

**ENVIRONMENTAL ATTITUDE, MOTIVATION AND PLACE  
ATTACHMENT OF VISITORS TO FEDERAL INSTITUTIONAL-  
BASED ZOOLOGICAL GARDENS IN THE SOUTH-WEST,  
NIGERIA**

**BY**

**OMOLOLA OLUWAKEMI AJAYI**

**MATRIC. NO.: 137239**

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(Ibadan)**

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## CERTIFICATION

I certify that this research was carried out by Miss Omolola O. Ajayi in the Department of Wildlife and Ecotourism Management, University of Ibadan.

.....

Supervisor

A. A. Alarape

B.Sc., M.Sc., Ph.D. (Ibadan)

Senior lecturer, Department of Wildlife and Ecotourism Management,

University of Ibadan, Nigeria

## **DEDICATION**

This thesis is dedicated to the Author and Centre of Excellence. You are truly God,  
from beginning to the end.

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## ABSTRACT

Zoological gardens (zoos) are nature-based tourism destinations which are capable of attracting large numbers of visitors. This influx is mostly accompanied by detrimental effects on the natural environment, especially where visitors have unfavourable attitude towards the environment, wrong motivations and attachment. In Nigeria, there is inadequate information on zoo visitors' environmental attitude, motivation and place attachment as well as the interrelationship among them. Hence, the interrelationship among environmental attitude, motivation and place attachment of visitors to federal institutional-based zoos in southwestern Nigeria was assessed.

All the federal institutional-based zoos in southwestern Nigeria: University of Ibadan Zoological Garden (UI Zoo), Federal University of Agriculture Abeokuta Zoo Park (FUNAAB Zoo), Obafemi Awolowo University Biological Garden (OAU Garden), and Federal University of Technology Akure Wildlife Park (FUTA Park), were surveyed from May 2017 to April 2018. Systematic random sampling technique was used to select a total of 1529 visitors (395 in UI Zoo, 379 in FUNAAB Zoo, 383 in OAU Garden, and 372 in FUTA Park). The sample size was determined from yearly visitors' influx of each zoo using Yamane formula. Information sourced with the aid of structured questionnaire were socio-economic characteristics, travel details, environmental attitude (12-factors scale), motivation (35-factors scale) and place attachment (Place Identity {PI}, Place Dependence {PD}, Place Affect {PA}, Place Social Bonding {PSB}). The constructs were assessed on a 5-point Likert scale, where scores of 1.0-1.7, 1.8-3.4 and 3.5-5.0 signified agreement, indifference and disagreement, respectively. Data were analysed using descriptive statistics, Structural Equation Modelling and ANOVA at  $\alpha_{0.05}$ .

Majority of the respondents were male (52.3%), single (86.7%), Christian (79.5%), Nigerian (95.2%), within the age range of 18-27 years (77.3%), possessed tertiary education (79.0%), and earned less than ₦50000 monthly (75.3%). Most visitors to UI Zoo were repeat visitors (58.5%) while 82.8%, 55.4% and 64.5% were first time visitors in OAU Garden, FUNAAB Zoo and FUTA Park, respectively. All the respondents came by road, 49.6% were local travelers and 61.3% stayed less than three hours on site. Highest environmental attitude factor was: 'humans have the right to modify the natural environment to suit their needs' (1.54±0.76) while the highest motivation factor was: 'to experience and appreciate nature' (1.30±0.62). Also, an indifferent attitude to PI (3.32±1.35), PD (3.25±1.38) and PA (3.44±1.23), and disagreement with PSB (3.53±0.96) was recorded. No significant relationships existed between visitors' motivation and environmental attitude ( $Z = 1.24$ ), and between motivation and place attachment ( $Z = 1.30$ ). There were significant differences however in visitors environmental attitude ( $F = 13.53$ ), motivation ( $F = 7.30$ ) and place attachment ( $F = 20.10$ ) among the zoos.

The zoo visitors' environmental attitude was anthropocentric. Their motivation was primarily to experience and appreciate nature but with indifference to zoo attachment. No interrelationship exists among the environmental attitude, motivation and place attachment of visitors to the zoos.

**Keywords:** Environmental attitude, Nature-based tourism, Place attachment, Visitors' motivation, Zoological garden

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 General Introduction

Tourism is now the biggest industry worldwide (The Nature Conservancy, 2015). Being a global incidence, it constitutes an important section of the service segment which strongly influences the economy (Ninemeier and Perdue, 2008). It has developed into a significant source of employment, economic growth, foreign exchange, and earnings for numerous nations (Aziz and Ariffin, 2009) and well thought-out by developing countries as a significant resource for development and growth for economies at the local level (Neuts *et al.*, 2013). Tourism ranked fourth in export categories while the export was thirty percent of commercial services global exports (UNWTO, 2009). In Nigeria, for example, a total of 4,037,808 international tourist arrivals accounting for US\$649,468,486 in expenditure, and domestic tourism arrivals recorded 3,081,808 with US\$470,606,780 expenditure in 2013 (Mbanefo, 2014).

Nature-Based Tourism (NBT) refers to purposeful tour to natural places and attractions. It has witnessed significant increase in the past twenty years (Balmford *et al.*, 2009) both globally and locally. The 7% growth of worldwide tourism in 2007 was estimated to grow to as high as 25% by 2020 (Honey, 2008). It encompasses

terms like wildlife tourism, beach tourism and mountaineering. The fact that visitors can have pleasurable experience, the standard of living in host communities is enhanced, funds are generated for ecological conservation, and tour operators make a good income enhances its promotion as an ideal situation where no stakeholder loses (Stronza and Durham, 2008). The economic value placed on natural resources serves as a basis on which the idea behind natural resources conservation like lakes, wildlife, rivers, beaches, waterfalls, hot springs, forests, mountains/hills and minerals is hinged (Alarape *et al.*, 2015). Therefore, the utilization of such natural areas and attractions for recreation and tourism is therefore described as nature based tourism (Kuuder *et al.*, 2013). Such areas include Protected areas and Zoos.

Zoological gardens have been proven to be nature based tourism destinations that are able to attract great number of people consistently over a long period (Akosim and Irokanulo, 2008). At inception, zoos were for the sports of royals and only included people in their social class (Yager *et al.*, 2015). The Egyptian dynasties history and the ancient writings indicated that many animals were bred by monarchs in zoo-like holdings dating 4000 years ago (Adams and Salome, 2014). In the 18th century, the rise in people's curiosity in natural history and science led to zoos serving as avenue for scientific research, providing evident and real-time chances to people in order to value natural resources (Yager *et al.*, 2015). Visiting zoos and wildlife attractions has now become a popular nature based leisure activity attracting more than six hundred million people in a year globally (WAZA, 2006).

## **1.2 Background of the study**

Visitors' exhibit distinctive behaviour prior to, during and after engaging on a tour. This is termed 'travel behaviour' or 'tourism consumer behaviour'. March and

Woodside (2005) defined it as the manner in which tourists act based on their disposition to a particular item or service and the resulting reaction to the usage of the item or service. A behaviour resulting directly from continual interaction between personal and environmental factors (Vuuren and Slabbert, 2011). Mathieson and Wall (1982) noted that the foremost tourism studies were on developing all inclusive models of travel behaviour with emphasis on decision making variables like perceptions, motivations and attitudes. Progress was recorded in research from the wider outlook to domain-specific travel behaviour. The move in the direction of the study of specific tourism products like cultural tourism (Dann and Seaton, 2001), sport tourism (Hinch and Higham, 2004), and nature tourism (Luo and Deng, 2008), questioned the validity of the earlier models. Following this peculiar trend, it has been emphasized by scholars that all visitors should not be treated as belonging to same population. This will be tantamount to committing “the sin of homogenisation” as opined by Pearce (2005).

Also, the sustainability of tourism has become an integral part of the scope of academic geography (Honey, 2008). With respect to this, research on nature-based tourism (NBT) has become very popular, distinguishing itself in significant ways from the broader frameworks and identifying with niches such as wildlife (captive (zoo) and non-captive) tourism and beach tourism (Balmford *et al.*, 2009) and according to Luo and Deng (2008), it emphasises the natural attractions viewing and sustainability. Sustainable tourism concept partly lies on the suggestion that the environmental attitudes, behaviour as well as choices of tourists significantly influences sustainability, and therefore be included in the deliberation (Weaver and Lawton, 2004). The sustainable development of natural and cultural heritage sites, wildlife attractions in and outside protected areas is not dependent solely on the actions of

governmental bodies, but also on visitors' attitudes and actions with respect to the environment when they visit natural areas (Törn *et al.*, 2009).

NBT is differentiated from more general tourism behaviour. General tourism constructs such as attitude, motivation, and attachment have therefore been adapted by researchers (Costen and Line, 2011) so as to develop better framework for a distinct modelling of travel behaviour in an NBT destination and therefore avoid the sin of homogenization. Efforts to unveil the determinants that shape travel behaviour stemmed not only from pure academic interest, but from practical business considerations as well (Line and Costen, 2011). Studies have revealed that most nature based tourists are concerned about environmental issues and enthusiastic about learning (Wight, 2001). Oram (197) noted that when those experiences are packed with enlightening messages, they are more fulfilled. McGehee and Norman (2001) stressed that intensive experiences in places through one on one interaction with flora and fauna in their natural environments can instigate and foster curiosity in natural history, ecology and biology; and as a result applied stewardship behavior and conscientiousness is built. Zoological gardens and parks provide an ideal setting for such place-based experiences and thereafter stewardship roles.

Mostafa (2007) noted that the pursuit of nature based tourism researches in recent times has been enhanced by the paradigm shift to 'living green' with a focus of aligning environmental values and consumption habits of individuals. An individual's attitude to buying an item is affected by the harmonization of the item's icon to the person's personal notion (Sirgy, 1982). Also, the selection of destination is in like manner determined by the attitudes and destination characteristics (Sirgy and Su, 2000). With respect to the specific study of NBT, it was also noted by Formica and



Uysal (2002) that there is a likelihood that environmental attitudes could affect destination selection processes. Fennell (2001) also proposed this model.

Motivation in a tourism context seeks to answer the question 'what stimulates a person to travel' (Nien, 2010). It has been discussed extensively in tourism researches with specific reference to its roles. For example, Hsu *et al.* (2010) established motivation as a mediating variable of attitudes and expectations toward visiting a destination, as well as an intervening factor for visit intention and image (Phillips and Jang, 2007). Moreover, motivation has been widely used as a segmentation tool (Park and Yoon, 2009). Accordingly, motivation determines not only if consumers will engage in a tourism activity or not, but also when, where, and what type of tourism they will pursue (Pizam and Mansfeld, 1999). According to Hsu *et al.* (2010), it influences previsit and post-visit factors like expectation and loyalty respectively

Place attachment was initially used to portray people's emotional parody to a setting (Hwang *et al.*, 2005). The concept over time has been adapted in recreation studies, most in outdoor events like hiking (Kyle *et al.*, 2003) and rafting (Bricker and Kerstetter, 2000). Place attachment is a vital social measure of the worth of environmental attractions because it captures personal values and perceptions (Warzecha and Lime, 2001). As a result, place attachment enjoyed increased attention in tourism in the past ten years, after intense evaluation in nature tourism researches of both eastern cultures (Hwang *et al.*, 2005) and western (Gross and Brown, 2006). Acquaintance with a place enhances the possibility of defensive acts among persons which may bring about a sense of dedication as well as conscientiousness concerning places they are most attached to (Walker and Chapman, 2003).

### 1.3 Statement of Problem

Environmental problems such as degradation and pollution are considered to be championed by humans. It has therefore been agreed that the special consideration be given to the human factor in preferring solutions to these challenges (Halpenny, 2010). The drive for a better environmentally sustainable behaviour has implied a shift to examine the challenges from an emotional, social and behavioural perspective, which led to enhanced concentration on research of attitude and behaviour (Kurz, 2002). For example, leisure activities in National Parks can bring about enormous negative effects, thereby adding to the park's environment degradation (Sterl *et al.*, 2008), bringing about calls to support environmentally sustainable activities (Stockdale and Barker, 2009).

The rapid development associated with the tourism industry comes with heightened awareness on problems facing the environment. Budeanu (2007) noted that tourism's fast growth has brought about negative impact on the environment despite the huge benefits associated with it. Research has shown that the receivers and providers of tourism services are the causes of these negative impacts. For example, Chan and Lam (2002) noted that visitors do not manage their waste, they litter the surroundings and also do not take cognisance of the plants and animals, while the management on the other hand have been said to destroy the environment subtly, as a result of extreme usage of resources.

Furthermore, Crompton (1979) noted that describing the 'how', 'who', 'where', and 'when', of tourism, alongside economic and social attributes of visitors is possible; the 'why' which is the most fascinating question is not usually addressed. Zoos have being proved to attract large numbers of visitors. This influx is mostly accompanied

by detrimental effects on the natural environment, especially where visitors have unfavourable attitude towards the environment, wrong motivations and attachment. However, the ecological conscientiousness of zoo visitors, their intrinsic and extrinsic travel motives, their levels of attachment as well as the interconnectedness of these travel behavioural constructs are a relatively under-researched area in tourism studies. Hsu *et al.* (2010) opined that in spite of the affirmed significance of travel motivations in explaining consumer behaviour, its relations to other constructs are comparatively under-studied.

On the other hand, tourism in international marketplace is getting additionally competitive for tourism sites, due to large number of emerging destinations putting the older ones under demands of rejuvenating and enhancing their worth so as to still be competitively viable (Line and Costen, 2011). Traditional attractions, such as zoological gardens in many nations are facing tough competition from many recreational products such as amusement parks, and computer games that are rising in topical times (Stevens, 2000).

#### **1.4 Justification for the study**

The concept of environmental attitude, motivation and place attachment has been researched individually rather than as inter-connecting travel behavioural constructs in different places. Their importance in defining and predicting tourists' behaviour has also being extensively researched.

Increased focus has been directed to conceptual and practical research on attitudes towards the environment since the 1990s (Tarrant and Green, 1999). Many research efforts on tourist environmental attitudes exist. For example, the impacts of early-life

experiences to a person's belief towards the environment using a multidimensional scale was assessed by Ewert *et al.* (2005); people's perception of nature was researched by Hashimoto (2005) and it was discovered that cultural factors was influential in this. The awareness of tourists of environmentally conscious actions by destination and fulfilling tours in ecotourism sites can bring about a good environmental disposition (Lee and Moscardo, 2005). Bjerke *et al.* (2006) examined the relationship between environmental attitudes and outdoor recreation interests and found out that there was a difference in the attitude of tourists that appreciate and those that consume; while Swanagan (2010) also identified the determinants of zoo visitors' conservation attitudes and behavior.

Likewise, research efforts on travel motivation also abounds. Lee *et al.* (2004) identified the foundational dimensions of motivations of visitors attending the 2000 World Culture Expo; Tao *et al.* (2004) assessed the motivations of Asian tourists travelling to Taiwan's Taroko National Park; Bansal and Eiselt (2004) investigated travel motivations to Canadian Maritime Province; Yoon and Uysal (2005) reviewed general tourists' travel motivations; Swanson and Horridge (2006) studied travel motivations influencing the type of souvenirs tourists purchase; the motivations of Taiwanese seniors was assessed by Jang and Wu (2006) while Kim *et al.* (2006) researched travel motivations of visitors to festivals. Similarly, Merwe and Sayman (2008) assessed travel motivations of tourists to Kruger National Park;

Visitors/tourists place attachment, on the other hand, has drawn less attention than the aforementioned behavioural constructs. However, some researches have been carried out such as Bricker and Kerstetter (2000) and Kyle *et al.* (2003) which studied place attachment within the context of outdoor activities like hiking and rafting. Predicting

visit results with respect to attachment to place has also been investigated (Ramkinssoon *et al.*, 2012). Place attachment has also been studied as a mediating variable between pre and post experiences and evaluated the linking effect of the concept of place attachment, between visitors' attitude and travel performances (Tsai, 2012).

Worthy of note is the fact that all the aforementioned researches were carried out in the western and eastern worlds. Winter (2009) agreed with this statement when it was noted that a great deal of the knowledge of consumer behaviour in tourism relied on experiential researches and conceptualised theories primarily from the western and Anglowestern point of view. In Nigeria, most academic literatures on tourism have largely been on environmental and socio-economic impacts (Eruotor, 2014); tourism potentials and development (Uduma-Olugu and Onukwube, 2012); and sustainability of tourism (Benson, 2014). There have however been limited focus is on visitors travel behaviour based researches such as Awaritefe (2003) which assessed destination environment quality and tourist's spatial behaviour; Adeleke (2015) examined motivation of tourists through marketing strategies of Olumo rock tourist complex; and Woosnam *et al.* (2016) which investigated the linkage of emotional solidarity and place attachment in communities around Osun Osogbo grove. This study addressed this research gap by examining these behavioural constructs (environmental attitude, motivation and place attachment); thus contributing to the limited body of literature existing on travel behaviour in Nigeria.

Moreover, the interconnectedness of motivation and other constructs like attitude is not often researched (Hsu *et al.*, 2010). Also, Kim (2012) opined that although there are many researches on the eco-friendly behaviour of tourism services providers,

researches particularly on attitude towards the environment and behaviour of visitors are yet lagging behind. The linkage between motivation and affective constructs such as place attachment remains unexplored (Luo and Deng, 2008). With this limitation in mind, Line and Costen (2011) assessed environmental attitudes, motivations and attachment in a popular national park in south-eastern US. An identified limitation to the study was the predominant Caucasian sample population. To the best of the researcher's knowledge after extensive research on existing literatures, Line and Costen (2011) research was the only study that has examined the interconnecting roles of these behavioural constructs. This signals an underserved area in tourism consumer behaviour research, thus makes this study the first attempt to examine this issue in Nigeria, probably the second in the world (with respect to nature based tourism destinations) hence providing a cross cultural context, and the first globally with respect to zoological gardens.

Moreso, under the auspices of NBT (specifically wildlife tourism); it is important to examine the environmental attitudes and behaviour of tourists. Luck (2003) noted that tourists' awareness of environment may increase at their experiential encounter with nature. The motivations, expectations and experiences of wildlife tourism visitors are diverse and multifaceted. A study in the United Kingdom revealed that the main factors influencing visits to zoos were past visits, endorsements from friends and/or family and location (Ryan and Saward, 2004). Alarape *et al.* (2015) while assessing visitors' perception and satisfaction in Markurdi Zoological Garden, Benue State, Nigeria identified the zoo's recreational facilities as visitor attractions motivating them to visit. This study also contributed to this body of research.

