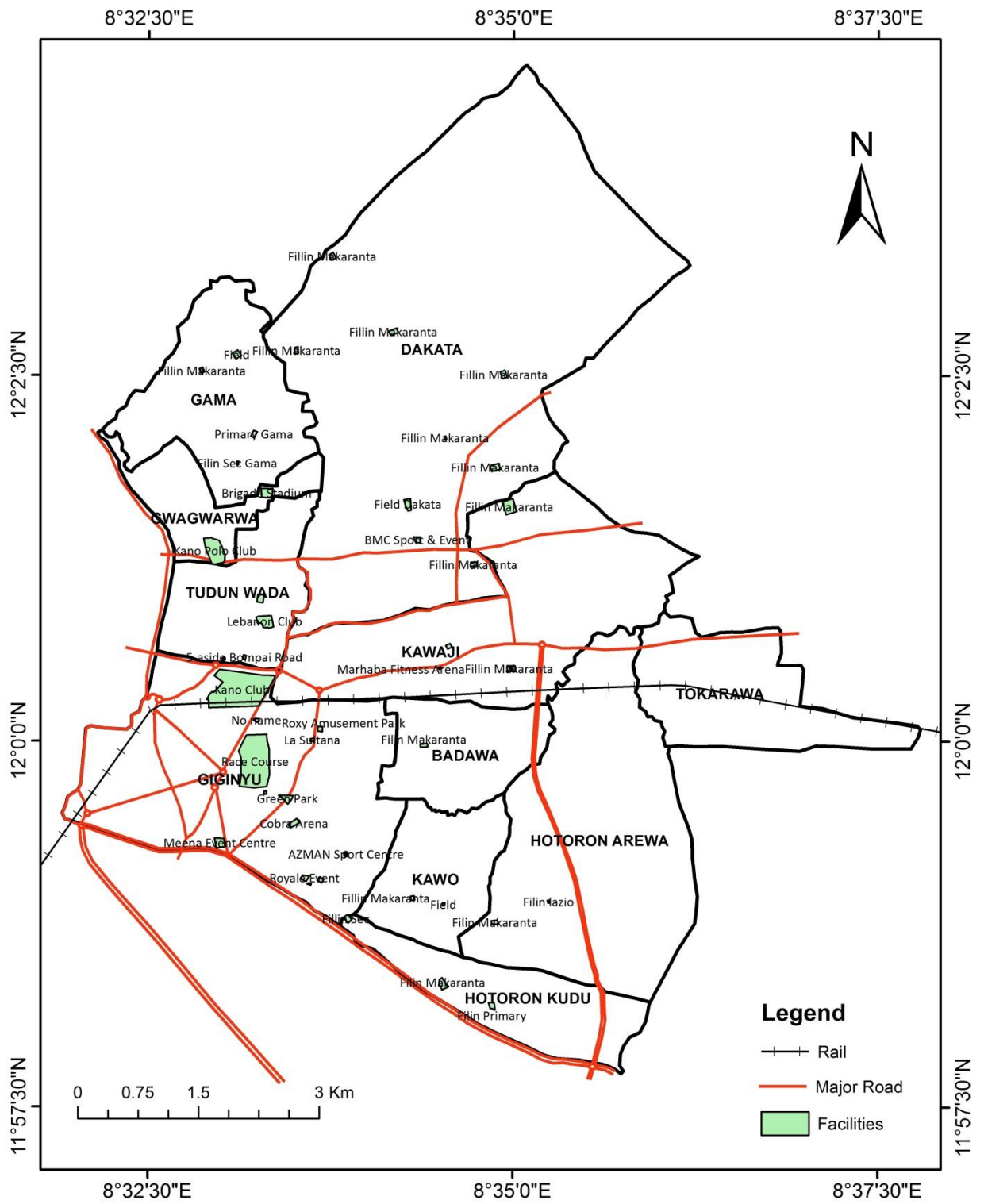


Figure 4.1: Distribution of some of the major outdoor recreational facilities in Nassarawa L.G  
 Source: Field Work, 2019

**Table 4.2:** Outdoor Recreational Centres in Nassarawa L.G.A. Kano State

S/N	Name	Location	Major facility(s)	Activities	Ownership
1	Kano Club	Murtala Muhammad way, Kano	Golf course, tennis court, badminton court squash court, dart board etc.	Golf, badminton, tennis, squash, Dart, snooker, Scrabble, Dominos	Public Private Partnership (PPP)
2	Kano Polo Club	Independence Road, Kano.	Polo ground and horses	Polo and horse riding	Public Private Partnership (PPP)
3	Kano Race Course	Race Course Road	Race course	Horse riding, racing, jogging, running, football, picnic	Public
4	Umar Farouk Villa	Alu Avenue Road by Ali Yakasai Street	1-Mini stadium (5-aside)	Football, picnicking	Private
5	La-Sultana	Ahmadu Bello Way, Kano	1-Mini stadium (5-aside)	Football, picnicking	Private
6	Lebanon Club	Miller Road, Kano	3-lawn tennis court; 1-basketball Court; 1-badminton court; 2-mini stadium (5-aside); 1-Children Playground; 2-squash court; Table tennis, snooker and	Football, basketball, badminton, tennis, squash, picnicking, etc.	Private (Lebanese Societies organisation)
7	Marhaba Arena	Fitness Hadejia road, Kano	1-mini stadium (5-aside) and Gym Hall	Gym, football and picnic	Private
8	BMC Sport & Event Centre	DakataDambo	1-mini stadium (5-aside), event ground snooker, and table tennis	Football, table tennis, snooker, picnic and other live event	Private
9	Cobra Arena	MagajiRumfa Road, Kano	1-mini stadium (5-aside), snooker, table tennis and mini motor-racing ground	Football, motor-racing, table tennis, picnic, relaxing etc.	Private
10	Roxy Park	Ahmadu Bello Way, Kano	Children playground facilities	Relaxing, hanging out and children play	Private
11	Green Park	Ahmadu Bello Way, Kano	Green open space with ornamental trees and canteen	Relaxing, hanging out and eating place	Public Private Partnership (PPP)
12	AZMAN Sport Centre	Lamido Road, Kano	1-mini stadium (5-aside),	Football, picnic and other live event	Private

Source: Author's Field Work, 2020

Information on residents' participation in those identified activities in respect of the observed facilities has been generated. The plates 4.1 to 4.4 show the picture of some of the outdoor recreational facilities in Nassarawa L.G.A. Kano state (see appendix for more).

### Mini- Stadium (5-aside)



Plate 4.1: Five aside mini stadium at BMC Sports & Event Centre, Dakata-Nassarawa, Kano  
Source: Field Work

### Recreational Park



Plate 4.2: Section of Green Park for relaxing and hanging out at Ahmadu Bello Way, Kano  
Source: Field Work



## Golf Course



Plate 4.3: Participants playing golf at Kano Club, Giginyu-Nassarawa, Kano  
Source: Field Work

## Polo Field



Plate 4.4: UsmanDantata International Polo Ground formally Kano Polo Club  
Source: Field Work



### **4.3 Demographic and Other Socio-Economic Characteristics of Respondents**

The variables surveyed are gender, age, marital status, household size, qualification, employment status, income level and the period of stay in Nassarawa. These variables are critical as they influence the residents' participation in outdoor recreation. They are also important in establishing the pattern of outdoor recreation participation.

#### **4.3.1 Gender and age of the respondents**

On the gender distribution of the respondents, Table 4.3 shows that most of the respondents are male which constituted 78.2% while females account for 21.8% of the study. 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 head in the household. 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". Therefore, it can be said that, this could affect participation in outdoor recreation as their participation in outdoor recreation may largely be influenced by their husband's decision.

Table 4.3 shows the age distribution of the respondents. The table reveals that, majority of the respondents were youth between the age of 26-35 years (36.8%), followed by respondents with ages between 18-25 years (29.8%). Another age category of the respondents who constitute larger proportion are those within the age of 36-45 years which account for 19.2% and 46-55 years representing 7.5%. While the least respondents ages between 56-65 years and above 66 years accounting for 4.9% and 1.8%, respectively.

**Table 4.3:** Gender and Age of the Respondents

<b>Sex of the Respondents</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>	<b>Mean</b>	
Male	302		78.2	
Female	84		21.8	
Total	386		100.0	
<b>Age Ranges</b>				
18-25 Years	115		29.8	
26-35 Years	142		36.8	
36-45 Years	74		19.2	32.92
46-55 Years	29		7.5	
56- 65 Years	19		4.9	
66 and above	7		1.8	
Total	386		100.0	

Source: Author’s Field Work, 2019

The age distribution of the respondents reveals an interesting result, given that the majority of the respondents are within active age of 15-25 and 26-35 years with mean age of 32.92 years. It can be inferred that, the respondents have the high tendency to participate in outdoor recreation as age has effect on the ability of individuals to actively engage in outdoor recreation.

#### **4.3.2 Marital Status and household size of the respondents**

Marital status and household or family size are among the important factors that could determine individual ability to engage in outdoor recreation. The marital status in Table 4.4 reveals that, majority of the respondents are single representing 51.6% of the total responses while 42.7% are married status. Widows and divorced constitute the negligible and similar of 2.8% and 2.8%, respectively. Although, the percentage of widow and divorced was insignificant compared to that of the single and married, it could also have effect on outdoor recreation participation.

**Table 4.4:** Information on the Respondents Marital Status and Household Size

<b>Marital Status</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>	
Single	199	51.6	
Married	165	42.7	
Widow	11	2.8	
Divorce	11	2.8	
Total	386	100.0	

<b>Household Size</b>			<b>Mean</b>
1-3	220	57.0	
4-6	70	18.1	
7-9	43	11.1	4.45
10-12	26	6.7	
13 and above	27	7.0	
Total	386	100.0	

Source: Author's Field Work, 2019

Table 4.4 also shows that, the household size of 1-3 constitutes the majority of the respondents representing 57.0% while those with 4-6 household members constitute 18.1% of the total respondents. The moderate family with household members of 7-9 represent 11.1% while only 6.7% and 7.0% of the respondents have the largest family sizes of 10-12 and 13 and above members respectively. It is, however, not strange to see that, more than half of the respondents fall within the category of 1-3 household members which formed 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.