Extensive literature search also revealed that tourism researches that have been carried out in Nigeria Zoological Gardens have been largely on the assessment of recreational potentials of zoos such as Makurdi Zoological Garden, Benue State (Yager *et al.*, 2015) and Agodi gardens, Oyo State (Ayodele and Alarape, 1998); visitor preferences for wild animal species (Adefalu *et al.*, 2015); impacts of zoological garden in schools (Adams and Salome, 2014) and on conservation education (Uloko *et al.*, 2011). To be case studies specific, researches ranges from cropological survey and inventory of animals at OAU and UI zoos (Ajibade *et al.*, 2010); survey of medicinal plants (Olusola and Oyeleke, 2015) and evaluation of ecotourism resources (Adekola, 2015) in FUTA Wildlife Park; to the prevalence of gastrointestinal parasites of carnivores in university zoos in southwest Nigeria (Adeniyi *et al.*, 2015). This research contributed to the existing body of literature by taking inventory on the wild animals in the study zoos as well as visitor preference for the wild animal species.

In essence, this study addressed the paucity of research in the area of developing countries in general and Nigeria in particular with respect to tourism consumer behaviour – specifically on environmental attitude, motivation and place attachment – in nature based tourism settings (Zoological gardens) as well as provide an inventory on the wildlife species and preferred wild animal species in the study zoos. By having adequate knowledge and understanding of these, strategies and policies can be developed and implemented to increase tourism demand (Law *et al.*, 2004; March and Woodside, 2005; Papatheodorou, 2006) as well as enhance sustainable tourism. Tourism stakeholders generally can draw various implications from the research. For destination managers, policy makers, it can aid the development of tourism by improvement on areas where the destinations are strong and address areas of proven

weakness. It also provides a context for cross-cultural comparison with similar western studies.

### **1.5 Research Questions**

1. What animals are in the study zoos?
2. What are the socio-demographic and travel characteristics of visitors to the zoos?
3. What attitudes do visitors have towards the environment?
4. What motivates the visitor or a group of visitors to travel generally and to the selected zoos?
5. To what extent are visitors attached and satisfied with zoos attributes and services?

### **1.6 Study Aim and Objectives**

The aim of this research is to assess the relationships between visitors environmental attitude, motivation and place attachment within the context of NBT specifically zoological gardens.

The specific objectives were to;

- ✓ carry out an inventory on the wild animal species in the zoological gardens – sex, number, size of enclosure, cage enrichment, food/feed and feeding regime, and IUCN status;
- ✓ investigate the socio-demographic and travel characteristics of visitors such as occupation, age, nationality, education, marital status, income, gender, number of visit, travel company, mode of travel and length of stay;



- ✓ examine visitors attitudes towards the environment and the antecedents;
- ✓ assess visitors image of zoos and motivational factors to the study zoos;
- ✓ examine visitors sense of place and the extent of satisfaction with zoos attributes and services.

### **1.7 Statement of Hypotheses (H<sub>0</sub>)**

1. There is no significant relationship between visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses.
2. There is no significant difference in visitors' environmental attitude across the study zoos.
3. Visitors' motivation is not significantly influenced by socio-economic characteristics.
4. There is no significant difference in visitors' motivation across the study zoos.
5. There is no significant difference in visitors' place attachment across the study zoos.
6. Visitors' motivation is not significantly influenced by their environmental attitude.
7. No significant relationship exists between visitors motivation and place attachment
8. No significant relationship exists between visitors' environmental attitude and place attachment.
9. No significant difference exists in overall visitors' satisfaction across the study zoos.
10. Visitors overall satisfaction is not significantly influenced by their socio-economic characteristics.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Zoological Garden**

A Zoological Garden or Park (popularly shortened as zoo) is a form of *ex-situ* conservation which involves primarily the keeping of wild animals alive outside their natural environment for aesthetic, educational, research and recreational purposes (Alarape *et al.*, 2015). According to SEAZA (2002), it is a captive wild animal's collection exhibit for recreational, scientific, education, and conservation reasons. Omonona and Ayodele (2011) described zoos as educationally planned oriented life animal displays, which is presented to visitors in the most aesthetically pleasing, interesting and naturalistic context. Wild animals and at times strange domestic animals are kept, bred, studied and exhibited for public viewing. A reason among many for establishing zoos is basically for introduction of wild animals to man (Yager *et al.*, 2015).

##### **2.1.1 History of zoos**

The notion and practice of keeping animals in zoo originated thousands of years ago (Ayodele *et al.*, 1999) when zoos were for the royals or established by feudal lords for

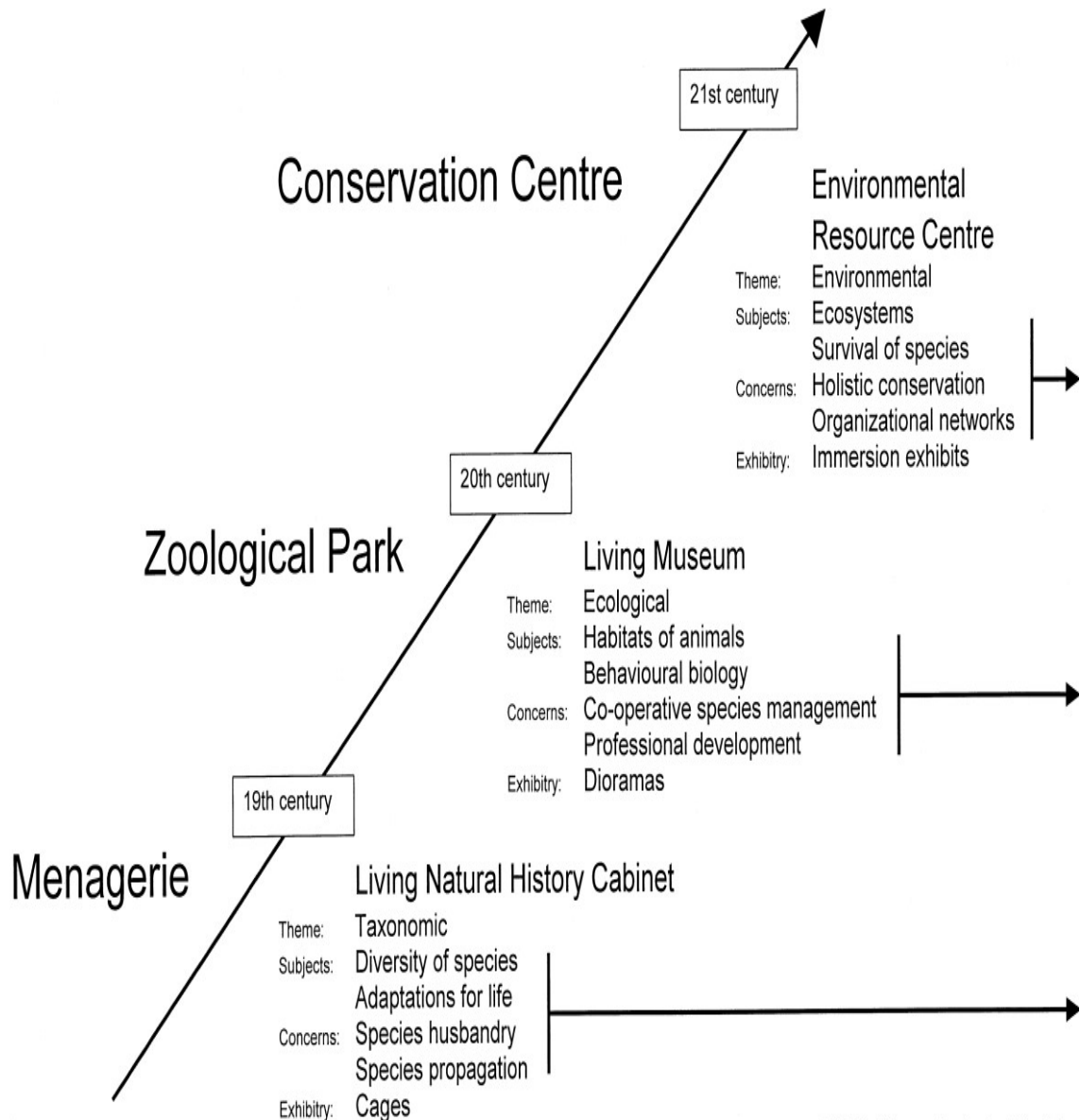
sporting, and strictly for men and women of their calibre (Omonona and Ayodele, 2011). The originally collected animals for public display was in China and ancient Egypt (Fa *et al.*, 2011), with the Egyptian dynasties dating over 4000 years ago. The first zoological garden of definite record is the Chen Dynasty of about 1100 BC in China called 'The Intelligence Park'. The first zoos were originally just live wild species of animals' collection in menageries for public enjoyment. The growing science of zoology in the eighteenth century witnessed the creation of menageries with an outlined purpose of studying the animals scientifically and satisfying the curiosity of diverse life forms in the world (Omonona and Ayodele, 2011; Carr and Cohen, 2011)

Menageries remained until the establishment of the first formal zoo in Vienna by 1752 (WAZA, 2006). The Zoological Society of London (ZSL) was the first scientific zoo created, in 1826. Species conservation and animal welfare concerns in zoos are relatively new. Knowles (2003) noted that conservation interest in zoos came to be after Second World War. Now, World Association of Zoos and Aquarium (WAZA) have a universal practice standard made available to enable zoos globally. Zoos are therefore still developmental. The history of zoos as it has evolved from menagerie to conservation centre is shown on Figure 2.1.

### **2.1.2 Types of zoos**

There are various types of zoos ranging in shapes, sizes and attractions (Stephanie, 2013; Anon, 2017).

**Urban zoo:** They are based within cities or urbanised areas and are a tradition of the 19<sup>th</sup> century concept in which animals are majorly kept in cages and other enclosures that suit the needs of the animals. However, urban zoos have adapted more



**Figure 2.1: The history of zoos**

Source: Rabb and Saunders (2005)

naturalistic form of displays for their animals in recent times. Despite this, they are limited in terms of the size. E.g. Antwerp Zoo in Belgium and most Nigerian zoos.

**Open range zoo:** They were established in rural communities since the early 1930s. Few species of animals are displayed with quite sizable enclosures e.g. San Diego Wild Animal Park, Whipsnade Park in England.

**Safari Park:** Safari parks, also known as zoo parks are zoo-like commercial tourist attraction in which animals are housed in larger, outdoor enclosures, confining them with moats and fences, rather than in cages. They allow visitors to drive through them and come in close contact to the animals. Visitors are sometimes able to feed animals through their car windows. E.g. Werribee Open Range Zoo in Melbourne, Australia, North Carolina Zoo, African Lion Safari in Ontario, Canada.

**Roadside zoos:** They are usually small, profit-oriented zoos, often intended to attract visitors to some other facility, such as a gas station. The animals may be trained to perform tricks, and visitors can get closer to them than in larger zoos. This type of zoo is sometimes less regulated, hence are often subject to accusations of neglect and cruelty. Roadside zoos are found all over North America, especially in remote locations.

**Petting zoo:** Petting zoo, also called petting farm or children's zoo, features a combination of domestic animals and docile wild species that can be touched and fed. In order to ensure the animals' health, food is supplied by the zoo, either from vending machines or a kiosk nearby. Example is Children Zoo and Park, Abuja, Nigeria.

**Animal theme park:** this is a combination of an amusement park and a zoo, mostly for the purpose of entertainment and commerce. They are similar to open range zoo with respect to size but differ in intention and outlook. E.g. Busch Gardens Tampa Bay in Tampa, Florida, Flamingo Land in North Yorkshire, England, Disney's Animal Kingdom in Orlando, Florida and Six Flags Discovery Kingdom in Vallejo, California.

**Aquarium:** Aquaria have evolved from only housing fish and marine life to accommodating animals such as penguins and otters that live in and around water. The first public aquarium was opened by London Zoo in 1853.

**Rescues and sanctuaries:** Usually, they are funded by animal welfare supporter. They take the form of rehabilitation and release centres. Examples are Idaho Black Bear Rehab Centre cares for orphaned bears cubs and prepares to release them back into the wild; Monkey World in England who provides home for abused chimps; and CERCOPAN Rehabilitation Centre in Calabar, Nigeria where rescued and abused primates are rehabilitated.

**Specialized zoo:** They focus on specific groups of animals such as Bird Park or aviary, reptile zoos or butterfly zoos.

### **2.1.3 Classification of Zoos in Nigeria**

Zoological gardens in Nigeria can be classified based on types of services or functions they perform and their organization (Omonona and Ayodele, 2011). They include;

**(a) Class ‘A’ Zoological Gardens**

These are the most common zoos and composed of exclusively zoological collections. For example, University of Ibadan, Oyo State. Its primary bases for establishment was to provide teaching and laboratory materials for the Zoology Department of the university, and has overtime included recreation as an objective. It has large collections of mammals, birds and reptiles, about 98% of which are of local origin, and are kept in metal and concrete cages in small units according to species and behavioural pattern.

**(b) Class ‘B’ Zoological Gardens**

An example of this is the Obafemi Awolowo University Biological Garden in Ile – Ife, Osun State. It is a facility primarily for biological studies, and also for recreation. A small number of exotic mammals and bird species as well as native fauna are kept in small breeding groups in small enclosures, in situations of close resemblance to their respective natural habitats.

**(c) Class ‘C’ Zoological Gardens**

The Kyarimi Zoological Garden is an example in this category. The garden was situated in a former forest reserve, covering an area of about 48 hectares. The animal collection consists of a combination of local and exotic species, 35% of which were zoo-bred animals. The animals are kept in small breeding groups according to their species, with the goal of embarking on a captive breeding programme within the reserve.

#### **2.1.4 Role of modern zoos**

According to Sterling *et al.* (2007), through time the roles of modern zoo have changed on terms of structure and also accommodated cultural values and the pressure on wild animals. Thus, modern zoos might have grown to conservation centres from menageries. However, West and Dickie (2007) noted that all zoos still must provide entertainment, so as to generate revenue, which then should be balanced with conservation objectives. Education and conservation is now the watchword of most zoos (Patrick *et al.*, 2007).

##### **a. Education**

Education most often is referred to as the primary mission of the zoo (Reading and Miller, 2007). As they attract six hundred people yearly globally, they are in a distinctive position to inform a large number of individuals, thus becoming conservation public face (Field and Dickie, 2007), and letting people know the worth and essence of wildlife conservation (Uloko, 2004). Fa *et al.* (2011) noted that an encounter with animals in such a close setting can bring emotions to bare, enabling the attachment of values to the species, and projecting the awareness and need for conservation. Zoos therefore bring about recreational experience, education and possible attitudinal and behavioural change among visitors (Baker, 2007).

##### **b. Captive breeding**

As emphasised by the Convention on Biological Diversity, captive breeding is vital as far as conservation is concerned (Baker, 2007). Animals were initially bred in captivity for stock retention. This changed in the early 90's to include the maintenance of populations in the wild for conservation (Bowkett, 2009). Noah's Ark paradigm



captures the initial idea of captive breeding. The idea according to Bowkett (2009) is to breed animals under captive environment and release them back to the wild when the threats facing them where they naturally occur dwindle, hence insuring the animals as opposed to extinction. At the removal of the threats, then reintroduction can be done (Conde *et al.*, 2011). Some wild animals have been reintroduced (Conde *et al.*, 2011) such as the *Urocyon littoralis* - Island Fox and *Equus przewalski* - Przewalski horse (van Dierendonck and de Vries, 1996).

### **c. Recreation**

The major goal for zoo keeping is recreation (Omonona and Ayodele, 2011), serving as avenue for relaxation and entertainment and provides opportunity for people to satisfy their natural curiosity of encountering different species of animals especially from different areas of the world. Zoo stores reflecting the history, current and future of the animals are avenue to entertain and educate, where persons of all age groups love going to zoos, for the reason that they can see various species of animals (Croke, 1997). Uloko and Iwar (2011) also noted lots of persons go to the zoo for learning as well as appreciation of nature's beauty especially in periods of festivity. It also presents an avenue for family-inclined trips (Chris and Jan, 2004).

### **d. Scientific research**

Zoologists, animal ecologists and veterinarians learn a lot with reference to animal behaviour and diseases through observations in zoos. Zoos are of significance in biomedical research especially in the areas of drug testing and vaccine production, zoo animals like the monkeys or apes with close blood chemistry to humans serve as a good testing ground for scientific products (Omonona and Kayode, 2011). Moreso,

the huge zoo animal number and diversity provide a number of study prospects for education and conservation (WAZA, 2005).

**e. Economic reasons**

Zoos are set up also for economic reasons in which revenue is generated from gate receipts and other activities within the zoo (Omonona and Kayode, 2011; Adams and Salome, 2014). Additional funding avenue include leases, concessions, research and grants, memberships of zoo and personal gifts, etc.

In Nigeria, there are 22 zoological gardens. This is presented on Table 2.1.

**Table 2.1: Zoological Gardens in Nigeria**

<b>S/N</b>	<b>ZOO</b>	<b>OWNERSHIP</b>	<b>YEAR FOUNDED</b>
1.	Jos Museum Zoo	Federal government of Nigeria	1945
2.	University of Ibadan Zoo	University of Ibadan	1948
3.	Ahmadu Bello University Zoo	Ahmadu Bello University, Zaria	1967
4.	Agodi Garden and Zoo, Ibadan	Oyo State Government	1967
5.	Obafemi Awolowo University Biological Garden	Obafemi Awolowo University	1968
6.	Calabar Zoo	Cross River State Government	1970
7.	Sanda Kyarimi Park, Maiduguri	Borno State Government	1971
8.	Biological Garden, Enugu	Enugu State Government	1971
9.	University of Nigeria, Nsukka Zoo	University of Nigeria, Nsukka	1972
10.	Zoo Park, Port Harcourt	Rivers State Government	1974
11.	Jos Wildlife Park	Plateau State Government	1975
12.	Kano State Zoo	Kano State government	1976
13.	University of Ilorin Zoo	University of Ilorin	1984
14.	Makurdi Zoo	Benue State Government	1976
15.	Ogba Zoo and Nature Park, Benin City	Edo State Government	1980
16.	Ikogosi mini zoo	Ekiti State Government	1988
17.	Abuja Children's Park and Zoo	Federal Government of Nigeria	2001
18.	Gombe State University Zoo	Gombe State University	2007
19.	Origin Zoo, Lagos State	Prince Abiola Kosoko	2008
20.	Federal University of Agriculture, Abeokuta Zoological Park	Federal University of Agriculture, Abeokuta	2012
21.	Prof Afolayan Wildlife Park, Akure	Federal University of Technology, Akure	2012
22.	Q - Brat Zoological Garden, Lagos State	Prince Sakiru Adesina Raji	2012

**Adapted from Omeni 1992; Uloko, 2004; Borokini, 2013**

### **2.1.5 Zoo Animal Enclosure Minimum Standards**

The recommendations of the Central Zoo Authority (2011), the governing body responsible for the oversight of Zoos in India and an affiliate member of the World Association of Zoos and Aquaria (WAZA) on zoo animal minimum enclosure standards are as follows:

1. The land area to be allocated for any animal enclosure should be with respect to the maximum number of animals that can be displayed in the animal enclosures. The maximum number of multiple species that can be housed together in a single enclosure should vary per species.
2. The enclosure area should have enough space so that the animals can move and exercise freely, adequate area to rest in shade and bask in the sun and have safe refuge from dominant animals and express their natural, social and reproductive behaviour.
3. Enclosures should not be given geometrical shapes, because the presence of corners is not palatable to smooth and unrestricted movement of animals. Enclosures with greater depth are always preferable as it enable animals to keep a safe distance from visitors.
4. The dimensions and the area of any enclosure should also take into cognisance the topography and naturalistic features of the site identified for construction of the enclosure.