#### **4.3.3 Educational qualifications and employment status of the respondents**

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 4.5 reveals that majority of the respondents are literate with 30.6% of the respondents having secondary certificate and 23.6% with ND/NCE certificates. The former are usually students with minimum of secondary certificate who are yet to finish their studies at various colleges and Universities. About 22.3% of the respondents hold Higher National Diploma and/or Bachelor’s degree while those with higher degrees(Masters and PhDs) are 8.3% and 2.6%, respectively. On the other hand, the table also reveals that, Nassarawa L.G.A. 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 expected because it’s the area that comprises different clusters of high and middle class people of the city with relatively high standard of living.

**Table 4.5:** Information on the Educational and Employment Status of the Respondents

<b>Educational status</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
No formal education	26	6.1
Primary	23	6.0
SSCE	118	30.6
ND/NCE	91	23.6
HND/BSc	86	22.3
PG to Masters	32	8.3
PhD	10	2.6
Total	386	100.0
<b>Employment Status</b>		
Private sector/self-employed	155	40.2
Public/Civil sector	86	22.3
Unemployed	58	15.0
Retirees	12	3.1
Students	75	19.4
Total	386	100.0

Source: Author’s Field Work, 2019

Occupational status of the respondents in the Table 4.5 reveals that 40.2% of the respondents are working in the private sector or are self-employed while 22.3% work within public or civil sector. Students constitute 19.4% which is a larger percentage compared to that of unemployed and retirees with 15.0% and 3.1% respectively. It can be reiterated further that employment and educational status of the respondents could have effect on outdoor recreation participation.

#### 4.3.4 Monthly income and length of stay in the area

The analysis of the monthly income as shown in Table 4.6 reveals that 49.2% of the respondents earned ₦20,000.00 and below while 16.1% earned between ₦21,000.00 and 40,000.00 monthly. There was as high as 13.7% of the respondents earning between ₦41,000.00 and ₦60,000.00 monthly. Only 4.9% earned between ₦61,000.00 to ₦80,000.00. Similarly, 16.1% of the respondents earn monthly income above ₦81,000.00. The mean monthly income of ₦73,821.84 indicated that, the Nassarawa L.G.A. Kano is an area of people with high standard of living and this may seem to influence their participation in outdoor recreation. This is because income level of people impels their ability to spend for recreation (Dickson, 2014).

**Table 4.6:** Respondents Monthly Income

Monthly Income (₦)	Frequency (N)	Percentage (%)
≤20,000.00	190	49.2
21,000-40,000	62	16.1
41,000-60,000	53	13.7
61,000-80,000	19	4.9
81,000 and above	62	16.1
Total	386	100.0

Source: Author's Field Work, 2019

Table 4.7 also shows the length of stay by the respondents in the study area which reveals that almost none of the respondents stayed less than 1 year. This further validates the quality of the information given by the respondents about the study area. Simon (2015) stated that “in the researcher’s view, residents that have not stayed in an area of study for up to one year may not have the adequate knowledge of the developmental trend of the place”.

**Table 4.7:** Length of Stay in the Neighbourhood

<b>Length of Stay</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
1-3 Years	25	6.5
4-6 Years	41	10.6
7-9 Years	25	2.5
Above 10 years	295	76.4
<b>Total</b>	<b>386</b>	<b>100.0</b>

Source: Author’s Field Work, 2019

#### **4.4 Characteristics of Participation**

This section describes the level and characteristics of outdoor recreation participation by the respondents. Different variables that can measure participation were surveyed and analysed. These include the frequency of participation, types of activities and facilities the residents use for outdoor recreation, the reasons for participation, , the time of participation, the distance travel and mode of transport as well as the constraints to participation in outdoor recreation activities. These variables are useful in establishing the pattern of outdoor recreation participation in the study area.

##### **4.4.1 Frequency of outdoor recreation participation**

Table 4.8 showed that 32.9% were participating in outdoor recreation on a weekly basis. This is followed by 18.5% of daily participants, and 14.2% of those were participating on a monthly basis. About 9.8% participated on a yearly basis; while 11.9% never participated. The picture depicted in the Table 4.8 reveals that, the level of participation in outdoor recreation in Nassarawa was found to be very high with 88.1% and 11.9% of the

respondents indicating participation and non-participation in outdoor recreation, respectively. This seems to disagree with Obinna *et al.* (2009), ABD'Razack *et al.* (2013), Dickson (2014) as well as Aribigbola and Francis (2016) who reported participation in outdoor recreation to be considerably low in Port Harcourt, Minna, Yenogoa and Akure, respectively.

**Table 4.8:** Frequency of Outdoor Recreation Participation

<b>Participation</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>
Daily	71	18.5
Every 2 days	24	6.2
Weekly	127	32.9
Every 2 weeks	25	6.5
Monthly	55	14.2
Yearly	38	9.8
Never	46	11.9
Total	386	100.0

Source: Author's Field Work, 2019

#### **4.4.2 Outdoor recreation activities participation survey**

The outdoor recreation activities participated by the respondents were surveyed and determined based on two different categories: the facility-based and non-facility based or related outdoor recreation activities. The respondents were asked to identify as many as it apply to them from the different recreation activities they participated in outdoors within the last 12 month (i.e. one year). They were also asked to specify average number of hours they participated in a typical occasion which was used to estimate the mean hours spent in a particular activity. These activities were generated from the preliminary observation and inventory of the facilities and recreational centres as shown in the Table 4.1 and 4.2.

From the Table 4.9, the most common among non-facility based or related outdoor recreation activities participated was visiting family and friends which constitutes 59.7% followed by

jogging and walking for pleasure with 53.5% responses each. All these activities have the participation rate exceeding 50% and closely followed by 42.8% of those interested in relaxing or escaping heat/noise (Figure 4.2).

**Table 4.9:** Non-Facility Based or Related Outdoor Recreation Activities Participation

<b>Non-facility Based or Related Activity</b>	<b>Frequency (N)</b>	<b>Percentage of Cases (%)</b>	<b>Mean hours</b>
Walking for pleasure	174	53.5	1.55
Jogging	174	53.5	1.55
Running	92	28.3	2.16
Skating	21	6.5	2.45
Motorcycling	61	18.8	2.24
Bicycling	102	31.4	2.14
Horseback Riding	40	12.3	2.30
Driving for pleasure	71	21.8	2.22
Relaxing, hanging out, escaping heat / noise, etc.	139	42.8	2.04
Attending outdoor concerts, fairs, or festivals	107	32.9	2.12
Visiting family and friends	194	59.7	2.50
Other games but played outdoors (cards/chess/scrabble/ snooker/table tennis, ludo etc.)	120	36.9	2.09

Source: Author's Field Work, 2019

The Table (4.9) also reveals that activities such as bicycling, attending outdoor live concerts, fairs or festivals, and other games (plays outdoors) like cards/chess/scrabble/ snooker/table tennis, Ludo have the participation rates between 30% and 40%. While running, motorcycling horseback riding and driving for pleasure were reported to be less than 30%. This appears to agree with findings of California State Park (2009), Romildet *al.* (2011), United State Outdoor Participation Report (2016, 2017 and 2018) and Bergerson (2018) which consistently report walking for pleasure and running including jogging as the most popular and common outdoor recreation activities respectively. Among all the activities visiting family and friends was found to have the highest mean hours (2.50) followed by



skating (2.45) horseback riding (2.30), motorcycling (2.24) and driving for pleasure (2.22) while walking for pleasure and jogging with the least mean hours of 1.55, respectively.

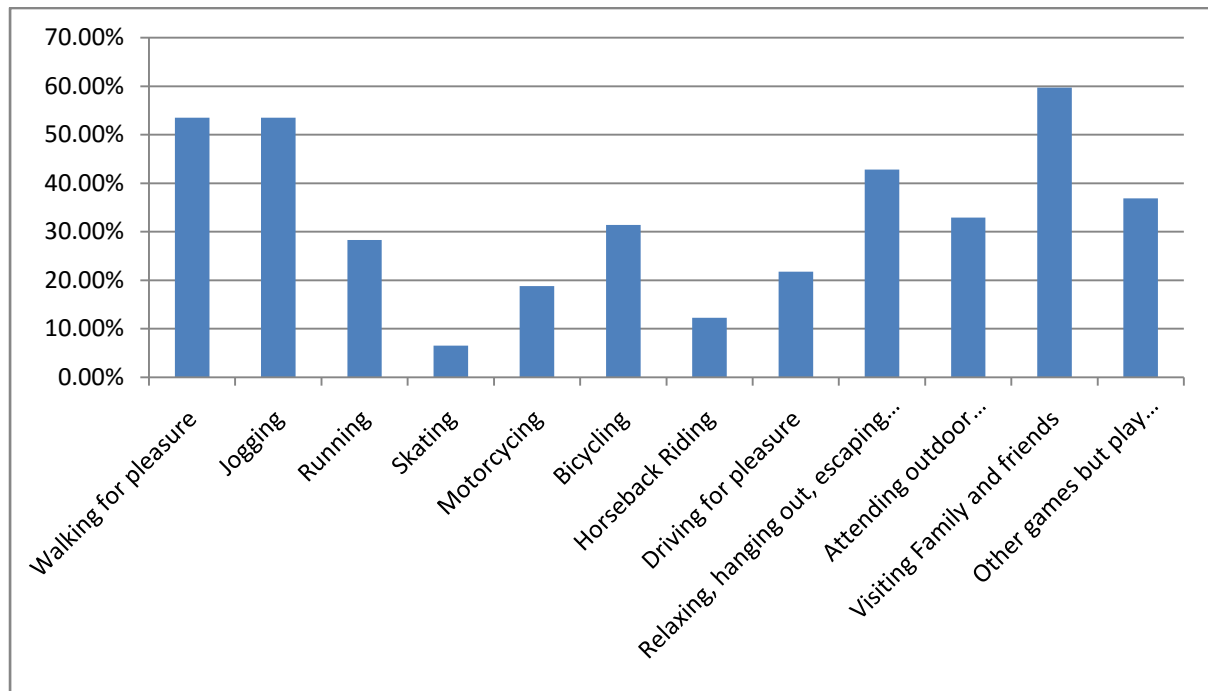


Figure 4.2: Non-facility based or related outdoor recreation participation by the respondents  
Source: Author’s Field Work, 2019

Table 4.10 indicates football as the most common among facility based or related outdoor recreation activities in the study area accounting for 67.6% while the least activity was Polo which represent 4.2%. Only going to parks and taking children to the parks has the participation rate between 20%-30%, while activities such as swimming, basketball, picnicking, horseback riding have the participation rates between 10%-20%, respectively. On the other hand, activities such as volleyball, badminton, lawn tennis, golf and polo have the participation rate below 10%, respectively. Table 4.10 revealed a good sense of realism in that the study area was observed to have a number of football fields and mini football stadium (5-aside) which provided the residents with relative opportunity to participate in football activity. Moreover, Golf was found to have the highest mean hour (2.43) followed by 2.29 for polo, 2.17 for lawn tennis, 2.10 badminton, 2.09 for going to parks, 2.05, 2.01, and 2.00 for football, taking children to the parks and volleyball, respectively. Activities such as

swimming, picnicking, horse riding and gymnastic attract comparatively less time with each having a mean duration of less than 2.00 hours.

**Table 4.10:** Facility-Based Outdoor Recreation Activities Participation

Facility based or Related Activity	Frequency (N)	Percentage of Cases (%)	Mean hours
Swimming	47	15.4	1.54
Football	207	67.6	2.05
Basketball	42	13.7	1.50
Volleyball	24	7.8	2.00
Badminton	25	8.2	2.10
Lawn tennis	26	8.5	2.17
Golf	20	6.5	2.43
Going to parks	79	25.8	2.09
Picnicking	48	15.7	1.39
Horseback riding	37	12.1	1.41
Taking Children to the parks	84	27.5	2.01
Polo	13	4.2	2.29
Gymnastics	58	19.0	1.23

Source: Author's Field Work, 2019

#### 4.4.3 Nature of the facilities used in outdoor recreation

Figure 4.3 shows that, majority (46.9%) of the participants uses public facilities for outdoor recreation, while 32.6% said that they use private facilities for outdoor recreation. It also shows that, 12.9% of the participants uses institutional facilities while 7.6% indicates other facilities which may include the use of both the private, public and institutional facilities. This tends to agree with the finding of Jibrin (2011) which identified public recreational facilities as the hive of recreational activities. This is because of the fact that most public facilities are free and usually not require too much amount of money to participate.

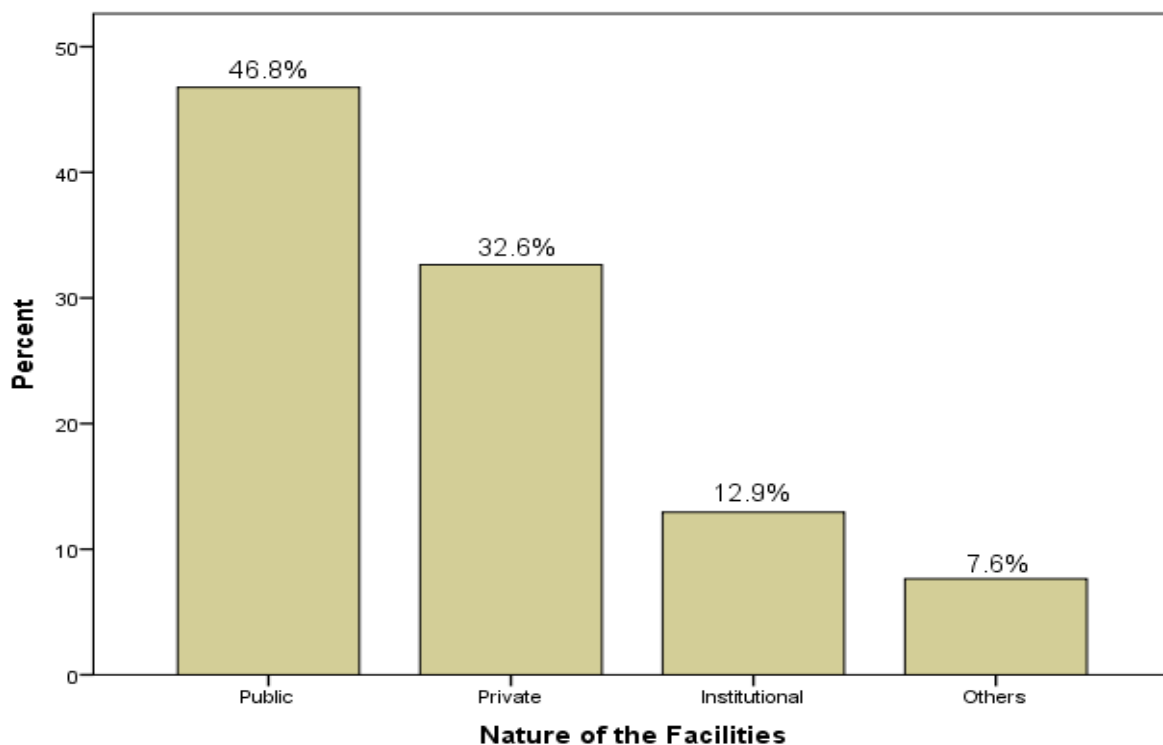


Figure 4.3: Nature of the Facilities Used in Outdoor Recreation  
 Source: Author's Field Work, 2019

#### 4.4.4 Time of participation in outdoor recreation by the respondents

The time of the day the residents usually participated in outdoor recreation as shown in Figure 4.4 reveal that, majority of the participants (40.0%) reports participating in outdoor recreation in the morning time (between 7:00am and 11:59am) and this was closely followed by 35.0% of those who indicates participation in the evening. These could, however, include a large number of people who often participated in outdoor recreation after working days and hours (i.e. during the weekends). The figure also shows that, those who indicate outdoor recreation participation in the night and afternoon constitutes 11.5% and 10.9% of the total participants, respectively, while others constitute only 2.6% of the respondents. This may include those participating both between time periods. The interpolation line in Figure 4.4 clearly illustrates the rise and fall of the participation as against time of the day. The reason however, not too far from the fact that afternoon and night time are normally the working and relaxing periods, respectively.

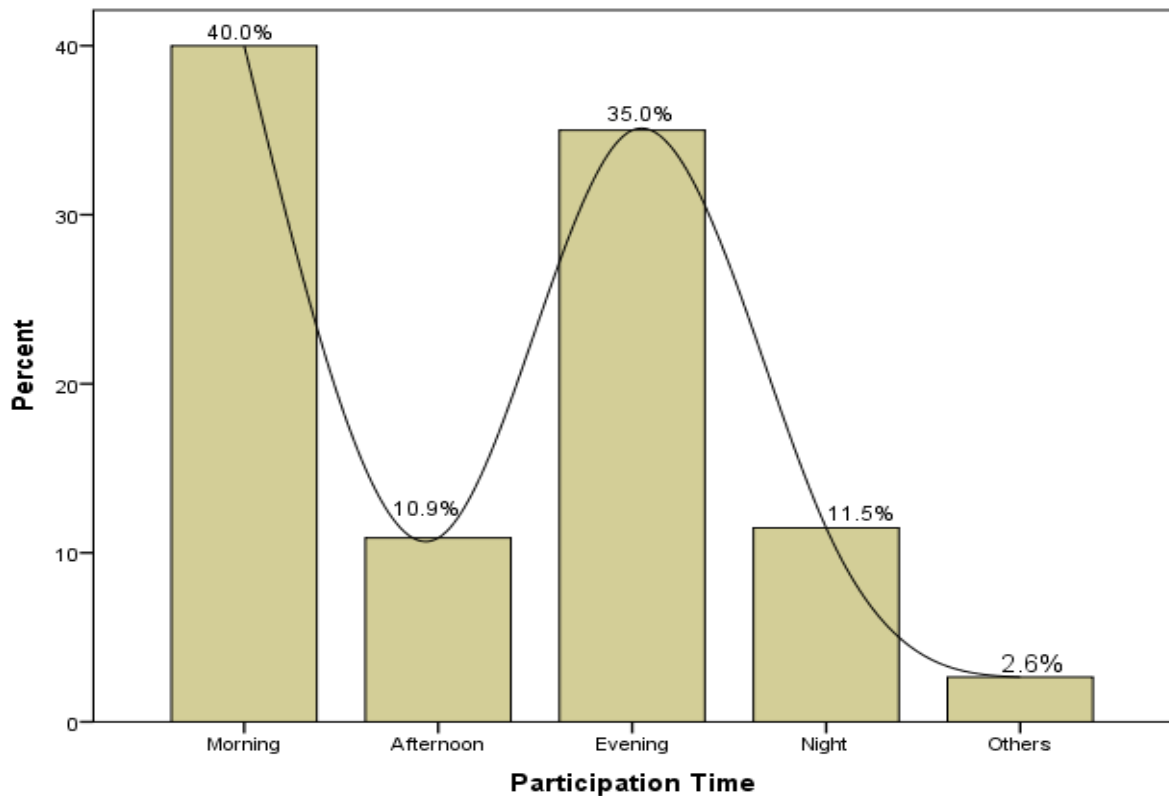


Figure 4.4: Time of Participation in Outdoor Recreation  
 Source: Author's Field Work, 2019

#### 4.4.5 Distance travelled and mode of transport to outdoor recreational venue/facility

The distance travelled from home to participate in outdoor recreation by the participants as shown in Table 4.11 is also quite revealing. The table reveals that, there was relatively little disparity in the distance covered by the participants to engage in outdoor recreation. It also reveals that, 93% of the participants travelled 1-4 kilometre distances to participate in outdoor recreation while 7.0% of the participants travel above 4 kilometres. This also corroborates with the finding of Jibrin (2011) who argue that recreation participants heavily rely on the recreational activities close to their districts. The result also shows relative time spent and cost of transportation incurred by the participants while participating in outdoor recreation. This further validates the essentiality of the numerous facilities Nassarawa L.G.A. is endowed with in reducing the travel cost. This is because distance has effect on the participants cost of transportation.