Nature immersing enclosures for animal display should be with following aims and objectives according to CZA (2011):

- a. Landscape around every animal enclosure should compose of appropriate tree and shrub species of adequate extent and shape in a way that the enclosure

should not be visible to the visitors from any place other than the animal viewing areas.

- b. All the hard exteriors of the enclosure that is the enclosure barrier and the frontage of the feeding cells should be adequately camouflaged through planting of bamboo, dwarf tree species and shrubs.
- c. Planting of appropriate trees and shrubs should be done around the animal viewing areas to divide the visitors into small viewing groups.
- d. Visitors should be made to pass through the green landscape around the enclosure for reasonable distances.
- e. Planting appropriate trees species should be done in the enclosure to ensure that entire place is not visible to the visitors from any of the viewing points. The animal should be seen in natural settings as much as possible.
- f. The barrier of every animal enclosure should be of a design, dimension and material that can effectively house the animals within the enclosure and safeguard against any form of escape.
- g. Shutters and doors fitted in the enclosure, kraal and feeding cell should be of such material and design that they cannot be damaged/ opened by the animals housed in the enclosure.
- h. All enclosure barriers except the animal viewing area could comprise of natural cliffs (if any), wall, glass, power fence or chain-link fence of prescribed dimensions. However, in animal exhibit enclosures, provision of a moat could be made in the animal viewing area, to enable the visitors to have an unobstructed view of the animals without getting close to them. Wet moats should normally not be used as barrier for the viewing area except in case of

water loving animals. The land area under moat should not exceed 20% of the total land area of the enclosure.

i. Other safeguards :

- Dutiful care should be taken to ensure that no powerline/ power cable passes over any animal enclosure.
- Enclosure barrier should be erected/ constructed at a safe distance from trees that can enable animals escape from the enclosure or damage the enclosure barrier.
- Where walls are used as enclosure barriers, care should be taken to plaster it with such proportion of cement mix that the plaster does not wither away leaving gaps that could be used by the animal as holds to escape out of the enclosure.
- Overhangs or chain-link of live wire should be used to disallow the animals from escaping out of the enclosure.
- Water pipelines and sanitary fittings should be fixed within the enclosure in such a way that they cannot be used by the animal as a tool for escape.
- Deep foundation should be provided for enclosure housing burrowing species.
- Special consideration should also be given to different barrier materials and fixtures to see that they are safe and cannot be broken or cause injuries to animals.

The minimum enclosure standards for various animal species in captivity is presented on Table 2.2.

**Table 2.2: Minimum Enclosure Size for animals in captivity**

Species	Minimum size of outdoor enclosure (m <sup>2</sup> )	Number of animals (Male: Female)	Minimum extra area per added species	Size of feeding cubicles/night shelter (LxBxH)	Minimum size of water body if any
Flightless birds, e.g Emu and Ostrich	500	1:1		3x2x2.5	-
Pheasants	80	1:3			3
Pea fowl	160	1:3			3
Flying birds (single species)	80	2:2		Height of aviary should be 6m	2
Flying birds (mixed species enclosure)	300			Height of aviary should be 8m	20
Water birds (mixed species enclosure)	300			Height of aviary should be 8m	60 (depth of 1.5m)
Parrots, Macaws, Cockatoos, Conures, Rosella	80	2:2		Height of aviary should be 5m	-
Baboon and other monkeys	500	1:1	100	2x1.5x2.5	-
Buffalo, Wild ass, Wild sheep	1500	1:1	200	3x2x2.5	-
Chimpanzees, orang-utans and gorilla	1000	1:1		2.75x1.8x3	-
Deer	1000	2:3	100	3x2x2.5	-
African elephant	5000	1:1		8x6x5.5	-
Giraffe	1500	1:1		8x5.5x6	-
Hippopotamus	1000	1:1		5x3x2.5	-
Jaguar	500	1:1		2x1.8x2.5	-
African lion	1000	1:1		2.75x1.8x3	-

Civets, Jackal, wild dog, Otters, Hogbadger,	400	1:1	100	2x1.5x2.5	-
Small cats	400	1:1	100	1.8x1.5x2	-
Leopard	500		100	2x1.8x2.5	-
Rhinoceros	2000	1:1	400	5x3x2.5	-
Tigers (except Bengal tigers)	1000	1:1	200	2.75x1.8x3	-
Zebra	1500	1:1		3x2x2.5	-
Crocodiles/Alligators	500	1:1		-	200 (depth of 2 m)
Python	80				6
Cobra, rat snake, vipers, sand boas	40				4
Monitor lizards	80				6
Water monitor lizards	80				40 (depth of 1.5m)
Chameleon and small lizards	40				4
Tortoises	40	1:1		(small shade from rain and heat)	4
Turtles	80	1:1			40 (with a depth of 2m)
Amphibians	10				4 (with a depth of 0.5m)
Small aviary birds such as love birds, finches, lorikeet, sparrows, budgerigar parrots	15	2:3		Earthen pots of appropriate sizes for nesting and shelter	-

**Adapted from CZA, 2011**



## 2.2 Tourism

The Oxford English Dictionary defined tourism as travel for the purpose of pleasure; and the theory and practice of touring, the business of attracting, accommodating, and entertaining tourists, and the business of tour operation. The World Tourism Organization defined it as people "travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (UNWTO, 2013). It involves all activities that temporarily and voluntarily take a person from his/her normal place of residence in order to satisfy a need either for pleasure, excitement, experience and or relaxation (Ayodele, 2002). Its importance was openly announced in the *Manila Declaration on World Tourism of 1980* as "an activity essential to the life of nations because of its direct effects on the social, cultural, educational, and economic sectors of national societies and on their international relations." (UNWTO, 2013).

Tourism brings in huge amounts of income into a local economy in the form of payment for goods and services needed by tourists, accounting for 30% of the world's trade of services, and 6% of total exports of goods and services (UNWTO, 2012). It also creates opportunities for employment in the service sector of the economy affiliated with tourism (UNWTO, 2012). This include accommodations, including hotels and resorts; transportation services, e.g. taxis, cruise ships and airlines; entertainment venues, e.g. amusement parks, casinos, shopping malls, music venues, and theatres; and hospitality services. This is in addition to goods purchased by tourists, including souvenirs, clothing and other supplies. International tourist arrivals got to 1.035 billion in 2012, up from over 996 million in 2011, and 952 million in 2010 (UNWTO, 2013) with France, United States and Spain been the most visited

countries globally. It was forecasted by that international tourism will continually grow at an average annual rate of 4% by the World Tourism Organization (WTO, 2004).

### **2.2.1 Nature-based Tourism**

Tourism that features ‘nature’ is generally referred to as environmental or ‘nature-based tourism’; a broad term which encompasses a series of tourism experiences which include adventure tourism, wildlife tourism, coastal tourism, and aspects of cultural and rural tourism such as farmstay (TWA, 2009). Nature-based tourism is distinguished from other tourism forms by its natural area context (TWA, 2009) and attractions as well as the emphasis it puts on sustainability (Luo and Deng, 2008). It includes all forms of tourism where nature or the outdoors is the primary attraction or setting, especially where nature is relatively undisturbed (Buckley, 2009). The activities are mostly based on passive enjoyment of scenery, geology, fauna and flora, outdoor recreation and adventure, consumptive uses like hunting and fishing and volunteer contributions to conservation or research (Caghan, 2007).

Nature-based tourism overlaps with several related concepts and subsectors like ecotourism. The industry is quite large and heterogeneous. The development of the sector in the past twenty years has been remarkable (Balmford *et al.*, 2009) both globally and locally. It has an expectation as noted by Honey (2008) to rise from the approximated seven percent of total tourism in 2007 to twenty five percent in 2020. The fact that visitors can have pleasurable experience, the standard of living in host communities is enhanced, funds are generated for ecological conservation, and tour operators make a good income enhances its promotion as an ideal situation where no stakeholder loses (Stronza and Durham, 2008). The economic value placed on

natural resources serves as a basis on which the idea behind natural resources conservation like lakes, wildlife, rivers, beaches, waterfalls, hot springs, forests, mountains/hills and minerals is hinged (Alarape *et al.*, 2015). Therefore, the utilization of such natural areas and attractions for recreation and tourism is therefore described as nature based tourism (Kuuder *et al.*, 2013). Such areas include Protected areas, Zoos, etc.

### **2.2.2 Wildlife tourism**

Wildlife tourism is a niche under nature-based tourism (Balmford *et al.*, 2009). It is the kind of tourism done to come in contact with wild animals in natural, semi-captive or captive setting according to Newsome *et al.* (2005). Wildlife tourism is a crucial part of the tourism industries in many countries including many African and South American countries, Australia, India, Canada, Indonesia, Bangladesh, Malaysia, Sri Lanka, Maldives, etc. It could be consumptive like fishing and hunting or non-consumptive like feeding, photographing and viewing, (Durberry, 2004). According to CRC (2008), good connection of elements that relates to wild animals and ecosystem, host community, visitors, the economy, tour operators and makes the the experience possible. This experience is provided in areas like National Parks, Game Reserves, Zoological Gardens and Parks, etc.

### **2.2.3 Zoo as a wildlife tourism attraction**

There are about one thousand zoos and aquariums globally receiving approximately 600 million people on an annual basis (WAZA, 2005). The visit is typically a day's tour, and has turned out to be a well-accepted relaxation activity for families (Ryan and Saward, 2004). Enigmatic megavertebrates (such as big cats apes, elephants and

giraffes) that are uncommon, distinctive, as well as lively usually draw people's interest, emphatically the young ones children (Turley, 2001) are often times displayed. Balmford *et al.* (2009) in recent times as growing tourists interests in unusual animal exhibition setting, with probable consideration for cost effectiveness, small and non-mammals like spiders, lizards, and butterflies, have been added as zoo attractions.

### **2.3 Consumer Behaviour in Tourism**

#### **2.3.1 Who is the consumer in tourism?**

The consumer of touristic activities is the visitor. A visitor is a traveller taking a trip to a main destination outside his/her immediate environment, for less than a year, for any main purpose (holidays, leisure and recreation, business, health, education or other purposes) other than to be employed by a resident entity in the country or place visited (UNWTO, 2014). Visitors are of three main types depending on their length of stay namely tourists and same day visitors (TTR, 2016).

- Tourists: they are visitors staying away from their houses for one or additional nights for any main purpose(s). They can be domestic or international travellers.
- Same day visitors: they are also known as tourist day visitors who spend at least three hours away from home outside their usual environment for general leisure, recreational and social purposes. Many of these visitors are residents of the area.

- Leisure day visitors: these visitors spend less than three hours away at tourism destination. This group contributes largely to local visitor economy. Most of these visitors are also residents of destinations and the local catchment area.

In the context of this study, nature-based tourists are the consumer of tourism products. Generally, nature-based tourists are heterogeneous in origins, interests, motivations and behaviours. There are four types of nature based tourists as recognized by Lindberg (1991). The types are the commonly used tourist types' definitions. They include:

1. Hard core: these types are researchers on scientific mission or members of voluntary conservation tours.
2. Dedicated: these types take trips to protected areas specifically in order to understand local, natural and cultural history.
3. Mainstream: these tourists visit well known iconic nature destinations primarily so as to take an unusual trip.
4. Casual: this category includes nature based components as part of a larger tourism plan.

Vespestad and Lindberg (2010) also presented four types of nature based tourists from ontological point of view:

1. *Genuine* nature-based tourism experiences where tourists find out their true authentic selves.
2. Nature-based tourism experiences as *entertainment* where nature becomes a setting for an activity or experience that has an entertainment value.
3. Nature based experiences as a *state of being*, where rewards of a nature-based experience specifically to the person concerned is the focal point.

4. *Social* nature based experiences that provide place, value and identity to group members such as families, friends, tour groups, etc.

### **2.3.2 Concept of consumer behaviour in tourism**

Visitors' exhibit distinctive behaviour prior to, during and after engaging on a tour. This is termed as tourism consumer behaviour or travel behaviour (March and Woodside, 2005). Consumer behaviour (CB) involves decisions, actions, thoughts and experiences that bring about the satisfaction of needs (Solomon, 1996). CB has remained a widely studied aspects in tourism and marketing fields, and also called 'tourist behaviour' or 'travel behaviour' (Cohen, 2014). Consumer behaviour can be evaluated from three peculiar perspectives (the pre-visit, actual visit and the post visit) as well as their inter-relationships.

Nine main categories of consumer characteristics provide the most popular bases for segmentation; they are: geographic factors, demographic factors, psychological factors, psychographic (lifestyle) characteristics, socio-cultural variables, use-related characteristics, use-situation factors, benefits sought, and forms of hybrid segmentation, such as demographic – psychographic profiles, geo-demographic factors, and values and lifestyles (Schiffman and Kanuk, 2004).

### **2.3.3 Variables in tourism consumer behaviour**

These variables are popularly referred to a tourists behavioural constructs.

#### **2.3.3.1 Attitude**

Attitudes are mostly acknowledged as a person's extent of unfavorableness or favorableness towards a mental entity (Ajzen and Fishbein, 2000). This behaviour is

learnt, and subject to perception and evaluation of the main characteristics or beliefs towards a certain entity by the consumers (Schiffman and Kanuk, 1997). According to Ajzen and Fishbein (2000), the principal component of attitudinal reaction, as person's assess, with respect to their beliefs, ideas, objects or actions within the scopes of like to dislike or good to bad is evaluation. The same authors described attitude as an individual's proclivity to display some reactions with respect to an idea or an object.

Affect refers to psychological reactions, the cognitive aspect is the values, acquaintance, perceptions and opinion, while behavioural dispositions constitute the conative (action) aspect (Jorgensen and Stedman, 2001). Kotler (2000) regarded attitudes as an individual presenting a continuously favourable or unfavorable assessment, emotional feeling, and action tendency on particular objects or concepts. Gagné and Briggs (1974) considered attitudes as the correspondent behaviours when an individual came into contact with various situations related to people, affairs, and objects in the environment that personal responses to external stimulus were controlled by such attitudes. According to Rosenberg and Hovland (1960), attitude can be grouped into cognitive component, affective, and conative components. Environmental attitudes in this study therefore refer to the visitors' continuous conation, cognition and preferences for everything in the environment.

An individual's attitude to buying an item is affected by the harmonization of the item's icon to the person's personal notion (Sirgy, 1982). Also, the selection of destination is in like manner determined by the attitudes and destination characteristics (Sirgy and Su, 2000). Fennell (2001) also proposed this model.

### **2.3.3.1.1 Environmental attitude**

#### **2.3.3.1.2 What is environmental attitude?**

There is no generally accepted definition of environmental attitude exists till date. This is so because it is a latent construct which cannot be directly observed but inferred from valued responses. The term is said to be similar to environmental affection, environmental awareness and environmental consciousness. Environmental attitudes can be divided into three categories namely environmental knowledge, environmental values, and ecological behaviour intention (Kaiser *et al.*, 1999). Moreso, Lu *et al.* (2004), classified it into four aspects: environmental protection, environmental resource, environmental study, and environmental sustainability.

Milfont and Duckitt (2010) on the other hand described it as an emotional disposition shown by evaluative responses to the natural environment with an iota of favour or disfavour. The hierarchical structure of environmental attitudes was proposed to be composed of two second order factors by Wiseman and Bogner (2003) as preservation and utilization. Preservation is the biocentric aspect that exhibits the conservation and safety of the environment. Individuals with the preservation environmental attitude place high priority on preserving nature in its original state, and should not be altered by any human use. The utilization group is the anthropocentric aspect which reflects the use of the natural resources.



### **2.3.7.1.2 New Environmental Paradigm (NEP) and Dominant Social Paradigm (DSP)**

According to Dunlap *et al.* (2000), the new environmental paradigm (NEP) in tourism studies is the most often used scale of environmental attitudes, with high usage in tourism, environmental education, outdoor recreation, and other domains (Lee and Moscardo, 2005). Three environmental factors are measured by the NEP measures which are ecocrisis, limits to growth, and humans over nature, and which are combined to give the composite. According to Catton and Dunlap (1978), the NEP works under the assumption that:

- ✓ Human beings are but one species among the many that are involved interdependently in the biotic communities that shape their social life;
- ✓ There are linkages of cause and effect and feedback in the web of nature, which produce many unintended consequences from purposive human actions;
- ✓ The world is finite, so there are potent physical and biological constraints limiting economic growth, social progress, and other societal phenomena.

Hence, NEP recognizes the detrimental impact of human-induced interactions with their surrounding natural landscape. It is the opposite of Dominant Social Paradigm (DSP) which favours economic growth, scientific development, competition, free market economy, care for the present population without considering the future, exploiting the grow-or-die principle, combining financial and political resources and enduring risks (Kostova *et al.*, 2011). The NEP scale is presented on Table 2.3. Agreement with the even numbered items (2, 4, 6, 8, 10, 12) shows anthropocentric beliefs while disagreement indicates pro-ecological view (ecocentrism: focusing basic ideas on people-environment association with respect to principles), and *vice versa* for the six odd numbered items (1, 3, 5, 7, 9, 11).

**Table 2.3: NEP Scale**

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<i>S/N</i>	<i>Measures of NEP</i>
	<i>Human over nature</i>
1.	Humans have the right to modify the natural environment to suit their needs.
2.	Mankind was created to rule over the rest of nature.
3.	Plants and animals exist primarily to be used by humans
4.	Humans must live in harmony with nature in order to survive
	<i>Limits of growth</i>
5.	The balance of nature is very delicate and easily upset.
6.	To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled.
7.	The earth is like a spaceship with only limited room and resources
8.	There are limits to growth beyond which our industrialized society cannot expand
	<i>Ecocrisis</i>
9.	When humans interfere with nature it often produces disastrous consequences.
10.	Humans need not adapt to the natural environment because they can remake it to suit their needs.
11.	Mankind is severely abusing the environment.
12.	We are approaching the limit of the number of people the earth can support

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Source: Dunlap *et al.*, 2000.