**Table 4.11:** Information on the Distance Travelled and Mode of Transport to Outdoor Recreation Facility(s)

<b>Distance Range in Kilometre (km)</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>	<b>Valid Percentage (%)</b>
Less than 1 Kilometre	74	19.2	21.8
1-2km	86	22.3	25.3
2-3km	90	23.3	26.5
3-4km	66	17.1	19.4
Above 4km	24	6.2	7.0
Sub total	340	88.1	100.0
No response	46	11.9	
Total	386	100.0	
<b>Mode of Transport</b>			
By foot	108	28.0	31.8
Bicycle	34	8.8	10.0
Motorcycle/Tricycle	83	21.5	24.4
Car	85	22.0	25.0
Bus/other public Transit	15	3.9	4.4
Taxi	10	2.6	2.9
Others	5	1.3	1.5
Sub total	340	88.1	100.0
No response	46	11.9	
Total	386	100.0	

Source: Author's Field Work, 2019

The analysis of the mode of transport the participants usually use to reach the various outdoor recreation facility(s) indicates that about 31.8% of the participants trek to outdoor recreation venue or facility, while 10.0% uses bicycle to reach the recreation venue. Also, about 24.4% and 25.0% of the participants use motorcycle/tricycle and cars for movement to most preferable outdoor recreation facility(s), respectively. Similarly, 4.4% uses bus or public transit while 2.9% and 1.5% of the participants reported using taxi and other modes such as horses respectively, to get to the outdoor recreation facility. However, what is displayed in the

mode of transport usage is expected considering the socio-economic status of the people in the study area. This seems to corroborate with ABD'Razacket *al.* (2013) who stated that, the levels of income determine the type of mode by which respondents visit the outdoor recreation areas.

#### 4.4.6 Source of information for outdoor recreation opportunities by the participants and their accompanies

The participants were asked about sources regarding the places of outdoor recreation. Table 4.12 reveals that majority (61.8%) of the participants reported that friends were their major source of information for outdoor recreation, while those indicating family as a source of information for outdoor recreation constitute 11.5% of the total responses.

**Table 4.12:** Participants Source of Information for Outdoor Recreation

Information Sources	Frequency (N)	Percentage (%)	Valid Percentage (%)
Friends	210	54.4	61.8
Family	39	10.1	11.5
Television/Radio	22	5.7	6.5
Schools	27	7.0	7.9
Social Network	25	6.5	7.4
Others	17	4.4	5.0
Sub total	340	88.1	100.0
No response	46	11.9	
Total	386	100.0	

Source: Author's Field Work, 2019

From the Table 4.12 also, 6.5%, 7.9% and 7.4% reported television or radio, schools and social networks (e.g. WhatsApp, Facebook) respectively as their sources of information. On the other hand, the participants who reported other sources of information constitute 5.0%. Moreover, when participating in outdoor recreation, the participants were asked to specify who they usually go along with (Table 4.13). In this regard, 40.9% reported going with friends. This is followed by 23.5% of those going alone, while 16.5% and 17.1% reported that they

usually goes with only family and both family and friends to participate in outdoor recreation, respectively. However, what is displayed in the companionship is in contrast to what is obtained in California State Park (2009) and Bergerson (2018) where it was reported that just family as well as both family and friends are the accompanies' categories frequently mentioned by the respondents to outdoor recreational areas in California and Oregon, respectively. This however may differ because participation in outdoor recreational activities in the developed societies is in itself a way of life and as such requires the support of family members (Simon, 2015).

**Table 4.13:** Participants and their Accompanies to Outdoor Recreation Venue(s)

<b>Accompanies</b>	<b>Frequency (N)</b>	<b>Percentage (%)</b>	<b>Valid Percentage (%)</b>
Alone	80	20.7	23.5
Family	56	14.5	16.5
Friend	139	36.0	40.9
Family and friends	58	15.0	17.1
Others	7	1.8	2.0
Sub total	340	88.1	100.0
No response	46	11.9	
Total	386	100.0	

Source: Author's Field Work, 2019

#### **4.4.7 Reasons for participation in outdoor recreation**

In this section, the various intrinsic factors that motivated the participants to develop interest to engage in outdoor recreation are discussed. It also describes the participants' perceived or expected benefits of partaking in outdoor recreational activities. The reasons for participation in outdoor recreation in Nassarawa (Table 4.14) were examined using different parameters measured on a 5-Point Likert Scale (1-Strongly Disagree to 5-Strongly Agree) in which the mean responses were ranked orderly to determine the top and least reasons for their participation in outdoor recreation.

**Table 4.14: Participants Reasons for Outdoor Recreation Participation**

Outdoor Recreation allows me to:	SD Freq(%)	D Freq(%)	UD Freq(%)	A Freq(%)	SA Freq(%)	Mean	Rank
Maintain good health condition	17(5.0)	14(4.1)	28(8.2)	123(36.2)	158(46.5)	4.15	1 <sup>st</sup>
Keep physically fit	30(8.8)	13(3.8)	30(8.8)	92(27.1)	175(51.5)	4.09	2 <sup>nd</sup>
Have fun	33(9.7)	17(5.0)	22(6.5)	141(41.5)	127(37.4)	3.92	3 <sup>rd</sup>
Improve my social relation with others	14(4.1)	30(8.8)	56(16.5)	145(42.6)	95(27.9)	3.81	4 <sup>th</sup>
Develop my skills and ability	27(7.9)	34(10.0)	49(14.4)	146(42.9)	84(24.7)	3.66	5 <sup>th</sup>
Have mental and cognitive growth	25(7.4)	41(12.1)	67(19.7)	122(35.9)	85(25.0)	3.59	6 <sup>th</sup>
Meet new and varied people	33(9.7)	42(12.4)	46(13.5)	151(44.4)	68(20.0)	3.53	7 <sup>th</sup>
Keeps my friends	27(7.9)	62(18.2)	78(22.9)	100(29.4)	73(21.5)	3.38	8 <sup>th</sup>
Gain a sense of accomplishment	31(9.1)	63(18.5)	79(23.2)	130(38.2)	37(10.9)	3.23	9 <sup>th</sup>
Comply with medical advice	80(23.5)	40(11.8)	54(15.9)	96(28.2)	70(20.6)	3.11	10 <sup>th</sup>
Experience outdoors with family	51(15.0)	68(20.0)	87(25.6)	89(26.2)	45(13.2)	3.03	11 <sup>th</sup>
Participated because I am a person	72(21.2)	81(23.8)	57(16.8)	85(25.0)	45(13.2)	2.85	12 <sup>th</sup>
Get away from the usual demands	49(12.7)	96(28.2)	94(27.6)	67(19.7)	34(10.0)	2.83	13 <sup>th</sup>

SD=Strongly Disagree, D=Disagree, UD=indecisive, A=Agree, SA=Strongly Agree  
Source: Author's Field Work, 2019

Table 4.14 reveals that, among all the reasons for participation in outdoor recreation, 'maintaining good health condition' ranked 1<sup>st</sup> with mean score of 4.15 while 'keep physically fit' ranked 2<sup>nd</sup> with mean score of 4.09. It also reveals that, 'having fun', 'improving social relation with others', and 'developing skills and ability' with a mean score of 3.92, 3.81 and 3.66, ranked 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup>, respectively. The table also shows little disparity in the mean score between the reasons ranked from 2<sup>th</sup> to 10<sup>th</sup>. On the other hand, 'participation because I am a sport person' and 'to get away from the usual demand' were the least important reason ranked 12<sup>th</sup> and 13<sup>th</sup> with a mean of 2.85 and 2.83, respectively.

#### 4.4.8 Perceived constraints to outdoor recreation participation in the study area

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/reduce their participation in outdoor recreation activities. Table 4.15 shows the mean score for each of the twenty (20) constraints studied.



The twenty (20) items measuring constraints had a Cronbach's alpha of 0.928 which indicates acceptable internal consistency. The result shows that 'personal security and safety' was the most perceived constraint with a mean score of 3.24 and closely followed by 'inadequate outdoor recreational facilities' with mean score of 3.08 which were ranked 1<sup>st</sup> and 2<sup>nd</sup>, 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.

Moreover, 'facilities are poorly maintained', 'places of outdoor recreation are too far away', and 'lack of social encouragement' ranked 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> with mean score of 3.05, 3.01 and 2.97, respectively. On the other hand, lack of time due to engagement with work and busy with family responsibility were ranked 7<sup>th</sup> and 8<sup>th</sup> 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 Romildet *al.* (2011) who reported lack of time as the most important constraint of outdoor recreation participation in Istanbul, Turkey and Sweden, respectively. Similarly, ABD'Razacket *al.* (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 significant percentages of the respondents have 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 6<sup>th</sup> to 20<sup>th</sup>.

**Table 4.15: 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	<b>1<sup>st</sup></b>
Inadequate outdoor recreation facilities	48(12.4)	113(29.2)	53(13.7)	106(27.5)	66(17.1)	3.08	<b>2<sup>nd</sup></b>
Places for outdoor recreation are too crowded	41(10.6)	126(32.6)	49(12.7)	108(28.0)	62(16.1)	3.06	<b>3<sup>rd</sup></b>
Facilities are poorly maintained	43(11.1)	113(29.3)	70(18.1)	102(26.4)	58(15.0)	3.05	<b>4<sup>th</sup></b>
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	<b>5<sup>th</sup></b>
Lack of social encouragement	49(12.7)	135(35.0)	49(12.7)	84(21.8)	69(17.9)	2.97	<b>6<sup>th</sup></b>
Too busy with work	81(21.0)	110(28.5)	27(7.0)	89(23.1)	79(20.5)	2.94	<b>7<sup>th</sup></b>
Too busy with family responsibilities	69(17.9)	121(31.3)	57(14.8)	69(17.9)	70(18.1)	2.87	<b>8<sup>th</sup></b>
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	<b>9<sup>th</sup></b>
Places for outdoor recreation cost too much	72(18.7)	131(33.9)	57(14.8)	83(21.5)	43(11.1)	2.73	<b>10<sup>th</sup></b>
I do not have enough information	73(18.9)	163(42.2)	44(11.4)	68(17.6)	38(9.8)	2.57	<b>11<sup>th</sup></b>
I don't have enough money	98(25.4)	139(36.0)	46(11.9)	67(17.4)	36(9.3)	2.49	<b>12<sup>th</sup></b>
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	<b>13<sup>th</sup></b>
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	<b>14<sup>th</sup></b>
Have alternative recreation at home	109(28.2)	152(39.4)	49(12.7)	46(11.9)	30(7.8)	2.32	<b>15<sup>th</sup></b>
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	<b>16<sup>th</sup></b>
Poor health condition	120(31.1)	150(38.9)	43(11.1)	37(9.6)	36(9.3)	2.27	<b>17<sup>th</sup></b>
Am not aware of the benefits	121(31.3)	171(44.3)	28(7.3)	42(10.9)	24(6.2)	2.16	<b>18<sup>th</sup></b>
Have physical disability	163(42.2)	149(38.6)	33(8.5)	23(6.0)	18(4.7)	1.92	<b>19<sup>th</sup></b>
Have household member with physical disability	166(43.0)	171(44.3)	22(5.7)	15(3.9)	12(3.1)	1.80	<b>20<sup>th</sup></b>

SD=Strongly Disagree, D=Disagree, UD=indecisive, A=Agree, SA=Strongly Agree  
Source: Author's Field Work, 2019

#### 4.4.9 Factor analysis of outdoor recreation constraints

The 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 4.16. Recreational constraints are grouped into different

categories according to literature. For example, Jackson (1988) identified two categories of constraints (internal and external) while Crawford *et al.* (1991) identified three constraints categories-structural, interpersonal (or internal), and intrapersonal.

**Table 4.16:** 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		.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.

However this study adapted Jackson (1988) classification and come up with three constraints categories as: internal, external and interactional. This is 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. 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.

To examine the effects of these numbers of external, internal and interactional constraints to participation in outdoor recreation among residents of Nassarawa L.G.A., Kano, Logistics Regression Models of each constraint category was evaluated according to their socioeconomic and demographic variables (Table 4.23).

#### **4.5 Patterns of Outdoor Recreation Participation**

Since the demographic and other socio-economic characteristics of the respondents were surveyed, and also level and characteristics of outdoor recreation participation were examined, the pattern of residents' participation can be established by evaluating the inter-relationships among the variables. This includes evaluating the inter-relationship between variables of gender, age, educational attainment, income level, household size with frequency of outdoor recreation participation, recreational activities partaken as well as the constraints to participation.

##### **4.5.1 Gender and outdoor recreation participation**

From the review of the literature, studies have shown exactly how gender influences the level of participation in outdoor recreational activities. From Table 4.17a, out of the 88.1% of the total participants, males constitute about 70.7% while female account for 17.4%.

**Table 4.17a:** Gender and Outdoor Recreation Participation

Gender	Participate in Outdoor Recreation		Total Freq(%)
	Yes Freq(%)	No Freq(%)	
Male	273(70.7)	29(7.5)	302(78.2)
Female	67(17.4)	17(4.4)	84(21.8)
Total	340(88.1)	46(11.9)	386(100.0)

Source: Author's Field Work, 2019

Therefore, the gender pattern of outdoor recreation in Nassarawa L.G.A. of Kano state as shown in the Table 4.17a depicts the general pattern of recreation in outdoor settings where male participants usually are in dominance comparatively, especially with respect to developing societies (Obinnaet *al.*, 2009; ABD'Razacket *al.*, 2013; Dickson, 2014; Akitoye, 2016). Using Chi-square the study examined whether the difference between male and female in participation in outdoor recreation was statistically significant. The result of the Chi-Square test (in Table 4.17b) showed that there is a significant difference in participation in outdoor recreation between males and females.

**Table 4.17b:** Chi-Square Test for Independence between Gender and Outdoor Recreation Participation

	Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.082 <sup>a</sup>	1	.008		
Continuity Correction <sup>b</sup>	6.105	1	.013		
Likelihood Ratio	6.346	1	.012		
Fisher's Exact Test				.012	.009
Linear-by-Linear Association	7.064	1	.008		
N of Valid Cases	386				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.01.

b. Computed only for a 2x2 table

\* $\leq 0.05$

Source: Author's Field Work, 2019

Conversely, the pattern displayed here seems to be in contrast with what is obtained in the earlier findings from a number of studies in developed countries (US Outdoor Recreation

report, 2017; 2018; Bergerson, 2018) in which there is little or no difference and to some extent, females often participate more than the males.

#### 4.5.2 Gender and frequency of participation

The frequency of participation as shown in Figure 4.5 also portrays a clear disparity between males and females in almost all the level of participation (that is, daily, every two days, weekly, fortnightly and monthly) except in the category of ‘once in a year’ which shows a close difference of 1% between male and female, respectively. The figure however, interestingly reveals that, the female trend of participation tend to increase partially with reduction in frequency.

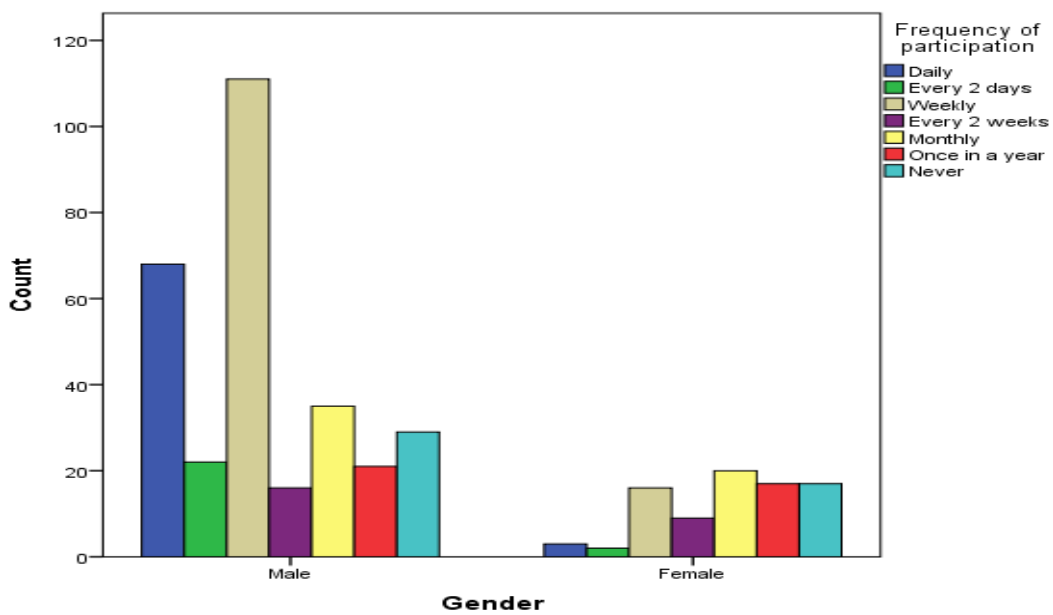


Figure 4.5: Gender and Frequency of Participation in Cross-tabulation  
Source: Author’s Field Work, 2019

#### 4.5.3 Age and frequency of outdoor recreation participation

The pattern of participation among different age groups as revealed in Figure 4.6 indicates that, majority participated in outdoor recreation on weekly basis across all the age groups. However, the collective age group between 18-45 years participated more in outdoor recreation especially on a daily and weekly basis than any other age group which has the

participation rate above 70%. This looks logical since it embraces youths who are active, energetic and may recreate at any time.

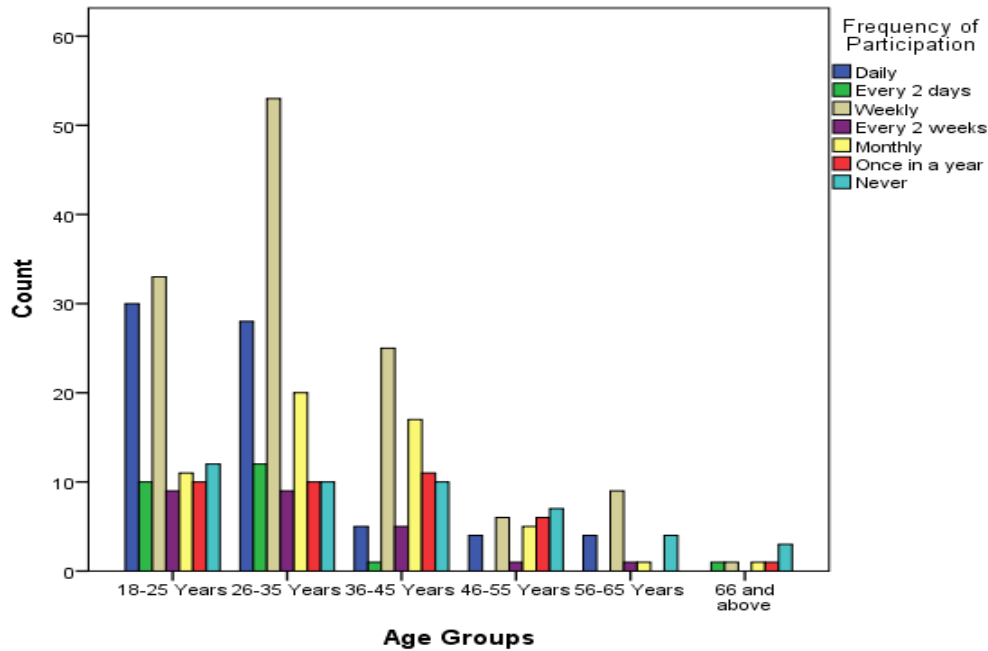


Figure 4.6: Age Group and Frequency of Participation in Cross-tabulation  
Source: Author’s Field Work, 2019

From Figure 4.6 it is obvious that, the participation rate tend to decrease with an increasing age. This indicates that, the outdoor recreation participation in the study area follows the general and global pattern of recreational activity participation which assumed that participation diminishes as age advances (Buton, 1970; NSRE, 2003; Shores, Scott and Floyd, 2007; ABD’Razacket *al.*, 2013; Simon, 2015).

#### 4.5.4 Marital status and frequency of outdoor recreation participation

Table 4.18 reveals that those that were single participated more on a daily basis (11.7%) and every 2 days (5.4%) than any other category while the married respondents maintained the lead on a weekly (16.1%), monthly (6.7%) and yearly (6.2%) basis. Widows and divorcees have the least level of participation comparatively. However, the table conveyed a similar pattern with that presented by Simon (2015) which reveals that married respondents maintain a steady rise in participation with periodic timing, that is, the longer the interval of

time for possible recreation, the more participation is observed despite the responsibilities that married people assume from time to time.