### 2.3.7.1.3 Factors influencing tourists' environmental attitudes

Three factors influence environmental attitudes (Leonidou *et al.*, 2014). They are;

- **Deontological status:** Brennan and Lo (2002) defined it as moral view point in which attitudes and behaviours are said to be inherently acceptable or unacceptable, in spite of the results. In the framework of environmental matters according to García-Rosell and Moisander (2008), this promotes a need by all human beings to protect the environment as an ethical assignment. Visitors who are of this ethical view according to Sparks and Merenski (2000) have a propensity of displaying a higher level of thoughtful notions and conscientiousness to protection of the environment as they fundamentally believe it is an acceptable course.
- **Law obedience:** this refers to the degree to which a person takes cognisance of the regulations, laws and rules. Gaski (1999) noted that with regard to protecting the environment in numerous nations, there are increasing legislation bodies controlling the behaviour of individuals and organizations. A visitor with this perspective conforms to laws governing the environment and is likely to develop environmental conscientiousness, outlook and inventiveness, in which they approve and patronise services that supports their view and withdraw from and/or condemn those that do not (Barr, 2007).
- **Political action:** this according to Braithwaite (1997) refers to a person's enthusiasm to engage in social and political matters, like participation in activists' assemblage, lobby of politicians, and avoiding firms that are not environmentally responsible. A tourist that is politically active is expected to develop this type of attitude, because protecting the environment is a socio-

political issue of major public concern that involves values, power, and cooperation between various stakeholder groups (Hampel *et al.*, 1996).

### **2.3.3.2 Motivation**

Motivation is a key variable used in explaining tourist behaviour and destination marketing. To market tourism services and destinations well, marketers must have an understanding of the variables that motivate and hitherto bring about decisions to travel as well as the resulting trend (Thaothampitak and Weerakit, 2014). It is an important variable because it is the driving force behind every behaviour. In other words, effective tourism marketing is not possible without an understanding of consumers' motivations (Cohen, 2014). A state of tension exists that drives the individual to attempt to reduce or eliminate the need once it is activated, (Stanciu and Țichindelean, 2011). Motivation is the need that drives an individual to act in a certain way to achieve the desired satisfaction (Beerli and Martin, 2004).

Motivation has also been described as emotional and/or natural wants and needs with the inclusion of important characters stimulating, directing, as well as integrating an individual's actions and activity (Swarbrooke and Horner, 2007). In cognitive social psychology, motivation is deeply connected to expected outcomes of a particular behaviour. In sociology and psychology, the definition of motivation is engaged towards emotional and cognitive reasons (White and Thompson, 2009) or internal and external motives (Stanciu and Tichlidean, 2011). An internal motive has to do with drives, feelings, and instincts while external motive involves mental representations such as knowledge and beliefs.

### 2.3.3.2.1 Motivation in tourism

Motivation is a main aspect for scholars and thought-out for long as the only variable that mediates the interface of stimulus and response to consumer behaviour (Catoiu, 2004). When travelling, vacating or going on visits to family and friends, motivation plays a key role (Mill and Morrision, 1985). The authors also gave credence to multiple motivators when going on a trip. When an individual seeks to satisfy a need and must take necessary action to do so, motivation comes into play. It gives an explanation to tourist's decision (McCabe, 2000). Tourist motivation was defined by Pearce *et al.* (1998) as "the global integrating network of biological and cultural forces which gives value and direction to travel choices, behaviour and experience". This is a vital determinant of travel decision-making as it surfaces when a tourist wants to satisfy a need (Chang, 2007).

Motivation according to Decrop (2006) refers to an individual's intrinsic situation or their specific wants and needs that propel such individual to conduct themselves in certain manner, which hitherto and thereby support their actions. Tourist motivation indicates that the concept of motivation can be classified into two forces which indicate that people travel because they are pushed and pulled to do so by some factors (Dann, 1977). These factors describe how individuals are nudged intrinsically to make a decision to travel and the way the features of a particular site attract them (Uysal and Haggan, 1993). The idea of the push - pull model is the disintegration of tourist's choice of destination into two categories (Thaothampitak and Weerakit, 2014). The first category is that which pushes a tourist away, it attempts to model the wide-ranging aspiration to go and be anywhere else, without specifying the specific place. The second category is that which pulls a tourist to a particular site. This

comprises the tangible characteristics or attributes of a destination that are primarily related to the perceived attractiveness of a destination. These destination characteristics may stimulate and reinforce inherent push motivations (McGehee *et al.*, 1996).

People do everything for a reason, although sometimes it is not easy to simply determine what the reason is (Solomon, 2004). To understand motivation in tourism simply means understanding what motivates tourists to choose a certain destination. Prebensen (2007) opined that once an individual has the right motivation to travel, the type of holiday and destination is often decided based on his/her perception or value of the various options available in the marketplace (Prebensen, 2007). Motivation in a tourism context thus gives answer to the question of what stimulates a person to travel (Nien, 2010).

#### **2.3.3.2.2 Motivation Theories and their relevance in tourism**

The concept of need is fundamental to most content theories of motivation. Pizam and Mansfeld (1999) noted that the factors that arouse motivated behaviour are needs and in order to understand human motivation, the discovery of the needs of people and ways of fulfilling them is crucial.

##### **1. Maslow's theory**

Maslow in 1943 was the first to attempt to do this with his needs hierarchy theory, and it is now the best known of all motivation theories. It is one of the commonest theories used to describe motivation antecedent and in tourism literatures. It is a theory modelled pyramidically. Maslow uses five sets of goals which are also referred to as basic needs: physiological needs, safety needs, social needs, self-esteem and

self-actualization (Tikkanen, 2007). Tourists may need to escape, relax, gain relief of physical and mental tension and for typical sun lust reasons.

Maslow's theory was first developed in the context of his work in the area of clinical psychology, but has become widely recognized in many applied areas such as industrial and organizational psychology, counseling, marketing, and tourism. One of the main reasons for the popularity is probably its simplicity (Tikkanen, 2007). Maslow argues that if none of the needs in the hierarchy (Figure 2.2) were satisfied, then the lowest needs, the physiological ones, would dominate behaviour. If these were satisfied, however, they would no longer motivate, and the individual would move up to the next level in the hierarchy which are safety needs. Once these were fulfilled, the individual would move up to the next level, and continually work up the hierarchy as the needs at each level were satisfied.

## **2. Beach and Ragheb theory**

In 1983, a model by Beach and Ragheb, classified motivational factors to four aspects, following Maslow's model:

- ✓ Intellectual aspect – explains people's motivation in events requiring intellectual competence like exploring and learning
- ✓ Social aspect – explains the involvement of people in recreation for interpersonal purposes
- ✓ Competence of skills acquisition– explains people's engagement in recreation for a challenging, leadership or competitive reason.

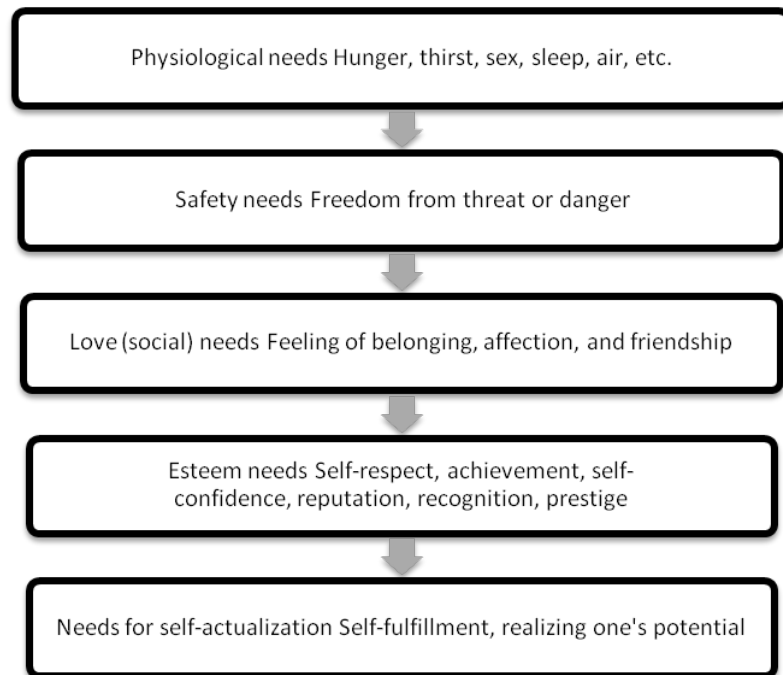


Figure 2.2: Maslow's Hierarchy of Needs

*Source:* Maslow (1943)



- ✓ Competence of stimulus avoidance – explains how people display a need to leave their immediate environment or a stress-filled situation.

### **3. Dann's theory**

Dann (1977) linked the factors that motivate tourists to Maslow's list of needs under push and pull motivational factors. He put forward seven categories of travel motivation:

1. Travel as a response to what is lacking in the immediate environment, yet desired
2. Destination pull as a result of motivational push
3. Motivation as a fantasy
4. Motivation as a defined purpose, such as visiting friends and family or for study.
5. Motivational typologies
6. Motivation and tourist experiences
7. Motivation as auto-definition and meaning, suggesting that the way tourists define their situations and circumstances will provide a greater understanding of tourist motivation than simply observing their behaviour.

### **4. Gray's travel-motivation theory**

Although this is an oversimplification of motivation as opined by Mansfeld (1992), Gray's theory gives two motives which can aid the explanation of why people visit natural areas. The first motive is the drive to go from a known to an unknown place, called 'wanderlust'. The second is a place which can provide the individual with specific facilities that do not exist in his or her own place of residence, referred to as 'sunlust' (Mansfeld, 1992). The wanderlust-sunlust motives do help to understand

why nature tourists search for settings which are different from the city-work-home routine and which enable the nature tourist to participate in activities in a different territory possible in those natural settings but not at home.

### **5. Crompton's theory**

This theory was developed by Crompton in 1979 and agreed with Dann's theory as far as the concept of push and pull motives were concerned. He identified nine motives as against Danna's theory of seven motives; namely prestige, self-exploration, escape, relaxation, kinship enhancement, regression, social interaction, and novelty and education.

### **6. Plog's theory**

The tourist motivation model proposed by Plog (1974) has been one of the most widely referenced. This model proposed that travellers may be classified into two categories: allocentrism/psychocentrism and energy. Individuals who are more allocentric are thought to prefer exotic destinations, unstructured vacations rather than packaged tours, and greater involvement with local cultures. Psychocentrics, on the other hand, are thought to prefer familiar destinations, packaged tours, and touristic areas. Later, energy was added, which explains the level of activity desired by the tourist; high-energy individuals prefer high levels of activity while low-energy travelers on the other hand prefer few activities that are engaged in passively. It has however been debated that Plog's theory is difficult to apply as individuals will travel with different motivations on different occasions (Gilbert, 1991).

### **2.3.3.2.3 Classification of tourists' motivation**

In current tourism literatures, there are numerous classifications of motivational factors. However, there are basically two schools of thoughts. The first classified motivations as a function of push and pull factors. The second, on the other hand is complex, with various motivational factors. Both school of thoughts have been extensively researched on and are widely accepted.

#### **2.3.3.2.3.1 The push and pull motivations (first classification)**

The motivation concept can be classified into two forces, which indicate that people travel because they are pushed and pulled certain destinations (Dann, 1981), so as to satisfy their needs (Pizam *et al.*, 1979). Dann (1981) explained the notion of the push and pull as individuals operating on internal drive to travel and external attraction to a destination. Klenosky (2002) noted that the push–pull approach has remained the most extensively accepted and practical in the explanation of motivation, because of the ease and enquiry nature. The concept is predicted by factors like emotions, imagery and involvement, (White and Thompson, 2009).

##### **(a) Push motivation**

This is the factor which motivates a person to take a holiday, that is, primary demand (Stanciu and Țichindelean, 2011). The push motivations are related to emotional or internal aspects and explain people's need for rest and relaxation, adventure and social interaction, escape, prestige, excitement health and fitness, and family togetherness (Crompton, 1979). The push is instinctive and psychological and brings out needs to go on a tour (Yoon and Uysal, 2005). The push factors are intrinsically

built. They instigate an individual to want a travel experience (Pizam and Mansfeld, 1999).

### **(b) Pull motivation**

This according to Stanciu and Tichindelean (2011) motivates an individual to embark on a specified holiday to a defined place and time. This is also called selective demand. Pull motivations are linked to exterior, situational, or cognitive perspectives and are connected with the peculiarities of the choice of destination (Cha *et al.*, 1995). The individual is inspired by a destination's attractiveness, such as beaches, recreational facilities, cultural attractiveness, entertainment, natural scenery, shopping, and parks (Yoon and Uysal, 2005). Pull factors are those that result from destination attractiveness as felt by tourists. The pull factors are those that affect the particular place an individual travels to (Pizam and Mansfeld, 1999).

The pull factor of motivation is crucial in the choice of destination. Destination choice has been conceptualized to have two phases (Crompton, 1977).

#### **I. First phase**

The first is a generic phase that looks into the fundamental issue of whether or not to have a vacation at all. Once the decision in favour of a vacation is made, the second phase is concerned with where exactly to go (Pizam and Mansfeld, 1999). The determinants of a destination choice are diverse and interwoven. They include personal values (Muller, 1991), perceptions (La Page and Cormier, 1977), destination attractiveness and image (Pizam and Mansfeld, 1999).

## **II. Second phase**

Urn and Crompton (1990) explored the second phase, and developed a framework of travel destination choice. The concepts used in the framework were put forward as external, internal, or cognitive aspects.

- External inputs were viewed as the totality of marketing exchanges and social relations prospective tourists come in contact with.
- Internal inputs derived from the socio-psychological set of a potential traveller, which includes the individual's socio-demographic attributes, intentions, standards, and disposition.
- Cognitive constructs is the inclusion of external and internal aspects to destinations consciousness.

Woodside and Lysonski (1989) also developed a model of tourists site with the selection as a result of pull motivation. He identified two variables which are; Marketing variables (Advertising, Channel Decisions, Pricing, Product Design) and Traveller variables (Lifestyles, Value System, Life Cycle, Income, Age, Previous Destination Experience).

### **2.3.3.2.3.1.1 Types of push and pull motivations**

Mannel and Iso-Ahola (1987) identified two main types of push and pull factors, personal and interpersonal. The authors suggest that people are motivated to travel to leave behind the personal or interpersonal problems of their immediate environment in order to obtain compensating personal or interpersonal rewards. The personal rewards are mainly learning, self-determination, sense of competence, challenge, exploration and relaxation. The interpersonal rewards stems from social interaction.

#### **2.3.3.2.3.2 The second classification**

Numerous authors have identified motivational factors under this category without specifically defining them as push or pull factors.

Based on the two schools of thought, motivational factors as defined by various authors are presented on Tables 2.4 and 2.5 for the first and second classifications respectively.

**Table 2.4: Push and Pull Motivational factors (First Classification)**

<b>Authors</b>	<b>Push motivation</b>	<b>Pull motivation</b>
<b>Crompton (1979)</b>	Social interaction	Education
	Relaxation	Novelty
	Escape	
	Regression	
	Prestige	
	Kinship-enhancement	
	Self-exploratory	
<b>Jang and Wu (2006)</b>	Socialisation	Events and costs
	Ego-enhancement	Cleanliness and safety
	Relaxation	Natural and historic sites
	Knowledge seeking	Facilities
	Self-esteem	
<b>Swanson and Horridge (2006)</b>	Relaxation	Destination
	Health and fitness	attractiveness
	Prestige	Tangible resources
	Desire for escape	Travellers' perceptions and expectations
	Rest	
<b>Correia et al. (2007)</b>	Social interaction	
	Adventure	
	Knowledge	Landscape
	Socialisation	Facilities
	Leisure	Core attractions

**Table 2.5: Second classification of motivational factors**

<b>Authors</b>	<b>Travel motives</b>
<b>Backman <i>et al.</i> (1995)</b>	Excitement
	External
	Family
	Socialising
	Relaxation
<b>Schneider and Backman (1996)</b>	Family togetherness
	Socialisation
	Social/leisure
	Festival attributes
	Escape
	Event excitement
<b>Lee <i>et al.</i> (2004)</b>	Escape
	Cultural exploration
	Novelty
	Event attractions
	Family togetherness
	Socialisation
<b>Fodness (1994)</b>	Value expressive function (self-enhancement)
	Value expressive function (self-esteem)
	Utilitarian function (reward maximisation)
	Utilitarian function (punishment, minimisation)
	Knowledge function
<b>Yoon and Uysal (2005)</b>	Excitement



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	Knowledge and learning experience
	Relaxation
	Achievement
	Family togetherness
	Escape
	Safety
	Fun
<b>Oh et al. (1995)</b>	Luxury seekers
	Safety/comfort seekers
	Culture/history seekers
	Novelty/adventure seekers
<b>Kim et al. (2006)</b>	Family togetherness
	Socialisation
	Site attraction
	Festival attraction
	Escape from routine
<b>Bansal and Eiselt (2004)</b>	Climate
	Relaxation
	Adventure
	Personal
	Education
	Sites and festivals

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<b>Loker and Perdue (1992)</b>	Naturalist (those who enjoyed nature surroundings)
	Family and friends-oriented
	Adrenalin, excitement seeking
	Escape
	Excitement and escape
<b>Goeldner <i>et al.</i> (2000)</b>	Spirituality
	Social status
	Escape
	Cultural enrichment
<b>Crompton (1977)</b>	Facilitation of social interaction
	Escaping from the everyday environment
	Recreation and travelling
	Status
	Discovering and evaluating of oneself
	Strengthening of family ties
	Regression
<b>Weaver and Oppermann (2000)</b>	Leisure
	Business
	Visiting friends and relatives
<b>Merwe and Saayman (2008)</b>	Nature
	Activities
	Nostalgia
	Novelty
	Escape from routine

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<b>John and Susan (1999)</b>	Physical
	Emotional
	Personal development
	Status
	Cultural
<b>Swarbrooke and Horner, 2007</b>	Personal development: learning new skills, enhancing knowledge
	Personal: search for economy, visiting friends and family, need to satisfy others
	Emotional: nostalgia, adventure, fantasy, romance; spiritual
	Physical: relaxation, exercise, sex and health
	Cultural: experiencing new cultures
	Status: exclusivity, fashionability, obtaining a good deal

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Source: Adapted from Crompton (1977); Loker and Perdue (1992); Fodness (1994); Oh *et al.* (1995); Backman *et al.* (1995); Schneider and Backman (1996); John and Susan (1999); Weaver and Oppermann (2000); Goeldner *et al.* (2000); Lee *et al.* (2004); Bansal and Eiselt (2004); Yoon and Uysal (2005); Kim *et al.* (2006); Swarbrooke and Horner (2007); Merwe and Saayman (2008)

Morrison (2013) deduced the following factors from the second classification;

1. Socio-psychological: Um and Crompton (1990) explained that this factor includes the personal characteristics, motives, values and attitudes of the tourist as they are connected closely with people's motives for pleasure/leisure travel.
2. Situational: The challenge an individual, family or a group of people have as a result of financial constraints, lack of available time to travel.
3. Interpersonal: The influence of friends, family members, other relatives, opinion leaders and others.
4. Awareness levels: Tourist has to be aware of a destination before they can consider them for pleasure/leisure travel.
5. Destination images: these are the perceptions people have about the destinations.
6. Destination products: these include factors such as attractions, events, experiences and activities that establish tourists' acceptance of a site.
7. Marketing and promotional communications: The messages and images transmitted by Destination Marketing Objectives (DMOs) and tourism sector stakeholders through various means.
8. Past experience in visiting: it is generally accepted that past visitors to a destination has greater tendencies to revisit that particular destination than those who have not yet visited.