**Table 4.18:** Level of Outdoor Recreation Participation and Marital Status

Variables	Frequency of Participation (%)							Total
	Daily	Every 2 days	Weekly	Every 2weeks	Monthly	Yearly	Never	
Marital Status								
Single	45(11.7)	21(5.4)	62(16.1)	16(4.1)	25(6.5)	16(4.1)	14(3.6)	199(51.6)
Married	25(6.5)	2(0.5)	62(16.1)	7(1.8)	26(6.7)	19(4.9)	24(6.2)	165(42.7)
Widow	0(0.0)	0(0.0)	1(0.3)	2(0.5)	1(0.3)	2(0.5)	5(1.3)	11(2.8)
Divorcee	1(0.3)	1(0.3)	2(0.5)	0(0.0)	3(0.8)	1(0.3)	3(0.8)	11(2.8)
Total	71(18.4)	24(6.2)	127(32.9)	25(6.5)	55(14.2)	38(9.8)	46(11.9)	386(100.0)

Source: Author's Field Work, 2019

#### 4.5.5 Qualification and frequency of outdoor recreation participation

Table 4.19 shows the relationship between educational attainment of the respondents and the level of outdoor recreation participation in the study area. According to Dickson (2014), educational attainment plays a vital role on participation in outdoor recreation activities as it exposes the individual to understand the reality of life and perhaps the benefits attributed to its participation.

**Table 4.19:** Level of Outdoor Recreation Participation and Qualification

Variables	Frequency of Participation (%)							Total
	Daily	Every 2 days	Weekly	Every 2weeks	Monthly	Yearly	Never	
Qualification								
No formal education	4(1.0)	1(0.3)	5(1.3)	2(0.5)	3(0.8)	2(0.5)	9(2.3)	26(6.7)
Primary	5(1.3)	1(0.3)	4(1.0)	3(0.8)	5(1.3)	3(0.8)	2(0.5)	23(6.0)
SSCE	30(7.8)	10(2.6)	35(9.1)	7(1.8)	11(2.6)	11(2.6)	14(3.6)	118(30.6)
NCE/ND	18(4.7)	6(1.6)	28(7.3)	6(1.6)	20(5.2)	7(1.8)	6(1.6)	91(23.6)
HND/BSc	10(2.6)	6(1.6)	42(10.9)	5(1.3)	7(1.8)	9(2.3)	7(1.8)	86(22.3)
PG to Masters	4(1.0)	0(0.0)	9(2.3)	2(0.5)	6(1.6)	5(1.3)	6(1.6)	32(8.3)
PhD	0(0.0)	0(0.0)	4(1.0)	0(0.0)	3(0.8)	1(0.3)	2(0.5)	10(2.6)
Total	71(18.4)	24(6.2)	127(32.9)	25(6.5)	55(14.2)	38(9.8)	46(11.9)	386(100.0)

Source: Author's Field Work, 2019



It was revealed from Table 4.19 that, majority participated on a weekly basis across all level of education. Whereas those with SSCE have the highest outdoor recreation participation on daily (7.8%), every 2 days (2.6%) and yearly (2.6%) among all the educational level, those with ND/NCE and HND/BSc takes the lead with 5.2% and 10.9% in the monthly and weekly recreational participation, respectively. The pattern depicted in Table 4.19 reveals that the frequency of participation is significantly affected by the level of education. This is corroborated in the Figure 4.7 which clearly showed low level of participation among those with primary (5.5%) or no formal education (4.4%) and high participation among those with SSCE (27%), NCE/ND (22%), HND/BSc (20.5%) and PGD/MSc (6.7%) while the participation rate tends to decrease at the PhD level (2.1%) which may perhaps be attributed to the age factor and other commitments.

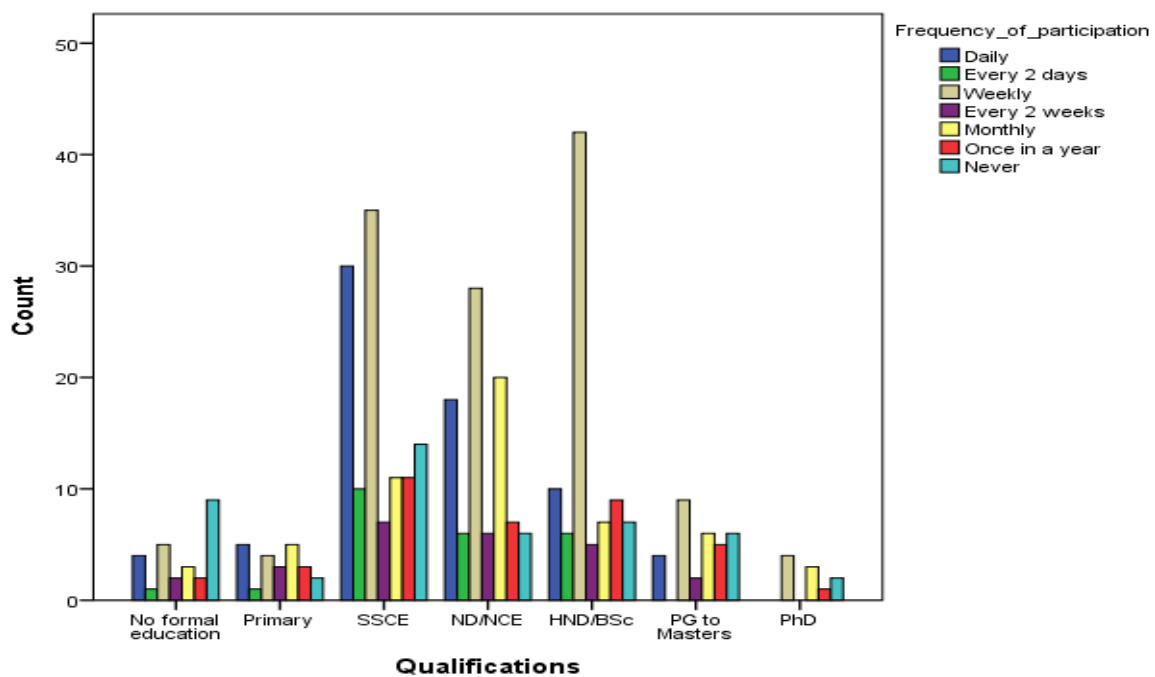


Figure 4.7: Qualifications and Frequency of Participation in Cross-Tabulation  
 Source: Author’s Field Work, 2019

#### 4.5.6 Employment status, monthly income and frequency of outdoor recreation participation

On the employment status and level of participation, Table 4.20 reveals that those working in private sector or self-employed have the highest participation (40.2%) than any other

employment category. This is followed by those in public or civil sector (22.3%). Regarding income, higher percentages were recorded among those that earned ₦20,000 or less across all levels of participation. That is then followed by those between ₦21,000-40,000, participating on a weekly basis and those that earned ₦80,000 and above, participating on a daily, monthly and yearly basis. The lower level of participation was also recorded among those that earned between ₦41,000-60,000 and ₦61,000-80,000, respectively. The finding here implies that income level of the respondents does not influence their participation in outdoor recreation. This can be supported by previous finding in Table 4.15 in which lack of money was found to be relatively disagreed with by the respondents or perceived as the least constraints limiting their engagement in outdoor recreation. However, this seems to disagree with ABD'Razacket *al.*(2013) which relates low level of participation with income level of the respondents in Minna, Nigeria.

**Table 4.20:** Level of Outdoor Recreation Participation and Employment Status, Monthly Income

Variables	Frequency of Participation (%)							Total
	Daily	Every 2 days	Weekly	Every 2 weeks	Monthly	Yearly	Never	
<b>Employment Status</b>								
Private sector/self-employee	24(6.2)	6(1.6)	58(15.0)	11(2.8)	25(6.5)	12(3.1)	19(4.6)	155(40.2)
Public/civil sector	12(3.1)	3(0.8)	39(10.1)	2(0.5)	14(3.6)	9(2.3)	7(1.8)	86(22.3)
Unemployed	13(3.4)	2(0.5)	10(2.6)	6(1.6)	7(1.8)	9(2.3)	11(2.8)	58(15.0)
Retiree	2(0.5)	1(0.3)	2(0.5)	1(0.3)	1(0.3)	2(0.5)	3(0.8)	12(3.1)
Students	20(5.2)	12(3.1)	18(4.7)	5(1.3)	8(2.1)	6(1.6)	6(1.6)	75(19.4)
Total	71(18.4)	24(6.2)	127(32.9)	25(6.5)	55(14.2)	38(9.8)	46(11.9)	386(100.0)
<b>Monthly Income (₦)</b>								
≤20,000	42(10.9)	17(4.4)	52(13.5)	12(3.1)	22(5.7)	19(4.9)	26(6.7)	190(49.2)
21,000-40,000	10(2.6)	3(0.8)	29(7.5)	4(1.0)	9(2.3)	6(1.6)	1(0.3)	62(16.1)
41,000-60,000	7(1.8)	0(0.0)	21(5.4)	5(1.3)	7(1.8)	5(1.3)	8(2.1)	53(13.7)
61,000-80,000	0(0.0)	2(0.5)	6(1.6)	1(0.3)	7(1.8)	0(0.0)	3(0.8)	19(4.9)
Above 80,000	12(3.1)	2(0.5)	19(4.9)	3(0.8)	10(2.6)	8(2.1)	8(2.1)	62(16.1)
Total	71(18.4)	24(6.2)	127(32.9)	25(6.5)	55(14.2)	38(9.8)	46(11.9)	386(100.0)

Source: Author's Field Work, 2019

#### 4.5.7 Evaluation of reasons of participation according to age groups

The interrelationship between the respondents' age groups and reasons of participation in outdoor recreational activities as shown in the Table 4.21 indicates that, the perceived reasons of participation varies with age. The degree of agreement with reasons indicated by the younger age is quite different from that of the older ages. The finding of the Table 4.21 reveals that, the age group 18-25 participated in outdoor recreation for the reasons such as 'developing skills and ability', 'gain a sense of accomplishment', meeting new and varied people' and because they are sport people. While, the respondents that are 66 years and above participate because they want to 'keep physically fit', 'maintaining good health condition' and 'complying with medical advice' more than any other age groups. The reason 'improving social relationship was agreed most among the age group 26-35 years than any other age cohort. On the other hand, those that are between the ages 36-45 years acknowledged the reasons 'experiencing outdoor with family' and 'get away from the usual demand' most than any other group.