#### 2.3.3.2.4 Factors that determine motivation

##### 1. Demographics:

###### a. Age

Different people across all ages differ in their purpose for travelling (Mahika, 2011). The tourism industry is persuaded that demographics are the basis for segmentation. For example,

- Parents want to continually keep their children happy (Swarbrooke and Horner, 2007).
- Young people want to relax, party, dance and make new acquaintances
- Elderly people prefer passive activities

###### b. Gender

This can have effect on destination selection. For example

- Men can go for sports holidays such as golf tournaments, or participate in various sporting events while women may go on shopping holidays, or trips that include beauty and body treatments.
- Women as a matter of fact finds relaxing trips whether emotionally or physically more valuable than men (Swarbrooke and Horner, 2004).
- Different products such as golf trips or shopping trips seem to be based wholly on a desire to match the perceived motivators of men and women respectively (Stanciu and Ticgindelean, 2011)
- Andreu *et al.* (2005) inferred that females had a higher motivation to travel than their male counterpart where male visitors would like recreational holidays and the female prefer relaxation packages.

### c. Cultural and nationality differences

This also influences the decisions visitors make about a trip. For example, tourists from colder region travelling on holiday to warmer climate, or vice versa. Kozak (2002) research revealed four aspects of motives namely; physical, enjoyment, relaxation and cultural. It was revealed that motivational differences between nationalities, for example, tourists from Britain mostly like interacting with fellow tourists as well as enjoying themselves, on the other hand, a tourist from Germany is more culture and nature inclined.

2. **Price:** this is a constant factor regardless of the type of tourism (Mahika, 2011).
3. **Location:** this is another important factor, which can be for example distance of a site from the visitors home, location of lodging facilities, departure and arrival airport, etc (Mahika, 2011).
4. **Tourist's previous experience:** this refers to the experience of being a tourist in general, and also in certain types of trips; where positive and negative experiences are considered (Mahika, 2011; Stanciu and Ticgindelean, 2011).
5. **Fashionability** can also be a major factor, but hardly important in selection of accommodation facilities or a choice airline (Swarbrooke and Horner, 2007). Although this differs from one country or area to the other, with majority of the sectors having on and off seasons.
6. **Personality:** tourists can be “gregarious or loner”, “adventurous or cautious”, “confident or timid”, etc.
7. **Lifestyle:** individuals who travel have varying lifestyles e.g. the partying people, lone travellers, group tourists, fashionistas, etc.

8. **Others** include: The past (nostalgia for certain destinations); Perceptions (on the strengths and weaknesses); Status (the way they will be perceived by other people) and Safety (Stanciu and Ticgindelean, 2011).

#### **2.3.3.2.5 Other aspects to consider in motivation**

- **Change in motivational factors over time:**

Motivational factors can change over time with respect to changes in the situations of a person's private life (Mahika, 2011). These circumstances include family (marriage, children), economy (increased or decreased income), health (appearance/disappearance of health problems, illness), experience, etc.

- **Multiple motivational factors**

Visitors are possibly influenced by a range of motivating factor during travel. Majority of travels has to do with finding a middle ground between many motivating factors (Stanciu and Ticgindelean, 2011). One motivation either becomes more prevailing or a holiday is bought that facilitates partial fulfillment of all (Swarbrooke and Horner, 2004; Stanciu and Ticgindelean, 2011).

- **Shared motivation**

People who travel as a group has influence on themselves as regards making their decision (Mahika, 2011). Such travels mostly are a matter of compromising among the group. There is a possibility that one member expresses higher dominance and his/her decision influences others. On such trips, a time of separation is created so that individuals can satisfy their private needs on their own. Belonging to a particular group or social class also influences the behaviour of tourists (Mahika, 2011). Those

who are part of a higher social class choose holidays in exotic destinations, use luxury means of transport like private jets, yachts, limousines, and choose luxury services. Middle-class tourists turn to less austentacious offers, choose forms of accommodation such as camping, hostels, hotels from one star to three stars, choose holiday packages with advantageous price, and even discounts.

- **Tourists false declaration of motivation**

In tourist motivations research, a problem was always the discrepancy that exists between the declared reasons by tourists and their real reasons for travelling (Swarbrooke and Horner, 2004). The authors noted that the reasons may be that they want to put claim to a class or individuality that is not their usual self. Also, sometimes people are oblivious of the travel reasons, as they have not critically examined it (Mahika, 2011)

### **2.3.3.3 Place Attachment**

Place attachment was first domicile in geography and was later studied in environmental psychology (Low and Altman, 1992) and architecture (Kaltenborn, 1997). A place can be physical or ethereal. Halpenny (2010) noted that the connotation and worth is defined by societies and individuals, and reflected in a person, people, as well as traditions as time passes. Place attachment is also called “sense of place” according to Warzecha and Lime (2001). Initially, Hwang *et al.* (2005) noted that it was used to express a person’s emotional parody to the environment.

Place attachment is a multifaceted idea of a person’s psychological procedure about an area (Scannell and Gifford, 2010), and an individual’s constructive emotional ties



to a specific area. It is the affective link of a person to a place (Gross and Brown, 2008), thus bringing about “the sense of actually being and feeling ‘in place’ or ‘at home’ (Yuksel *et al.*, 2010) and bring about a feel of conviction and safety (Tsai, 2012). Researches on place have drawn the interest of various scholars, especially from environmental management; which came fairly from the environmental challenges intimidating the survival of areas well thought-out to be vital to individuals and the society at large (Sanders *et al.*, 2003).

#### **2.3.7.3.1 Attachment theory**

Place attachment is the psychological connection involving individuals in relation to their environment (Mazumdar, 2005). It is said to take its origin from attachment theory (Bowlby, 1980). Bowlby (1991) noted that the connection develops from the naturalistic reality of a child-mother link which is instinctively entrenched, thus aiding the child’s continued existence. This linkage creates the first psychological image of the child as well as others (Mennen and O’Keefe, 2005). Behaviours in interactions with people and outlook throughout the child’s entire life is stimulated through this (Bowlby, 1982).

#### **2.3.7.3.2 Place attachment and Tourism**

Place attachment over time has been adapted in recreation studies, most especially in outdoor events like hiking (Kyle *et al.*, 2003) and rafting (Bricker and Kerstetter, 2000). It is a significant non-economic measure of the worth of an environmental setting since it encompasses personal values and perceptions, (Warzecha and Lime, 2001). The scope of attachment theory over the last three decades has increased to accommodate adults social interactions (Hazan and Shaver, 1994) other social settings (Wiles *et al.*, 2009) and places (Morgan, 2010) and in this case tourism destinations.

The connection between individuals and places is most times referred to as place attachment by environmental psychologists (Guiliani and Feldman, 1993). It is a multifaceted paradigm which includes numerous aspects of affect, feeling, knowledge, opinions and actions in relation to a place by people (Chow and Healy, 2008) stemming from cultural, social and psychological procedures (Altman and Low, 1992).

Three branches were identified in the context of place attachment in the subjective tourist experience research: the first branch views place attachment as an independent variable or as an antecedent of tourists' behaviours and attitudes. It focuses on prediction of visit outcomes based on tourists' place attachment levels (Ramkinssoon *et al.*, 2012) and on prediction of pro-environment behaviours (Ramkinssoon *et al.*, 2012). The second refers to place attachment as a mediator between antecedents and outcomes and analyzes the intervening impact of the place attachment concept, connecting tourists' attitudes in addition to visit outcomes (Prayag and Ryan, 2012). The third branch perceives the place attachment as an outcome by itself and tries to predict place attachment levels by using attitudes as predictors (Gross and Brown, 2008).

### **2.3.3.3 Sub-constructs of Place Attachment**

#### **1. Place Dependence**

Place dependence is visitors' practical affection to a particular area and the understanding of its distinctiveness, bringing about satisfaction (Williams *et al.*, 1992). It is the connection that persons develop with a place physical attributes. Scannell and Gifford 2010) stressed that the higher the person's intensity of place dependence, the lower the chance of wanting to substitute the place, thus indicating

higher loyalty. This indicates that individuals assess places with regards to other choices (Yuksel *et al.*, 2010). Place dependence spring out from individual connection to an area (Raymond *et al.*, 2010).

A wide series of scenery whether natural or man-made destinations like trails, beaches, parks, forests, lakes, mountains, etc (Manzo, 2005) are found to be important by visitors. In natural environments and natural resource areas, place dependence has specific meanings thus providing a model arrangement for enhancing place dependence by people (Vaske and Korbin, 2001). Also, individual's attention on nature is motivated by a yearning of satisfying certain needs as shown in various studies (Kaplan and Kaplan, 1989) and enjoy certain preferred results (Kyle *et al.*, 2004).

## **2. Place Identity**

Once a person goes to natural places, according to Gu and Ryan (2008), the place structural and shared characteristics may bring about high level of identity with the place. This may include the particular peculiar activities and detailed memoirs of the place (Devine-Wright and Clayton, 2010). The sound association between a place and one's personal individuality is referred to as place identity (Prohansky, 1978). Places provide people the chance to show and affirm their uniqueness according to Budruk *et al.* (2009). People are likely going to have a high level of place identity when it bring about feelings of peculiarity and facilitates exclusivity from other settings (Twigger-Ross and Uzzell, 1996).

Persons who vividly have an identity with local areas display great likelihood to approve as well as involve in conservation agenda to care for the areas (Walker and Ryan, 2008). This can include intentions to volunteer (Moore and Scott, 2003),

enthusiasm in advocating for place-protective acts (Stedman, 2002), picking waste and decrease of poaching activities (Walker and Chapman, 2003), protection of local resources (Bricker and Kerstetter, 2000).

### **3. Place Affect**

Place affect is the psychological linkage that persons have with places. It was defined by Tuan (1977) as “topophilia” or “love of place” which may differ in depth from a felt enjoyment to very deep connection. Persons usually develop a psychological tie with the environment to fulfill basic needs of human like a broad feeling of welfare as argued by Relph (1976) (Brown *et al.*, 2003). The links may be very deep (Kyle *et al.*, 2004). Thus, it can give meanings to the place by developing a person’s notion (Tuan, 1977). Also, people have a need for nature as opined by Wilson (1993). This emotional link with natural settings brings about a deep sense of satisfaction for park visitors (Korpela *et al.*, 2009).

Higher experience with natural environments equals greater psychological associations and vice versa (Hinds and Sparks, 2008). Affection for a place is a vital indicator of environmental attitudes to harvesting local forests (Pooley and O’Conner, 2000). Proof exists too that affection to natural environment brings about responsible acts (Kals *et al.*, 1999).

### **4. Place Social Bonding**

People get connected to settings that promote shared connections (Scannell and Gifford, 2010) and bring about communal belonging (Hammit *et al.*, 2009). This come about when persons build up shared ties with individuals through the people–place relations (Hammit *et al.*, 2006). Hammit (2000) noted that these shared

interactions are vital in outdoor recreation environment. Fried (1963) opined the need of remaining close to a place comes from social relationships. Scannell and Gifford (2010) referred to it as a social-based place link. Low and Altman (1992) put it that, “places are repositories and contexts within which interpersonal, community, and cultural relationships occur, and it is to those social relationships, not just to place qua place to which the people are attached”. Terms that have been used in developing the concept of place social bonding include sense of community, belongingness and neighbourhood attachment. Kyle and Chick (2007), pinpointed the significance of place experiences connected with close acquaintances.

## **5. Place satisfaction**

Place satisfaction, according to Stedman (2002) is described as a multifaceted evaluation of a place felt value for meeting a person’s needs for a place substantial attributes, the accompanied social aspects and services offered. Chen and Chen (2010) opined that when visitors’ experiences bring about thoughts of fulfilment, they are satisfied and vice versa. This variable as documented by Bosque and Martin (2008) is an instrument to destination success in the face of ardent competition.

Place satisfaction may have influence on visitors’ willingness to involve in behaviours that will influence the place settings (Stedman, 2002). His study revealed that visitors were enthusiastic about engaging in place-protective actions as a result of their lower satisfaction levels. Furthermore, the author revealed that visitors who had higher levels of place attachment and lower levels of satisfaction displayed higher enthusiasm to act to oppose changes of the lake in question. Interestingly, it was noted that the perfect and impacted situation of the researched lake had no significant influence on visitors’ intentions to protect it.

#### **2.3.3.4 Tourists' Destination Image**

Image of a destination refers to the linkage between notions, views and attitudes concerning a specific place (Tasci *et al.*, 2007). Kotler and Gertner (2004) defined it as the sums of thoughts and feelings people hold about place. Prior researchers describe tourist destination image could be divided into several sub-constructs from the cognitive image perspective (Pike and Ryan, 2004). With the deepening of tourist destination image studies, it is widely understood that tourist destination image could be divided into two separate dimensions of cognitive image and affective image (Son, 2005).

The traveller's image of a destination is built not only on past experiences and marketing communications, but also on non-promotional media. These include films, novels, and television shows (Banyai, 2009). For destinations benefits, images should be distinct, attractive, straightforward and of utmost importance, convincing and realistic (Kotler and Gertner, 2004). Banyai (2009) noted that visitors destination image is a composition of the notions sold by the marketing arm of the destination and also from others area such as previous visits. a notion also supported by San Martin and del Bosque (2008). Chen and Tsai (2006) noted that destination's assessment relies on perceived worth, significance and general fulfillment. This has influence on visitors loyalty (Banyai, 2009).

#### **2.3.3.5 Destination Loyalty**

Loyalty as described by Oliver (1997) is a deep obligation to patronise or buy a much like service or product continuously, hence resulting into havng a contant trademark, in spite of situations and circumstances and defiling market factors that can influence a change. The common description of loyalty is "the intention for repeat visits by tourists and the amount by which a travel destination is likely to be recommended to

friends or family” (Neuts *et al.*, 2013). This approach relies majorly on behavioural intentions, which is directly related to the attitudinal aspect (Dekimpe *et al.*, 1997). A favourable attitude however does not automatically equal a definite behaviour (Neuts *et al.*, 2013).

### **2.3.3.6 Satisfaction**

Successful destination marketing is dependent on visitors (Kozak and Rimmington, 2000). According to Bitner and Hubbert (1994), customer satisfaction refers to the thoughts or notion of a service following use. Satisfaction as opined by Kotler (2000) is an individual’s feel of fulfillment or unfulfilment as a result of the comparison between products or services outcome and expectation. Kim *et al.* (2003) defined it as a post-purchase attitude formed through a mental comparison of the product and service quality that a customer expected to receive from an exchange.”

#### **2.3.3.6.1 Satisfaction in tourism context**

Tourist satisfaction, as defined by Thaothampitak and Weerakit (2010), are tourists after-the-act evaluation of the overall service experience. Or simply, satisfaction is what a tourist feels about a service after experiencing it. One of the crucial elements of successful destination marketing is tourist satisfaction, which influences the choice of destination and the decision to return (Yoon and Uysal, 2005). It is essential to understand the nature and preceding factors of satisfaction (Fuch and Weiemair, 2003). To assess a destination success, visitors’ satisfaction evaluation should constitute a fundamental factor and must play a vital part in preparation of destination’s viable products and services (Yoon and Uysal, 2005).

Visitor’s satisfaction is viewed as an emotional response to experiences (del Bosque and San Martin, 2008). Optimizing visitor satisfaction is often an important objective

park managers seek to achieve (Tonge and Moore, 2007). Stedman (2002) summarizes visitor satisfaction as a multifaceted evaluation of a place's felt worth, the level of satisfaction determined by perception of the physical and social characteristics of an area. In national parks, such characteristics include crowding (Moyle and Croy, 2007), presence of litter (Tonge and Moore, 2007), unique scenery and natural features (Archer and Griffin, 2005), behaviour of other visitors (Herrick and McDonald, 1992), facilities such as car parking and toilets (O'Neill *et al.*, 2010), and being able to view wildlife (Tonge and Moore, 2007). Crilley *et al.* (2012) further emphasize that satisfaction is affected by service quality and visitor expectations at a site. Visitor satisfaction is conducive to repeat visits, political and societal support (Tonge *et al.*, 2011), visitor loyalty (Chen and Tsai, 2007), and word-of-mouth endorsements (Okello and Yerian, 2009), a powerful marketing tool to aid promotion and increase levels of visitation (Sivalıoğlu and Berköz, 2012) for the site.

According to Engel *et al.* (1993), tourism satisfaction is the assessment that occurs after an activity or service has been employed to see whether or not it was up or beyond expectation. It is a consumption experience reaction with emotions (Spreng *et al.*, 1996); "a person's cognitive-affective state resulting from a consumer experience" (Bosque and Martin, 2008) or 'a short-term emotional reaction to a specific service performance' (Lovelock and Wright, 1999). Satisfaction does not only affect immediate repeat purchases but also reputation (Ryan *et al.*, 1999) and trust (Selnes, 1998). It is a "tourist's post-purchase evaluation of the overall service experience (process and outcome)" (Fournier *et al.*, 1999). The satisfaction of tourists is vital to thriving destination marketing, this is because because it influences destination choice, the use of products and services, and loyalty (Kozak and Rimmington, 2000).



Measuring satisfaction in tourism has two purposes according to Kuuder *et al.* (2013):

1. Identifying the need of tourists and organizational plan of meeting it;
2. Providing organizational platform to interact with tourists on what they want or do not want.

There is also an established association among satisfaction, service quality and intention to revisit in many studies. Characteristics such as perceived attractions, perceived quality, perceived risk and perceived value are used as measures of tourists' satisfaction (Quintal *et al.*, 2008). Attributes like tourist attractions, safety and infrastructure, comfort facilities, cultural attractions, shopping, ambience, variety and accessibility influences their satisfaction (Prayag, 2008).

#### **2.3.3.6.2 Factors influencing tourists' satisfaction**

Perceived value, expectations and destination image has huge influence on satisfaction of tourists. A person's mental representation of the knowledge, feelings, and general notion of a particular place is referred to as destination image (Sadeh *et al.*, 2012). Tourist perceived value and expectation are influenced by it (Xia *et al.*, 2009). Sadeh *et al.* (2012) noted that the image tourists have of a place before embarking on a tour forms the basis for their expectations of such place.

Satisfaction of tourists is directly related to their perceptions (Sadeh *et al.*, 2012), there is an establishment of satisfaction when they feel the worth of service is higher than monetary commitment (Song *et al.*, 2012). The comparison of post-travel experiences and pre-travel expectations bring about satisfaction (Sadeh *et al.*, 2012).

### **2.3.4 Relationship between environmental attitude, motivation and place attachment**

Motivation has been in the discourse of tourism researches with specific reference to its roles. For example, Hsu *et al.* (2010) established motivation as a mediating variable of attitudes and expectations toward visiting a destination, and also an intervening determinant of image and visit intentions (Phillips and Jang, 2007). Moreover, motivation has been widely used as a segmentation tool (Park and Yoon, 2009).

Place attachment to nature in a defined setting may bring about good outcomes in a person's general life, and as a result may generally affect a people's responsible action in their day to day living. The theoretical framework is based on the opinion that visitors' pro-environmental behavioural intentions in a particular natural area have effect on their universal environmental behaviour. This shows the way a person's participation in pro-environmental behaviours in a particular area enhances the rate in which they get involved in it in other places. This is in line with Bem's (1972) theory of self-perception in which good behaviour in one place means good behaviour in other places. A notion supported by Vaske and Kobrin (2001) and Whitmarsh and O'Neill (2010).

Halpenny (2010) assessed how pro-environmental behavioural intentions in parks may lead to the general benefit of the environment, arguing that visitors to park may transmit their attachment and value they attach to parks to the general human environment. However, Halpenny (2010) also documented the simplicity as well as price of performance of behaviours as other factors.

## **2.4 THEORETICAL AND CONCEPTUAL FRAMEWORK**

### **2.4.1 THEORETICAL FRAMEWORK**

The theoretical framework of this study is hinged on the theory of planned behavior; push and pull theory of tourist motivation; attachment theory and related models.

#### **2.4.1.1 Theory of Planned Behaviour (TPH)**

Planned behavior was postulated by Ajzen in 1988. The theory explains how different stimuli can activate behavior. This theory provides a useful framework for understanding consumer behaviour in tourism. It implies that consumer's decision making process is based on their views and beliefs, and also social and cultural determinants. Its focus is on intention as a function of behaviour. In other words, individual's behaviour is determined by his or her intention towards a particular behaviour. One of the most often used, and adapted theories; to explain tourists' behaviour is the theory of planned behaviour (Han *et al.*, 2010). Based on the theory of reasoned action, the theory of planned behaviour predicts an individual's intention to engage in certain behaviour at a certain time and place.

The New Environmental Paradigm Scale is an outcome of the theory of planned behaviour and this was adopted for this study. The NEP measures three environmental factors, humans over nature, limits to growth, and ecocrisis, which combine to form a composite measure of environmental attitudes (Dunlap *et al.*, 2000);

- Humans over nature: mankind's dominion over the natural environment,
- Limits to growth: the planet's ability to sustain a growing population,
- Ecocrisis: the potential for manmade ecological disaster

The factors influencing environmental attitudes were assessed following Leonidou *et al.* (2014) model. Three factors were identified which are deontological action, law obedience and political status. The factors are based on the premise that an individual's daily activities such as morals, obedience to laws of the land and participation in social political issues go a long way in influencing the environmental attitude of such individual.

#### **2.4.1.2 Push and Pull theory of tourist motivation**

The theory of push and pull tourist motivation by Dann in 1977 is hinged on two crucial aspects

1. The motive that drives a tourist away from home (push factors)
2. The motives that drive a tourist towards a destination (pull factors)

The push factors (intrinsic) are the socio-psychological needs of an individual such as perceived routine environment, examination and assessment of self, relaxation, prestige, regression, improvement and facilitation of social interaction. The pull factors (extrinsic) are related to destination attractiveness and image. This theory like most motivational theories is an outcome of Maslow's need theory.

The motivation model of Morrison (2013) was applied for this study. Morrison divided the aspects of the push and pull factors into eight;

1. Socio-psychological: this factor includes the personal characteristics, motives, values and attitudes of the tourist as they are linked closely with people's motives for pleasure/leisure travel.
2. Situational: The problem an individual, family or a group of people have as a result of financial constraints, lack of available time to travel.

3. Interpersonal: The influence of family members, other relatives, friends, opinion leaders and others.
4. Awareness levels: Tourists have to be aware of destinations before they can consider them for pleasure/leisure travel.
5. Destination images: these are the perceptions of people about destinations.
6. Destination products: these are factors such as attractions, events, experiences and activities that determine the acceptance of a destination by tourists.
7. Marketing and promotional communications: The messages and images transmitted by Destination Marketing Objectives (DMOs) and tourism sector stakeholders through various channels.
8. Past experience in visiting: Previous visitors to a destination have greater tendencies to revisit that particular destination than those who have not yet visited.

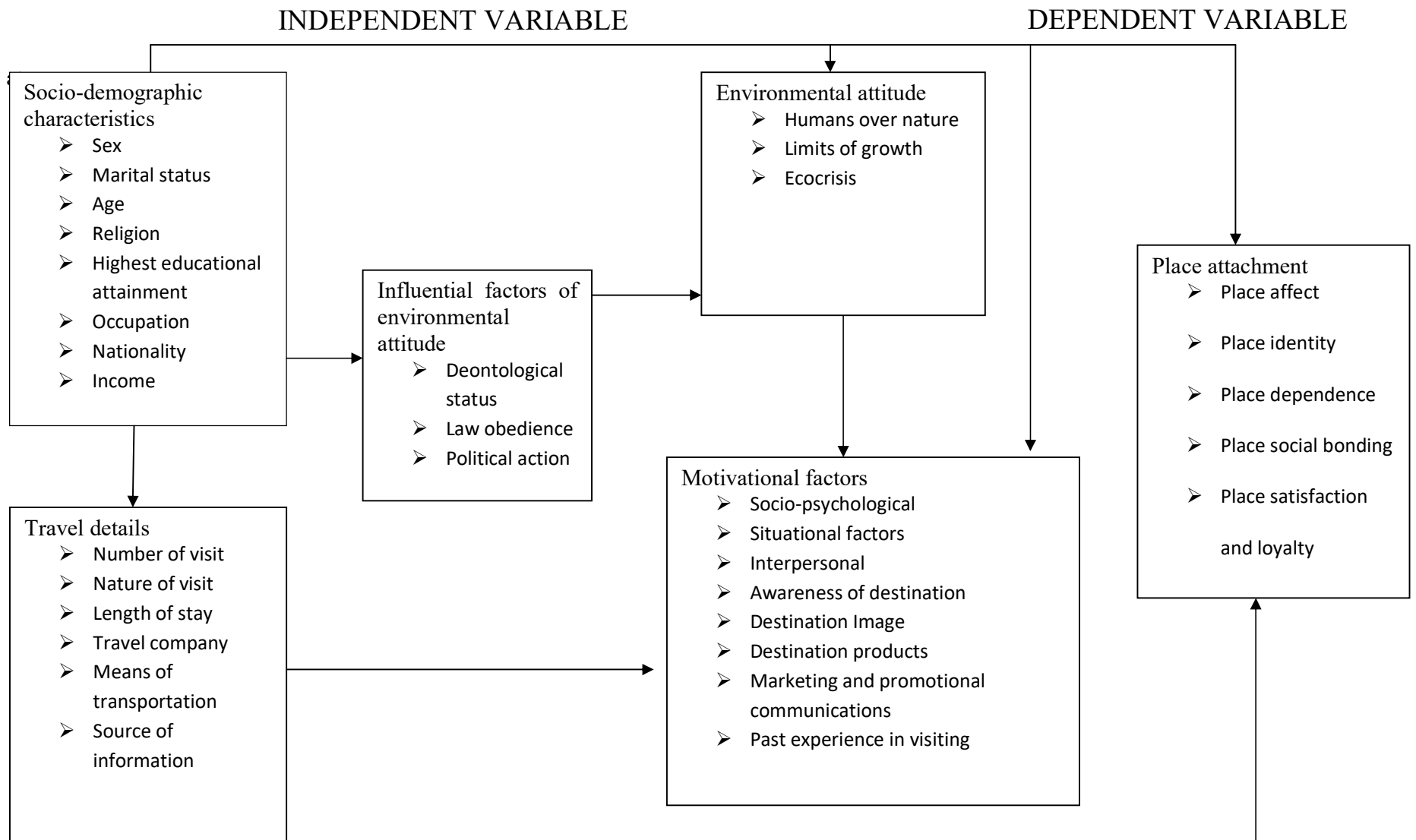
These eight factors reflected under three captions namely zoo image, push motivational factors and push motivational factors as classified by the researcher.

#### **2.4.1.3 Attachment theory**

Bowlby in 1949 developed the attachment theory. This is based on the precept that people possess a tendency to love and trust (or distrust) others based on early-life experience which can be related to caregivers e.g. the love a child has for the parents. In a place context, it describes the feeling of being at home (sense of belonging) in a particular place setting. Scannell and Gillford (2011) model of place attachment will be adopted for this study. It adopts the features of planned behaviour and attachment theory in the five components of place attachment namely place affect, place identity, place dependence, place social bonding and place satisfaction and loyalty.

#### **2.4.2 CONCEPTUAL FRAMEWORK**

The conceptual framework for this study is on the premise that the environmental attitudes of visitors influence their decision to visit a nature based tourism destination (in this case, a zoo) which as a result establishes an attachment to the zoo. This is represented on Fig 2.3 presenting two main components: the independent variables which are the predictor variables; and the dependent variable (predicted variable).



**Fig 2.3: Conceptual Framework for the study**

## CHAPTER THREE

### MATERIALS AND METHODS

#### 3.1 Study Area

The south west region of Nigeria is one of the six geopolitical zones of Nigeria; comprised of six states namely Ekiti State, Ondo State, Osun State, Oyo State, Ogun State and Lagos State. The area lies within 2°31'1" and 6°00'1" east and Latitude 6°21'1" and 8°37'1" North (Agoola, 1979) with a total land area of 77,818km<sup>2</sup> and a projected population of 28,767,752 in 2002 (NPC, 1991). The study area is bounded in the east by Edo and Kwara States, in the north by Kwara and Kogi States, in the west by the Republic of Benin and in the South by the Gulf of Guinea. The region is predominated by people of Yoruba culture and they live in both rural and urban areas. The important towns in the region include Ibadan, Ile-Ife, Ikeja, Abeokuta, Ado – Ekiti, Akure, etc. The economic activities in the zone are farming, mining, livestock rearing, local craft industries and industrial activities (Ogunmakinde *et al.*, 2015).

The climate of south-western Nigeria is tropical in nature and it is characterised by two major seasons – wet and dry seasons. The temperature ranges between 21°C and 34°C while the annual rainfall ranges from 150mm to 3000mm. The wet season is associated with the Southwest



Monsoon wind from the Atlantic Ocean while the dry season is associated with the Northeast trade wind which blows from the Sahara desert.

The vegetation of Southwest Nigeria is made up of fresh water swamp and mangrove forest at the belt. The lowland in the forest stretches inland to Ogun and part of Ondo State while secondary forest is towards the northern boundary where the derived southern savannah exists. (Agboola, 1979)

This study was carried out in federal institutional-based zoological gardens in South West, Nigeria namely University of Ibadan Zoological Garden (Oyo State); Federal University of Abeokuta (FUNAAB) Zoological Park (Ogun State); Obafemi Awolowo Biological Garden (Osun State) and Federal University of Technology Wildlife Park (Ondo State). For the purpose of this study, they will be referred to as UI Zoo, FUNAAB Zoo, OAU Garden and FUTA Park respectively. These sites were purposively selected by virtue of their relevance to the study scope and for efficient execution of the research.

### **3.1.1 University of Ibadan Zoological Garden**

'UI Zoo' as it is popularly called was founded in 1948 alongside the Department of Zoology in a form of menagerie mainly for education and research purpose. It became a fully fledged zoo in 1974. It is located at the Zoology Department (2km to the institution's main gate) and occupies a land mass of 10acres on latitude 7°26'N and longitude 3°53' E (Ajibade *et al.*, 2010). The zoo has evolved from its primary reason of establishment to accommodate conservation, education and research and recreational purposes.

### **3.1.2 Federal University of Abeokuta (FUNAAB) Zoological Park**

FUNAAB Zoo is located in a conserved forest about 200 metres away from the main gate of the institution. It was established in 2008 and occupies 62 hectares of land. The zoo was established

for education/research and recreational purposes. The zoo serves as a resource for research for students who offer courses in Forestry, Wildlife, Zoology, Veterinary and Botanical fields. It also serve the general public as leisure garden to appreciate nature and see different animals in their natural habitat.

### **3.1.3 Obafemi Awolowo University Biological Garden**

The garden was established in 1968 and it is located on latitude 7.4667°N and longitude 4.5667°E (Ajibade *et al.*, 2010). The Garden is situated at the Zoology Department, Faculty of Science. It is primarily a facility for biological studies and at the same time for recreation (Omonona and Ayodele, 2011).

### **3.1.4 T. A. Afolayan Wildlife Park**

T. A. Afolayan Wildlife Park is situated in Federal University of Technology Akure, Wildlife Park along Akure – Ilesha road in the North-Western part of the institution between longitude 05° 18' E and latitude 07° 17' N and covers a land area of 8.91ha (Olusola and Oyeleke, 2015). The park was established in 2008. It is a lowland rainforest and the general topography of the area is gently undulating and the area is well drained with most of the run off draining into the stream which passes through the area. Some rock outcrops are also found in the area.

The map of the study zoos in the different states within south-west Nigeria is presented on Figure 3.1.

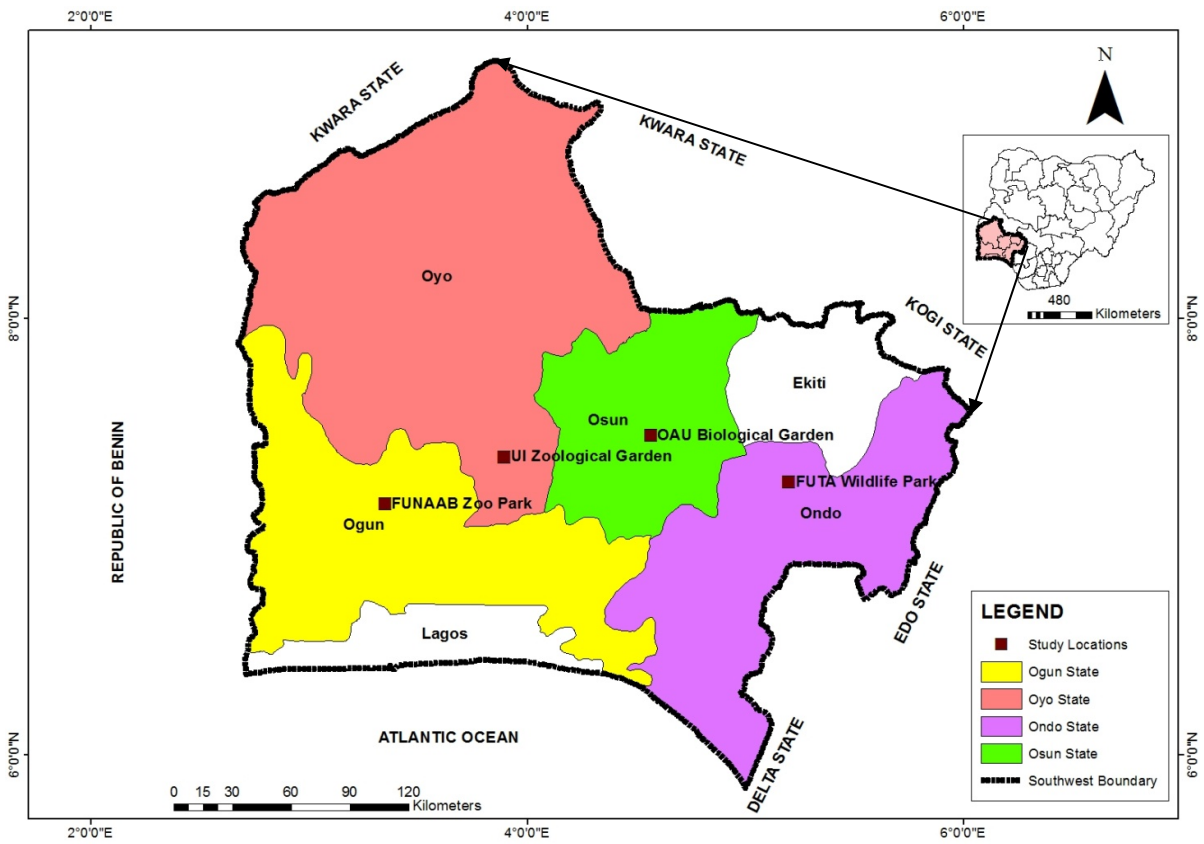


Figure 3.1: The study zoos locations in southwest Nigeria

## **3.2 Research design and methods**

### **3.2.1 Reconnaissance Survey**

The study started with a preliminary survey of the area for familiarisation with the environs, and management of the study sites

### **3.2.2 Nature of Research**

Surveys are commonly used for collecting data within the field of tourism. For the purpose of this research, a descriptive survey was conducted. According to Altinay and Paraskevas (2008), descriptive surveys are concerned with particular characteristics of a specific population and are predominantly used to gather information about what people do or think.

### **3.2.3 Research methods**

The study adopted both quantitative and qualitative methods. Bryman (2006) noted that the combination of qualitative and quantitative methods have been notable in recent years since it adds to adequate testing among data collected from both sources.

### **3.2.4 Target respondents**

The target respondents for this research were visitors and staff of the study zoos.

### **3.2.5 Data collection**

The two major sources of data were primary and secondary data sources.

**Primary data:** The primary data was collected through the use of semi-structured questionnaire, in-depth interviews, direct observations and enclosure size measurement.