**Table 4.21:** Mean Scores for Reasons of Participation and Age Groups

Reasons of Participation	Mean Scores of Age Group (years)						Total Mean
	18-25	26-35	36-45	46-55	56-65	Above 66	
Have fun	3.96	3.97	3.86	4.05	3.27	3.75	3.92
Keep physically fit	4.13	4.05	3.81	4.64	4.27	4.75	4.09
Experience outdoor with family	2.97	2.97	3.33	2.82	3.07	2.50	3.03
Keep my friends	3.43	3.42	3.31	3.64	2.93	2.25	3.38
Maintain good health condition	4.14	4.14	4.00	4.50	4.33	4.50	4.15
Have mental and cognitive growth	3.70	3.57	3.52	3.77	3.13	3.50	3.59
Improve my social relationship	3.73	3.86	4.02	3.82	3.53	2.25	3.81
Develop my skills and ability	3.89	3.80	3.27	3.45	3.40	1.75	3.66
Get away from usual the demand	2.71	2.92	3.05	2.73	2.27	1.75	2.83
Gain a sense of accomplishment	3.33	3.27	3.30	2.64	3.13	2.25	3.23
Comply with medical advice	3.02	3.10	3.06	3.00	3.67	4.75	3.11
Meet new and varied people	3.79	3.50	3.30	3.73	3.00	2.25	3.53
Because am a sport person	3.16	2.98	2.22	2.68	2.93	1.75	2.85

Source: Author's Field Work, 2019

The result of the Table 4.21 however, looks logical when one considers the younger age group 18-25 years are usually single, active and energetic, the middle age 36-45 years are usually married and that there are responsibilities they may assume from time to time. The older age group (66 and above) have usually one or more ailments due to ageing that may require them to engage in recreation for health reasons.

#### **4.5.8 Logistics regression of participation in outdoor recreation activities**

To further explain the relationship between outdoor recreation participation and the socioeconomic factors, Multinomial Logistic Regression was estimated for participation in 24 different recreational activities (Table 4.22). The results revealed that, gender was significant in almost two-third of the activities surveyed in which males 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 18-65 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 supported the previous finding of Figure 4.6 that, participation in outdoor recreation diminishes as the age advances.

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 people were more likely to participate only in 'taking-children-to the park'. However, income level was somehow insignificant in Table 4.22. Those with lower income were more likely than those with higher income to participate in different recreation activities. 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  $\leq$  ₦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. Perhaps this may 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 education were less likely than those with higher education to participate in walking for pleasure, jogging, relaxing, horseback riding, and golf. 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.

**Table 4.22:** Multinomial Logistics Regression of 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)***	18-25: (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		18-25: (5.2)** * 26-35: (5.0)*** 36-45: (8.2)*** 46-55: (5.9)***		≤₦20,000: (.282)*		
Relaxing/hanging out	Male: (.554)*		No form.: (.116)* SSCE: (.151)*			
Attending outdoor concerts, fairs, etc	Male: (.273)***					
Visiting family and friends	Male: (.440)**	18-25: (6.36)*** 26-35: (4.96)*** 36-45: (6.55)*** 46-55: (1.86)*** 56-65: (5.52)***		₦61,000-80,000: (4.75)*		

**Table 4.21 Cont.**

Activity	Gender	Age	Qualification	Income level	Employment Status	Marital Status
Other game but played 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		18-25: (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)**

Note: \*p=(≤0.05), \*\*p=(≤0.01), \*\*\*p=(≤0.001); No form. = No formal Education, Priv. = Private sector/self-employed.  
\_Only Odd Ratios (OR) of the p-values are shown

Those with university degree or equivalent are more likely to participate in horse-back riding, going to park and golf, but less likely to participate in ‘taking children to the park’. Conversely, those having higher degrees (MSc and PhD) were not significant participants in all the 24 activities studied. Moreover, one may conclude from the findings of the Table 4.22 that, participation in different types of outdoor recreational activities in Nassarawa L.G.A. decreases with increasing age, level of income and education.

#### **4.5.9 Logistic Regression of Outdoor Recreation Constraints**

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). In this regard, two categories of dependent variable (Disagree and Agree) coded as ‘0’ and ‘1’ were used, respectively. Gender, age, monthly income, qualification, employment status, marital status, household size and participation 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 with BSc or higher degrees 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 (Non-employed=0, Employed=1).

However, to estimate the possibility that 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 (strong disagree and disagree) and agree (agree and strongly agree). The



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

The findings (Table 4.23) reveals 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 other people' and 'lack of social encouragement'. In this case, the positive coefficients greater than 1 indicate that, female were more likely than male to feel constrained regarding these items of internal and external constraints. Similarly, age was significant in only three out of twenty constraints- 'too busy with family responsibility' 'do not have anyone to participate with' and 'have a physical disability'. This is consistent with findings of Johnson *et al.* (2001) who found lack of information and personal safety as well as lack of partner, to have significant relationship with age and gender. The findings (Table 4.23) imply that, older respondents were more likely to be constrained in those constraints with Odd Ratios greater than 1 than younger ones. In other words, the perception of these constraints is more likely to increase with increasing age. This is expected because age itself is a factor that may affect the participation of individual in any activity including recreation.

Also, three constraints were statistically significant for qualification in which 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. With regard to the employment status, respondents who are unemployed were less likely than employed to feel constrained regarding- 'too busy with work', and more likely to have 'poor health condition', 'do not have anyone to participate with' and 'having physical disability' constrained their participation in outdoor recreation.

**Table 4.23:** 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 <sub>8</sub> <sup>2</sup>	%	R <sup>2</sup>
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

Note: \*p= (0.05), \*\*p= (0.01), \*\*\*p= (0.001); R<sup>2</sup>= NagelkerkeR<sup>2</sup>; only Model X<sub>8</sub><sup>2</sup> significant at 0.001 reported; %=correctly classified cases.

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 are less likely than married to feel constrained by 'too busy with family responsibility' and 'having physical disability'. But, household size was not significant across all constraints.

Participation was statistically significant for 13 out of the 20 constraints. In other words, 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 barriers 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.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discussed the summary of the major research findings, conclusion drawn from the findings and recommendations. The chapter also contains the contribution of the research findings to knowledge as well as the recommendations for further studies.

#### 5.2 Summary of Findings

- Outdoor recreation opportunities were found to be high in Giginyu and Tudun Wada clusters because they were the clusters with the highest number of facilities of different hierarchy.
- According to the study participation in outdoor recreation in Nassarawa was found to be very high in which 88.1% and 11.9% of the respondents indicate participation and non-participation, respectively. Weekends was found to be the best period of participation in outdoor recreation because about 32.9% indicates participation on a weekly basis. Visiting family and friends, jogging and walking for pleasure or exercise were found to be the most common and popular among non-facility based outdoor recreational activity with a participation rate of 59.7%, 53.5% and 53.5%, respectively. On the other hand, the study also found football, taking children to the parks, to be the most popular among facility based outdoor recreation activities participated, with a participation rate of 67.6% and 27.5%, respectively.
- The study was also able to measure and analyse the average hours spent in recreational activities in typical occasion. The study found the highest average hours of 2.50 and lowest of 1.55 among non-facility based or related recreation activities. While the

maximum and minimum mean hours of 2.43 and 1.23 for facility-based or related activities respectively. The findings also revealed that, majority 46.8% of the participants use public facilities. Morning and evening were the best time of the day for outdoor recreation participation in the study area. Most of the participants (92.9%) travelled between 1-4 kilometre distances to participate in one or more outdoor recreation activity. This is because the study includes other outdoor recreational activities that do not require the use of facilities.

- A statistically significant difference was found between proportions of male participants and that of the female participants ( $X^2=.008$ ). In the study area, it was equally established that, the participation rate tends to decrease with increasing age. Moreover, the finding also reveals that, the reason of participation varies with age. The frequency of participation tends to be significantly affected by the level of education-where the study observed low level of participation among those with lower education, high participation among those with average education and low participation among those with higher degree or education. Moreover, the study found that income level of the respondents does not have any effect on their ability to participate in outdoor recreation in the study area.
- The study reveals the relationship between socio-economic and demographic factors and participation in 24 different facility-based and non-facility based outdoor recreation activities. According to the finding, gender was found to be statistically significant in almost two-third of the activities surveyed in which males were more likely than females to participate in the majority of the activities. The study was also able to establish that, participation in different type of outdoor recreational activity in Nassarawa L.G.A. decreases with increasing age, level of income and education.
- The study has also been able to identify that, the perception of outdoor recreation constraints is context specific rather than general. 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 1<sup>st</sup>. 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 is more likely to increase with increasing age. Income level of the respondents does not have any effect on their perception of constraints. Non-participants were more likely than participants to feel constrained in thirteen of twenty constraints.

- With respect to constraints categories, internal factor remained 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 significantly related external, internal and interactional constraints respectively. However, external constraints related to recreational place or facilities were not significant across all socioeconomic and demographic variables. Finally, the study established that the perception of constraints varies with age gender as well as between participants and non-participants.

### **5.3 Conclusion**

From the foregoing discussion the study has come to conclusion that, provision and availability of facilities in a particular geographical setting is really important in terms of participation in outdoor recreation. Meaning that, the provision of facilities is actually demand-driven and determines to a reasonable extent the degree of residents' participation in outdoor recreation. Also, 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 upon 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 (i.e. Nigeria).

#### **5.4 Recommendations**

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

- Security should be improved and tightened around recreation areas to safe guard the life of the potential recreationist within the study area. This will further encourage more participation especially among people of high income or calibre.
- There should be regular and proper maintenance of recreational areas and/or facilities.
- According to the findings, ‘inadequate recreational facilities’ was the second most perceived constraint of outdoor recreation participation despite abundant facilities in the study area. This implies that the available facilities do not meet up their recreational interest and needs. Therefore, additional facilities should be provided more specifically in the neighbourhoods within a closed minimum distance to further encourage the people.
- While the findings of this research will form an informed basis for recreation planning, the study also recommends that, recreation plans should be prepared in a manner that is implementable, bearing in mind the spatial context and cultural climate within which the plan is to be actualised. This would encourage the development of future recreational facilities in accordance with relevant planning principles and standards. The standards should also draw from empirically determined patterns of participation for different types of activities as it relates to corresponding facilities. The plans should equally focus on the provision of a wide range of facilities for recreation activities and programs targeting

particularly older age and females (as this would encourage elderly and female participation), provision of pedestrian, jogging and running track especially along the roads or streets to encourage people participating in those activities. It should also focus more on the provision of recreation support services such as information (brochures, websites, signposts, newsletters, media campaign and maps), transports services, recreation leadership (including management, planning officers, programmers, leaders, and trainers) and other services that are key to implementation but often neglected. This will promote awareness about the importance of outdoor recreation participation among different social groups of the study area and city population in general.

- Similar study should be conducted in the remaining local governments of the metropolis. This is because for a sustainable recreation plan to be achieved, a range of issues need to be researched to assess and identify the determinants, constraints and pattern of participation in the area under study and in the wider context.

### **5.5 Contribution to Knowledge**

The study established that:

- In a smaller spatial entity with abundant facilities, income level of the respondents does not have any effect on their ability to participate in outdoor recreation. This is demonstrated by the monthly income of the participants which majority (48.2%) of the participants earned less than or equal to ₦20,000. Whereas, only 15.9% of the participants earned ₦81,000 and above. Majority (61.4%) disagreed lack of money constrained their participation. Also, those with lower income were more likely than those with higher income to participate in different recreation activities. None of the activities found significant among those earning ₦80,000 and above.



- Giving that, amongst all the constraints ‘security and personal safety’ ranked 1<sup>st</sup> (M=3.24) and one of the commonly 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. Thus, the perception of outdoor recreation constraints is context specific rather than general.

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**APPENDIX I**  
**QUESTIONNAIRE FOR OUTDOOR RECREATION PARTICIPATION**

DEPARTMENT OF URBAN AND REGIONAL PLANNING  
FACULTY OF ENVIRONMENTAL DESIGN  
AHMADU BELLO UNIVERSITY, ZARIA

**Dear Respondents**

This questionnaire is designed to obtain information to carry out an MSc Research on **Assessment of Residents' Participation in Outdoor Recreation in Nassarawa L.G.A., Kano Metropolis**. You are requested to kindly assist in filling the questionnaire to enable me achieve this ultimate goal. Be assured that all information provided will be held in confidence.

Thanks

**Section A: Demographic and other economic Characteristics of the respondents**

- 1- Neighbourhood \_\_\_\_\_
- 2- Gender:           a. male { }   b. female { }
- 3- Age: \_\_\_\_\_
- 4- Marital Status:   a. Single { }   b. Married { }   c. Widow { }   d. Divorce { }
- 5- Household Size: Including yourself, how many people regularly live in your household?  
\_\_\_\_\_
- 6- Qualification:       a. No formal education { }   b. Primary { }   c. SSCE { }  
                                  d. ND/NCE { }   e. HND/BSc { }   f. PG up to Masters { }   g.  
                                  PhD { }
- 7- Employment status:   a. Private Sector/self-employee { }   b. Public/Civil sector { }  
                                  c. Unemployed { }   d. Retiree { }   e. Student { }
- 8- `What is your estimated monthly income? I earned at least \_\_\_\_\_monthly
- 9- How long have you stayed in Nassarawa? I lived almost\_\_\_\_\_years.

**Section B: Questions related to Outdoor Recreation Participation**

Outdoor recreation activities are those activities you engage or/are doing outdoors at your leisure time. They may be walking, jogging, running and cycling along roads, horse riding, driving for pleasure, playing sports like football, basketball, golf and tennis, attending outdoor live performances/concerts/drama, picnic, and going to event centres and many more examples.

10- How often do you participate in any of the outdoor recreation activities in Nassarawa?  
 a. Daily{ } b. Every 2 days{ } c. Weekly{ } d. Every 2 weeks { } e. monthly { } f.  
 Once in a year { } g. Never { }

11- Please fill out the following table only for the non-facility based or related outdoor recreation activities that you participated in during the last 12 months.

<b>Non-facility based or related activities</b>	<b>Tick as many that apply to you most {✓}</b>	<b>Average number of hours you participated in a typical occasion</b>
Walking for pleasure		
Jogging		
Running		
Skating (roller/board)		
Motorcycling for pleasure		
Bicycling for pleasure		
Horseback riding on the roads, and streets		
Driving for pleasure		
Relaxing, hanging out, escaping heat / noise, etc.		
Attending outdoor concerts, fairs, or festivals		
Visiting family and friends		
Other games but play outdoors(cards/chess/scrabble/snooker/table tennis, ludo etc.)		
Karate		
Going to watch traditional boxing (Dambe)		

12- Please fill out the following table only for the facility-based outdoor recreation activities that you participated in during the last 12 months.

<b>Facility-based outdoor recreation activities</b>	<b>Tick as many that apply to you most {✓}</b>	<b>Average number of hours you participated in a typical occasion</b>
Swimming		
Football		
Basket ball		
Volleyball		
Badminton		
Lawn Tennis		
Golf		
Going to the parks		
Picnicking		
Horseback riding on the race course		
Taking your children or grandchildren to a playground		
Gymnastics		

13- What type of facilities do you usually use for outdoor recreation?

- a. Public facilities { } b. Private facilities { } c. Institutional facilities { } d. Others (specify).....

14- What time of the day do you usually participate in outdoor recreation?

- a. Morning { } b. Afternoon { } c. Evening { } d. Night { }

15- How far do you travel from home to participate in outdoor recreation?

- a. 0-1km { } b. 1-2km { } c. 2-3km { } d. 3-4km { } e. Above 4km

16-What mode of transport do you use to your outdoor recreation venue/facility? a. By foot { } b. Bicycle { } c. motorcycle/tricycle { } d. Car { } d. Bus or other public transit { } e. Taxi { } f. Others (specify).....

17- How do you know about the places of outdoor recreation?

- a. Friends { } b. Family { } c. Television/ radio { } d. Schools { } e. Social network (Facebook/Whatsapp/Twitter etc.) { } f. Others (specify).....

18- When participation in outdoor recreation, who do you usually go with?

- a. Alone { } b. Family { } c. Friend { } d. Family and friends { } e. Others (specify).....

19- Please read the following statements carefully and indicate the degree to which you agree with the statement in relation to the reasonof your participation in outdoor recreation activities.

Outdoor recreation allows me to:	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
Have fun					
Keep physically fit					
Experience outdoors with family					
Keep my friends					
Maintain a good health condition					
Have mental and cognitive growth					
Improve my social relation with others					
Develop my skills and abilities					
Get away from the usual demands					
Gain a sense of accomplishment					
Comply with medical advice					
Meet new and varied people					
Participated because I am a sportsman/woman					

20- Please read the following statements carefully and indicate the degree to which you agree with the statement in relation to the major barriers or factors that limit/reduce your participation in outdoor recreation activities.

<b>I do not frequently participate in outdoor recreation because:</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Too busy with work					
Too busy with family responsibilities					
Poor health condition					
I don't have enough money					
I do not have anyone to participate with					
I do not have the skills or abilities					
I am not aware of the benefits					
I do not have enough information					
Have no way to get to places of outdoor recreational facilities					
Facilities are poorly maintained					
Places for outdoor recreation are too far away					
Places for outdoor recreation are too crowded					
Security and personal safety					
Am afraid of getting hurt or injured by other people					
Places for outdoor recreation cost too much					
Inadequate outdoor recreation facilities					
Lack of social encouragement					
Have alternative recreation at home					
Have a physical disability					
Have household member with physical disability					

21- What type of disability do you or member of your household have?

- a. Walking { }    b. Sight { }    c. Hearing { }    d. None { }    e. Others (specify).....

22- Is there some support or assistance that could be offered to help you or others in your household improve your outdoor recreational experience? a. Yes { }    b. No { }

23- If yes, please describe what could be done: \_\_\_\_\_

\_\_\_\_\_

*Thanks You for the Response*



## APPENDIX II

### Checklist on Outdoor Recreational Facilities in Nassarawa L.G.A. Kano State

DEPARTMENT OF URBAN AND REGIONAL PLANNING  
FACULTY OF ENVIRONMENTAL DESIGN  
AHMADU BELLO UNIVERSITY, ZARIA

**NAME OF CLUSTER.....**

Please fill the following form where you observed any of the following outdoor recreational facilities: recreational park, Polo Field, Race Course, Golf Course, swimming pools, football fields, lawn tennis courts, picnicking spots, basketball courts, event centres, volleyball court, garden, etc.

S/N	FACILITY TYPE	LOCAL NAME (SUNA)	LOCATION (UNGUWA)	OWNERSHIP Private/Public	FUNCTIONALITY (YES/NO)	ACCESSIBILITY: By road (YES/NO)

## APPENDIX III

### Photographs of Some of the Facilities in Nassarawa L.G.A. Kano

#### Football Field



Football Field located at Ranji-Dakata, Kano  
Source: Field Work

#### Mini- Stadium (5-aside)



Five-aside Mini Stadium at Marhaba Fitness Arena, Kawaji-Nassarawa, Kano  
Source: Field Work

## Table Tennis



Youth playing at commercial table tennis in Kawaji-Nassarawa, Kano  
Source: Field Work

## Snooker



Snooker facility at BMC Sports & Event Centre, Dakata-Nassarawa, Kano  
Source: Field Work



## Event ground



Event Ground for live concerts and events at MagajiRumfa Road, Giginyu  
Source: Field Work

## Relaxing Facilities



Outdoor Relaxing Facilities at Cobra Arena, Giginyu, Kano  
Source: Field Work

## Race Course



A Section of Kano Race (FilinSukuwa) for horse riding, car racing, jogging and running at Giginyu-Nassarawa, Kano  
Source: Field Work

## Tennis



Plate 4.11: Lawn Tennis Court at Lebanon Club, Tudun Wada-Nassarawa, Kano  
Source: Field Work



## Basketball



Plate 4.12: Basketball Court at Lebanon Club, Tudun Wada-Nassarawa, Kano  
Source: Field Work