- *Questionnaire*: Cohen (1989) defines a questionnaire as a self-report instrument used for gathering information about variables of interest to an investigation. It can be open ended or close ended. For this study, close-ended questions were designed in order to call for responses, which narrow down the field of enquiry, since the respondents chooses among fixed responses. They help researchers to analyse easier the data since the responses can be directly compared and easily aggravated (Patton, 1990). Also, open ended questions were designed to get various responses on peculiar issues. The use of questionnaires is believed to get the most reliable responses (Hurst, 1994). This was administered to the visitors.
- *Key Informant Interview*: This was mostly used for the collection of data from the site employees and selected tourists. This helped in highlighting important issues of interest such as general management practices for each of the species. When doing an in-depth qualitative interview (involving the use of open ended questions), the researcher can gather valuable data from people knowledgeable in the topic studied (Patton, 2002).
- *Direct observation*: This was done by the researcher to collate data on the wildlife species in the zoos; identify destination attributes and visitors characteristics. Photographs of destination attributes were also taken.
- *Measurement*: The enclosures of all the animals in the zoos were measured using a meter tape and recorded. This was compared with the minimum enclosure requirements for animals in captivity as recommended by the Central Zoo Authority (2011).

**Secondary Data:** The secondary data contributed towards the formation of background information. Secondary data sources provide data that have been collected, analyzed and discussed by other researchers in the field. Hence, secondary data helps to contextualize current research in the field.

### **3.2.6 Sample size**

A total of one thousand, five hundred and twenty nine copies of questionnaire were administered in the zoos: 395, 379, 383 and 372 in UI Zoo, OAU Biological Garden, FUNAAB Zoo Park and FUTA Wildlife Park respectively (Table 3.1). This sample size was determined using the Yamane (1967) formula of sample size determination for a known population.

$$n = \frac{N}{1+Ne^2}$$

where n = Sample size

N = Target population

e = Percentage of error 5% or 0.05 (95% Confidence Interval)

1= Constant value

### **3.2.7 Sampling technique**

A combination of purposive (visitors of 18 years of age and above) and systematic random sampling techniques was used in administering questionnaires to the visitors.

### **3.2.8 Questionnaire design**

The questionnaire reflected the objectives of the research. The questionnaire design was adapted from previous researches similar to this study plus observation and discussion with zoo personnel during the reconnaissance survey. The questionnaire was sub-divided into five sections

**Table 3.1: Sample Size Determination**

<b>Zoo</b>	<b>Minimum daily visitor number</b>	<b>Maximum daily visitor number</b>	<b>Average daily visitor number</b>	<b>Average monthly visitor number</b>	<b>Average yearly visitor number</b>	<b>Sample size (Yamane Formula)</b>
<b>UI Zoo</b>	8	150	79	2370	28440	<b>395</b>
<b>FUNAAB Zoo Park</b>	1	40	20.5	615	7380	<b>379</b>
<b>OAU Garden</b>	1	50	25.5	765	9180	<b>383</b>
<b>FUTA Park</b>	0	30	15	450	5400	<b>372</b>
<b>Total</b>						<b>1529</b>

1. **Section one:** this consist of the demographic information and behavioural characteristics - sex, gender, marital status, education, age, nationality, purpose of visit, length of stay, travel companion, income, number of miles travelled to the area, and the number of times each year they visit the area and their length of stay. It also sought information on preferred marketing strategies for the sites.
2. **Section two:** this section elicited information on environmental attitudes and the underlying factors influencing it. Environmental attitudes were measured using the New Environmental Paradigm scale (Dunlap *et al.*, 2000). The underlying factors influencing environmental attitudes – deontological status, law obedience and political action- were assessed using the model suggested by Leonidou *et al.* (2014).
3. **Section three:** this sought information on motivational factors. The NBT motivation scale will consist of the items proposed by Kim and Lee (2002), Luo and Deng (2008), and Muhamad and Som (2010).
4. **Section four:** this consisted of questions on place attachment. The subconstructs of place attachment were assessed following Scannell & Gifford (2010a). It contained questions on the preferred wild animal species by visitors.
5. **Section five:** this section was made up of questions on satisfaction and loyalty. This was adapted from Oliver (1997), Huh (2002) and Jodice *et al.* (2006).

Sections two to five were scored on a 5-point Likert scale as used in related studies such as Thaothampitak and Weerakit (2014); Alarape *et al.* (2015) and Philemon (2015). Scores of 1.0-1.7, 1.8-3.4 and 3.5-5.0 signified agreement, indifference and disagreement respectively.



### **3.2.9 Pre-Test**

A pre-test was carried out in UI Zoo in which copies of the questionnaire were administered to 30 visitors. This was a preliminary test done to determine the reliability of the questionnaire in eliciting the desired information. It was also done to identify any problem such as unclear words that may be encountered during the actual survey. Observations made were noted and corrected.

### **3.2.10 Questionnaire Validity and Reliability**

The content validity was done by getting experts in the fields of nature based tourism, psychology, environment management, extension and statistics to scrutinize the instrument. Also, a questionnaire pre-test was carried out. The content validity was also strengthened through extensive literature searches. This is as suggested by Shields (2001).

In order to determine the reliability of the various scales employed in measuring the behavioural constructs assessed by this study, the Cronbach's alpha was determined for each construct (Environmental attitude, Zoo image, Motivation and Place Attachment) in individual zoos as well as for the combined analysis. This coefficient measures the internal consistency and reliability among a group of items combined to form a single scale, reflecting how well the items are measuring the same concept. The various Cronbach's alpha (included on the result tables) showed internal consistency for all the scales.

## **3.3 Statistical analysis**

Two statistical tools were used in the analysis of quantitative data from the field survey: Statistical Package for Social Sciences (SPSS) version 20 and R (Programming language) version 3.5.0. The data were subjected to:

1. Descriptive statistics (frequencies, percentage, charts, line graphs and tables)
2. Inferential statistics which include One Way Analysis of Variance (ANOVA), Pearson Chi-square; and Structural Equation Modelling. Statistical significance was at  $\alpha_{0.05}$ .

Thematic analysis was used in analysing the qualitative data. Thematic analysis generally involved pinpointing, examining and recording patterns within the data. This is applied mostly to interview questions and open ended questions in questionnaire. The five phases of thematic analysis are familiarisation with data, generation of initial codes, creation of initial themes, review of the initial themes, and naming and defining the themes (Braun and Clarke, 2013). A descriptive analysis such as frequency and percentage analysis can then be applied to the generated themes.

### **3.4. Variables**

#### **3.4.1 Independent variables**

1. **Socio – economic characteristics:** sex, marital status, age, religion, highest level of education, occupation, nationality and monthly income.
2. **Travel details of respondents:** number of visit to zoo, nature of visit, length of stay, media through which the zoo was known, travel company, and means of transportation.
3. **Influential factors of environmental attitude (antecedents):** deontological status, law obedience and political action.
4. **Environmental attitude:** human over nature; limits to growth and ecocrisis
5. **Motivation:** push and pull factors

#### **3.4.2 Dependent variable**

**Place attachment:** place identity, place affect, place dependence, place social bonding, place satisfaction and loyalty.

**Table 3.2: Analysis of Hypotheses**

<b>S/N</b>	<b>Hypothesis (H<sub>0</sub>)</b>	<b>Inferential Test</b>
1.	There is no significant relationship between visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses.	SEM
2.	There is no significant difference in visitors' environmental attitude across the study zoos	ANOVA
3.	Visitors motivation is not significantly influenced by socio-economic characteristics	Chi Square
4.	There is no significant difference in visitors' motivation across the study zoos	ANOVA
5.	There is no significant difference in visitors' place attachment across the study zoos	ANOVA
6.	Visitors motivation is not significantly influenced by their environmental attitudes	SEM
7.	No significant relationship exists between visitors motivation and place attachment	SEM
8.	No significant relationship exist between visitors environmental attitude and place attachment	SEM
9.	There is no significant difference in overall visitors' satisfaction across the study zoos	ANOVA
10.	Visitors overall satisfaction is not significantly influenced by their socio-economic characteristics	Chi Square

## CHAPTER FOUR

### RESULTS

#### 4.1 Checklist of animals in the study zoos

This is presented on Table 4.1. A total of seventy one species of animals (329 individuals) belonging to 40 families, 21 orders, and 3 classes (Aves, Reptiles and Mammals), were presented and displayed in the four zoological gardens. UI Zoo had a total of sixty four species, while it was twenty seven, thirteen and thirteen for FUNAAB Zoo Park, FUTA and Wildlife Park OAU Bio Garden respectively (Table 4.1). Across the zoos, *Balaerica pavonia* (Crowned crane), *Sthruo camelus* (ostrich), *Cercopithecus mona* (Mona monkey), *Papio anubis* (olive baboon), and *Chentochelys sulcata* (African spurred tortoise) were represented. Three out of the four zoological gardens had *Psittacus erithacus* (African grey parrot), *Anas platyrhynchos* (Mallard duck), *Chen caerulescens* (White geese), *Cercocebus torquatus* (collared mangabey), *Osteolaemus tetraspis* (dwarf crocodile), *Crocodylus niloticus* (Nile crocodile) and *Python sebae* (African rock python). The most represented class of animals was Mammalia with thirty-two species, followed by Aves (twenty four species), Reptilia (thirteen) and Gastropoda (1). Only one (*Panthera leo*) of the big five is represented in two of the zoos (UI and OAU Gardens).

Majority (67%) of the animals belonged to the Least Concern conservation status of IUCN, followed by 23% that were threatened (Endangered (6%), Critically Endangered (4%) and Vulnerable (13%)). 2% are Near Threatened, 7% domesticated and 1% not evaluated (Fig 4.1).

**Table 4.1: Checklist of animals in federal institutional – based zoos in South-West Nigeria**

S/N	SCIENTIFIC NAME	FAMILY	ORDER	COMMON NAME	IUCN STATUS	UI ZOO	FUNAAB ZOO	OAU GARDEN	FUTA PARK
<b>AVES</b>									
1.	<i>Psittacus erithacus</i>	Psittacidae	Psittaciformes	African grey parrot	EN	+	+	-	+
2.	<i>Psittacula krameri</i>	Psittacidae	Psittaciformes	Rose ringed parakeet	LC	-	+	-	-
3.	<i>Anas platyrhynchos</i>	Anatidae	Anseriformes	Mallard duck	LC	+	+	+	-
4.	<i>Cairina moschata</i>	Anatidae	Anseriformes	Muscovy duck	LC	-	-	-	+
5.	<i>Pelicanus occidentalis</i>	Pelecanidae	Pelecaniformes	Brown pelican	LC	+	-	-	-
6.	<i>Leptoptilus crumenifer</i>	Ciconidae	Ciconiformes	Marabou stork	LC	+	-	-	-
7.	<i>Chen caerulescens</i>	Anserinae	Anseriformes	White geese	LC	+	+	-	+
8.	<i>Tyto alba</i>	Strigimorphae	Strigiformes	Barn owl	LC	+	-	-	-
9.	<i>Milvus aegypticus</i>	Accipitridae	Accipitriformes	Yellow billed kite	LC	+	+	-	-
10.	<i>Gypohierax angolensis</i>	Accipitridae	Accipitriformes	Palmnut vulture	LC	+	-	-	-
11.	<i>Plectropterus gambesis</i>	Anatidae	Anseriformes	Spur winged goose	LC	+	-	-	-
12.	<i>Necrosyrtes monachus</i>	Accipitridae	Accipitriformes	Hooded vulture	CE	+	-	-	-
13.	<i>Falco tinnuculus</i>	Falconidae	Falconiformes	Common kestrel	LC	+	-	-	-

14.	<i>Poicephalus senegalus</i>	Psittacidae	Psittaciformes	Senegal parrot	LC	+	-	-	-
15.	<i>Melopsittacus undulatus</i>	Psittaculidae	Psittaciformes	Budgerigar parrot	LC	+	-	-	-
16.	<i>Columba guinea</i>	Columbidae	Columbiformes	Speckled pigeon	LC	+	-	+	-
17.	<i>Balaerica pavonia</i>	Gruidae	Gruiformes	Black crowned crane	VU	+	+	+	+
18.	<i>Pavo cristatus</i>	Phasianidae	Galliformes	Pea fowl	LC	+	-	-	+
19.	<i>Ciconia ciconia</i>	Ciconidae	Ciconiformes	White stork	LC	+	-	-	-
20.	<i>Numida meleagris</i>	Numididae	Galliformes	Guinea fowl	LC	+	-	+	-
21.	<i>Plectropterus gambensis</i>	Anatidae	Anseriformes	Spur winged goose	LC	+	-	-	-
22.	<i>Dendrocygna viduata</i>	Anatidae	Anseriformes	White faced whistling duck	LC	+	-	-	-
23.	<i>Dromaius novaehollandiae</i>	Dromaiidae	Sthruioniformes	Emu	LC	+	-	-	-
24.	<i>Struthio camelus</i>	Struthionidae	Struthioniformes	Ostrich	LC	+	+	+	+
<b>REPTILES</b>									
25.	<i>Osteolaemus tetraspis</i>	Crocodylia	Crocodylidae	Dwarf crocodile	VU	+	+	+	-
26.	<i>Crocodylus niloticus</i>	Crocodylia	Crocodylidae	Nile crocodile	LC	+	+	-	+
27.	<i>Python sebae</i>	Pythonidae	Squamata	African rock python	VU	+	+	+	-
28.	<i>Python regius</i>	Pythonidae	Squamata	Royal python	LC	+	+	-	-

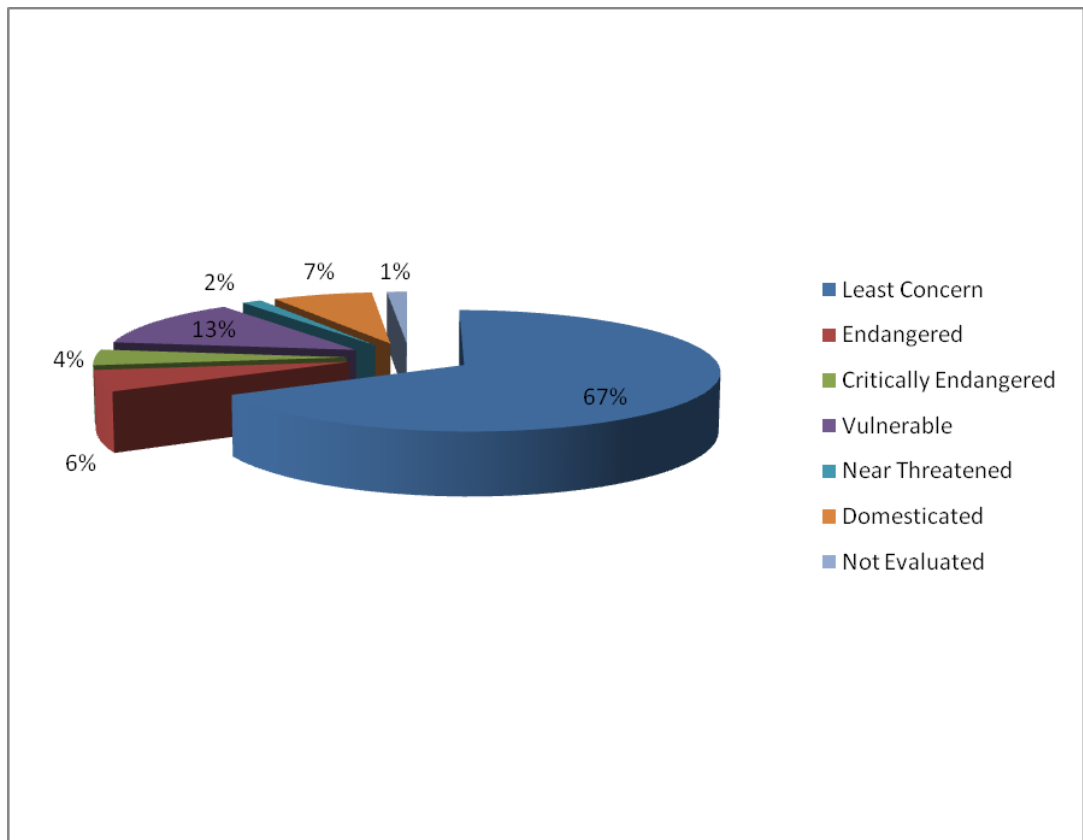
29.	<i>Bitis gabonica</i>	Viperidae	Squamata	Gaboon viper	LC	+	+	-	-
30.	<i>Bitis arietans</i>	Viperidae	Squamata	Puff adder	NE	-	+	-	-
31.	<i>Causus rhombeatus</i>	Viperidae	Squamata	Common night adder	VU	+	-	-	-
32.	<i>Veranus niloticus</i>	Veranidae	Squamata	Monitor lizard	LC	+	+	-	-
33.	<i>Trionyx triunguis</i>	Trionychidae	Testudines	African soft shell turtle	EN	+	-	+	-
34.	<i>Pelusios castaneus</i>	Pelomedusidae	Testudines	West African mud turtle	LC	+	+	-	-
35.	<i>Chentrochelys sulcata</i>	Testudinidae	Testudines	African spurred tortoise	VU	+	+	+	+
36.	<i>Naja nigricollis</i>	Elapidae	Squamata	Black neck spitting cobra	LC	+	-	-	-
37.	<i>Naja naja</i>	Elapidae	Squamata	Black cobra	LC	+	-	-	-
<b>MAMMALS (PRIMATES)</b>									
38.	<i>Chlorocebus sabaeus</i>	Cercopithecidae	Primates	Green monkey	LC	+	-	-	+
39.	<i>Cercopithecis mona</i>	Cercopithecidae	Primates	Mona monkey	LC	+	+	+	+
40.	<i>Erythrocebus patas</i>	Cercopithecidae	Primates	Patas monkey	LC	+	+	-	-
41.	<i>Chlorocebus pygerythrus</i>	Cercopithecidae	Primates	Vervet monkey	LC	-	+	-	-
42.	<i>Cercopithecus erythrogaster</i>	Cercopithecidae	Primates	White throated guenon	VU	+	-	-	-
43.	<i>Cercocebus torquatus</i>	Cercopithecidae	Primates	Collared or red capped mangabey	VU	+	+	-	+



44.	<i>Mandrillus leucophaeus</i>	Cercopithecidae	Primates	Drill monkey	EN	+	-	-	-
45.	<i>Papio anubis</i>	Cercopithecidae	Primates	Baboon	LC	+	+	+	+
46.	<i>Erythrocebus patas</i>	Cercopithecidae	Primates	Patas monkey	LC	+	-	-	-
47.	<i>Pan troglodytes</i>	Hominidae	Primates	Chimpanzee	EN	+	-	-	-
<b>MAMMALS (UNGULATES)</b>									
48.	<i>Equus africanus</i>	Equidae	Perissodactyla	African wild donkey	CE	+	-	-	-
49.	<i>Equus asinus</i>	Equidae	Perissodactyla	Domesticated donkey	D	-	+	-	-
50.	<i>Equus ferus caballus</i>	Equidae	Perissodactyla	Wild horse	CE	+	-	-	-
51.	<i>Equus caballus</i>	Equidae	Perissodactyla	Horse	D	+	-	-	-
52.	<i>Philantomba maxwelli</i>	Bovidae	Artiodactyla	Maxwell's duiker	LC	+	+	-	-
53.	<i>Sylvicapra grimmia</i>	Cephalophinae	Artiodactyla	Common duiker	LC	+	-	-	-
54.	<i>Cephalophus rufilatus</i>	Bovidae	Artiodactyla	Red flanked duiker	LC		-	-	+
55.	<i>Camelus dromedaries</i>	Camelidae	Artiodactyla	Dromedary camel	D	+	-	-	-
56.	<i>Gazellae dorcas</i>	Bovidae	Artiodactyla	Dorcas gazelle	VU	+	-	-	-
57.	<i>Taurotragus derbianus</i>	Bovidae	Artiodactyla	Giant eland	LC	+	-	-	-
58.	<i>Giraffa camelopardalis</i>	Giraffidae	Artiodactyla	Giraffe	VU	+	-	-	-

59.	<i>Sus scrofa</i>	Suidae	Artiodactyla	Domestic pig	D	+	-	-	-
60.	<i>Phacochoerus africanus</i>	Suidae	Artiodactyla	Warthog	LC	+	-	-	-
61.	<i>Potamochoerus porcus</i>	Suidae	Artiodactyla	Red river hog	LC	+	-	-	-
<b>MAMMALS (RODENTS)</b>									
62.	<i>Hystrix cristata</i>	Hystricidae	Rodentia	Crested porcupine	LC	+	+	-	-
63.	<i>Cavia porcellus</i>	Caviidae	Rodentia	Guinea pig	D	+	-	-	-
64.	<i>Cricetomys gambianus</i>	Nasomyliidae	Rodentia	Giant rat	LC	+	+	-	-
<b>MAMMALS (CARNIVORES)</b>									
65.	<i>Mellivora capensis</i>	Mustelidae	Carnivora	Honey badger	LC	+	-	-	-
66.	<i>Hyaena hyaena</i>	Hyaenidae	Carnivora	Stripped hyena	NT	+	-	-	-
67.	<i>Civettictis civetta</i>	Viverinidae	Carnivora	African civet cat	LC	+	+	-	-
68.	<i>Panthera leo</i>	Felidae	Carnivora	Lion	LC	+	-	+	-
69.	<i>Canis aureus</i>	Carnidae	Carnivora	Common jackal	LC	+	+	-	-
70.	<i>Crocuta crocuta</i>	Hyaenidae	Carnivora	Spotted hyena	LC	+	-	+	-
<b>GASTROPOD</b>									
71.	<i>Archachatina marginata</i>	Archatinidae	Gastropoda	Giant west African snail	LC	+	-	-	-
<b>Total</b>						<b>64</b>	<b>26</b>	<b>13</b>	<b>13</b>

Note: LC= Least Concern, EN = Endangered, CE = Critically Endangered, V = Vulnerable, NT = Near Threatened, D= Domesticated, NE = Not Evaluated, + = present, - = absent



**Fig 4.1: Percentage distribution of IUCN statuses of animals in federal institutional based zoos in South-West Nigeria**

#### **4.1.1 Animal diversity, Number, Sex, Enclosure size, Cage enrichment, Food and Feeding regime of animals in UI Zoo**

This is outlined on Table 4.2.

Diversity, Number and Sex: There were sixty four species of animals in UI Zoo. They were largely classified into six sections namely aviary (small birds (14 species), large birds (7 species)), herpetarium (13 species), primates (8 species), herbivores section (12 species), carnivore (6 species) and children section (5 species). Most species of animals had at least one member of its group. Twenty one species however had no mate especially birds and snakes. Plate 4.1 shows a female giraffe without a mate. In total, there were 198 individuals in the zoo. The sex of the herps and birds were largely undefined in the zoo. On Plate 4.2, two crocodiles are shown in the same enclosure, however their sexes were undetermined. Juvenile record was also very low.

Enclosure size and Cage Enrichment: Animals enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds (with the exception of the larger birds such as the ostrich) and herpes, and larger for the herbivores and carnivores. Cage enrichment varies for all the animals; for example there were inner rooms for all the almost all the animals; hanging bars and tyres for the primates, hollow boxes and branches for the birds, etc.

Food: Birds were largely fed with grains (dried maize, sorghum, guinea corn) with the exception of the carnivorous birds that were fed with flesh. This is supplemented with boiled beans and yam. The parrots were fed with groundnut and pepper. Some birds such as the ostrich and emu were also given compounded feed. Primates were fed with fruits (banana, water melon, banana, cucumber, pineapple, cabbage and orange) and supplemented with cooked beans, cooked yam with oil. The carnivores

were fed with raw meat (cow, goat, pig). It was supplemented with dog feed for the civets. The herbivores were fed with grasses. This was supplemented for some (e.g. Donkey) with compounded feed and raw yam. The herpes especially the snakes were fed with live chicks and white rats. The soft shell and hard shell turtles and young crocodiles were fed with the intestine of slaughtered animals and or soft meat.

Feeding regime: Birds were generally fed once daily. The carnivorous ones were fed once in 2 or 3 days. Primates were fed twice daily (fruits in the morning and cooked beans/yam in the afternoon). The herpes were fed once in 2 or 3 weeks. The turtles were fed twice/thrice weekly. The snails and tortoise were fed on a daily basis. The herbivores were fed once/twice daily. The carnivores were fed thrice weekly. Animals in the children zoo were fed once daily.

**Table 4.2: Number, Enclosure Size, Cage Enrichment, Food and Feeding regime of Animals in UI Zoo**

S/N	SCIENTIFIC NAME	NUMBER				ENCLOSURE SIZE (CENTIMETRES)			CAGE ENRICHMENT	FOOD	FEEDING REGIME
		Un	Ad M	AD F	Juv	L	B	H,D			
<b>Aviary (small birds)</b>											
1.	<i>Psittacus erithacus</i>	1	–	–	–	450	346	277	Hollow box, tree branch	Grains (maize, guinea corn)	Once in 3 days
2.	<i>Anas platyrhynchos</i>	5	–	–	–	450	338	277	Water bath	Boiled yam with palm oil, cooked beans, grains	Once daily
3.	<i>Pelacanus occidentalis</i>	2	–	–	–	450	590	277	Water bath, earthen pot, small house	Insects, fish intestines of goat, meat or cow	Once in 2 days
4.	<i>Leptoptilus crumenifer</i>	2	–	–	–	450	590	277	Water bath, earthen pot, small house	Insects, fish intestines of goat, meat or cow	Once in 3 days
5.	<i>Chen caerulescens</i>	6	–	–	–	450	610	277	Water bath	Boiled yam with palm oil, cooked beans, grains	Once daily
						306	471	277	Small house		
6.	<i>Tyto alba</i>	1	–	–	–	306	185	277	Enclosure covered with tapeline, tree twig	Insects, fish intestines of goat, meat or cow, soft meat	Once in 2 days
7.	<i>Milvus aegypticus</i>	3	–	–	–	306	170	277	Tree branch, iron bars	Insects, fish intestines of goat, meat or cow, soft meat	Once in 2 days
8.	<i>Gypohierax angolensis</i>	1	–	–	–	306	170	277	Tree branch, iron bars	Insects, fish intestines of goat, meat or cow, soft meat	Once in 2 days
9.	<i>Plectropterus gambesis</i>	3	–	–	–	306	372	277	Water bath	Boiled yam with palm oil, cooked beans, grains	Once daily
10.	<i>Columba guinea</i>	2	–	–	–	cm340		184	Iron bar	Guinea corn	Once daily

11.	<i>Poicephalus senegalus</i>	4	–	–	–	152	184	184	Iron bar	Groundnut, pepper	Once daily
12.	<i>Melopsittacus undulatus</i>	3	–	–	–	81	60	143	Suspended feeding trough, small water pot	Guinea corn, soy bean	Once daily
13.	<i>Necrosyrtes monachus</i>	1	–	–	–	306	318	277	Tree stump, iron bar	Cow meat, goat meat, pig meat	Once in 3 days
14.	<i>Falco tinnuculus</i>	1	–	–	–	<sup>cm</sup> 340		184	Iron bar	Day old chick	Once in 3 days
<b>Aviary (Large birds)</b>											
15.	<i>Balaerica pavonia</i>	3	–	–	–	1546	1183	630	Water bath, earthen pots, ornamental plants, small houses, shrubs, fountain	Soy bean, guinea corn	Once daily
16.	<i>Pavo cristatus</i>	–	4	2	–						
17.	<i>Ciconia ciconia</i>	2	–	–	–						
18.	<i>Plectropterus gambensis</i>	1	–	–	–						
19.	<i>Dendrocygna viduata</i>	4	–	–	–						
20.	<i>Struthio camelus</i>	–		1	–	1730	1360	220	Shed, water hole, partly grassed floor	Grains, compounded feed, cabbage, boiled yam, cooked beans	Once daily
			1			1240	1360	220			
21.	<i>Dromaius novaehollandiae</i>	–	1	–	–	Cohabits with the female ostrich			Shed, water hole, partly grassed floor	Grains, compounded feed, cabbage, boiled yam, cooked beans	Once daily
<b>Primates</b>											
22.	<i>Chlorocebus sabaues</i>	–	2	1	–	350	400	200	Tree stump, hanged tire, ball, iron bar	Cooked beans, cooked yam, banana, water melon, banana, cucumber, pineapple, cabbage, orange	Twice daily
23.	<i>Cercopithecis mona</i>	–	2	1	–	350	400	200	Tree stump, hanged tire, ball, iron bar	Same as above	Twice daily
24.	<i>Erythrocebus patas</i>	–	1	2	–	400	450	500	Tree stump, hanged tire, ball, iron bar, inner room	Same as above	Twice daily
			1	1		310	700	300			
25.	<i>Cercopithecus erythrogaster</i>	–	1	–	–	400	300	500	Tree stump, hanged tire, ball, iron bar,	Same as above	Twice daily



26.	<i>Cercocebus torquatus</i>	–	1	1	–	580	580	500	inner room Tree stump, hanged tires, iron bars, inner room	Same as above	Twice daily
27.	<i>Mandrillus leucophaeus</i>	–	1	1	–	790	600	300	Tree stump, hanged tires, iron bars, inner room	Same as above	Twice daily
28.	<i>Papio anubis</i>	–	1	–	–	460	460	600	Tree stump, iron bars	Same as above	Twice daily
			1			700	900	670			
			1			620	310	300			
29.	<i>Pan troglodytes</i>	–		2	–	460	460	600	Inner room, tree stump, iron bars, hanging wooden chair	Same as above	Twice daily
<b>Herpes</b>											
30.	<i>Crocodylus niloticus</i>		1	1		1490	905	200, 100	Water bath, concrete floor	Intestines of slaughtered animals, meat pieces	Once in 2/3 weeks
		2				490	735	280, 50			
		2				540	720	250,100			
		2			9	3500	400	400, 100			
					4	3500	400	400, 100			
31.	<i>Osteolaemus tetraspis</i>	1	–	–	–	348	300	277	Water bath, small house	Chicks, White rats	Twice weekly
		3				348	260	277			
		6				100	133	176			
32.	<i>Python sebae</i>	1	–	–	–	412	367	190	Rocky outcrop, glass enclosure, ornamental plants, water bath, nature themed wallpaper	Chicks, White rats	Once in 2/3 weeks
		1				100	133	176			
33.	<i>Bitis gabonica</i>	1	–	–	–	412	367	190	Same as above	Chicks, White rats	Once in 2/3 weeks
34.	<i>Veranus niloticus</i>	3	–	–	–	412	367	190	Rocky outcrop, glass enclosure, ornamental plants, water bath, nature themed	Chicks, White rats	Twice weekly
		1				221	133	176			

									wallpaper, one shrub, cement pots			
35.	<i>Python regius</i>	1	–	–	–	412	367	190	White granite	Chicks, White rats	Once in 2/3 weeks	
		3				221	133	176	enclosure floor, glass			
		1				100	133	176	enclosure, ornamental plants, water bath, few grasses, 2 white earthen pots, white walls			
36.	<i>Trionyx triunguis</i>	1	–	–	–	306	288	277	Water bath	Intestine, liver of slaughtered animals, soft meat	Twice weekly	
		1				456	358	176				
37.	<i>Causus rhombeatus</i>	1	–	–	–	100	133	176	Water bath, stones on enclosure floor	Chicks, White rats	Once in 2/3 weeks	
38.	<i>Pelusios castaneus</i>	21	–	–	–	100	133	176	Muddy water bath, nature themed wallpaper	Chicks, white rat, Intestine, liver of slaughtered animals, soft meat	Thrice weekly	
39.	<i>Naja nigricollis</i>	1	–	–	–	100	133	176	Stony enclosure floor, concrete water pot	White rat, Chicks	Once in 2/3 weeks	
40.	<i>Naja naja</i>	1	–	–	–	100	133	176	White graveled floor, nature themed enclosure	White rat, Chicks	Once in 2/3 weeks	
41.	<i>Chentochelys sulcata</i>	1	–	–	15	395	490	150	Shrub, inner room, grassed floor	Water melon, banana, cooked beans	Once daily	
42.	<i>Archachatina marginata</i>	6	–	–	–	100	133	176	Dark room, water pot	Banana, water melon	Once daily	
<b>Herbivores</b>												
43.	<i>Camelus dromedaries</i>	–	–	1	–	3810	4960	160	Large grassed range, stable, few trees	Grasses (elephant grass, herbs), compounded feed, grains (corn, millet, sorghum)	Once daily	
44.	<i>Equus asinus</i>	–	1	–	–				Stable	Grasses (elephant	Twice daily	

									grass, herbs), compounded feed, grains (corn, millet, sorghum), raw yam		
45.	<i>Equus caballus</i>	–	1			1140	820	200	Stable, grassed enclosure	Same as above	Twice daily
46.	<i>Equus africanus</i>	–	1	1	1	720	1440	140	Water hole, Shed	Same as above	Twice daily
47.	<i>Gazellae dorcas</i>	–	1			1100	2633	220	Few Trees, Shrubs, small shed	Same as above	Once daily
48.	<i>Philantomba maxwelli</i>	–	–	2	–	Cohabits with the female gazelle			Few Trees, Shrubs, small shed	Grasses (elephant grass, herbs), compounded feed, grains (corn, millet, sorghum)	Once daily
49.	<i>Taurotragus derbianus</i>	–	1	–	–	1980	1540	260	Few trees, stable	Same as above	Once daily
50.	<i>Equus ferus caballus</i>	–	2	4	1	1540	816	260	Few trees, stable	Same as above	Once daily
51.	<i>Giraffa camelopardalis</i>	–		1	–	<sup>cm</sup> 9975		350	Large grassed range, stable, few trees, suspended feeding bough	Same as above	Once daily
52.	<i>Sus scrofa</i>	–	2	–	–	300	250	300	Water bath	Grass, cooked yam, cooked beans, grains	Twice daily
53.	<i>Phacochoerus africanus</i>	–	1	–	–	1280	900	178, 86	Mud bath	Grasses (elephant grass, herbs), compounded feed, grains (corn, millet, sorghum)	Once daily
54.	<i>Potamochoerus porcus</i>	–	1	1	–	1050	920	220	Water hole	Same as above	Once daily
<b>Carnivores</b>											
55.	<i>Mellivora capensis</i>	–	1	1	–	400	500	300	Inner room	Dog feed, cow meat, goat meat, pig meat	Once in 2 days
56.	<i>Hyaena hyaena</i>	–	1	–	–	570	675	220	Inner room	Dog feed, cow meat,	Thrice weekly

										goat meat, pig meat especially the bony parts	
57.	<i>Civettictis civetta</i>	–	1	1	–	300	250	300	Inner room	Dog feed, cow meat, goat meat, pig meat, banana	Thrice weekly
58.	<i>Panthera leo</i>	–	1	3	–	2275 <sup>d</sup>	3650 <sup>d</sup>	500 <sup>d</sup>	Inner room, Trees, rocky outcrop	Cow meat, goat meat, pig meat	Thrice weekly
			1			325	200	300			
						325	370	200			
						1625 <sup>d</sup>	840 <sup>d</sup>	500 <sup>d</sup>			
59.	<i>Canis aureus</i>	–	1	1	–	470	600	300	Inner room	Cow meat, goat meat, pig meat	Thrice weekly
			2	1		470	600	300			
60.	<i>Crocuta crocuta</i>	–	1	–	–	470	600	300	Inner room	Cow meat, goat meat, pig meat especially the bony parts	Thrice weekly
<b>Children zoo</b>											
61.	<i>Hystrix cristata</i>	1	–	–	–	210	300	400	Concrete burrows	Cooked beans, boiled yam with oil	Once daily
62.	<i>Cavia porcellus</i>	–	1	1	–	210	300	400	Flooring with wood waste	Grasses (elephant grass, herbs), compounded feed, grains (corn, millet, sorghum)	Once daily
63.	<i>Numida meleagris</i>	–	1	1	–	210	300	400	Flooring with wood waste	Grains	Once daily
64.	<i>Cricetomys gambianus</i>	–	1	1	–	210	300	400	Concrete burrow	Cooked beans, boiled yam with oil	Once daily
65.	* <i>Pavo cristatus</i>	–	1	–	–	210	300	400	Flooring with wood waste	Grains	Once daily

Note: Un = Undetermined, Ad M = Adult Male, Ad F = Adult Female, Juv = Juvenile, L = Length, B = Breadth, H = Height, D = Depth  
cm = circular measurement of enclosure, d = den



Plate 4.1: Female *Giraffa Camelopardalis* in UI Zoo without a mate



Plate 4.2: Two *Crocodylus niloticus* in the same enclosure in UI Zoo (sex undetermined)

#### **4.1.2 Animal diversity, Number, Sex, Enclosure size, Cage enrichment, Food and Feeding regime of animals in FUNAAB Zoo**

This is outlined on Table 4.3.

Diversity, Number and Sex: there were twenty six species of animals in the zoo park. They were largely classified (for the purpose of this study) into five sections namely aviary (7 species), primates (5 species), herbivores (3 species), herpes (9 species) and carnivores (2 species). Most species of animals had at least one member of its group. Ten species however had no mate. Plate 4.3 shows a male *Cercocebus torquatus* without a mate. In total, there were 76 individuals in the zoo. The sexes of the birds were largely undefined in the zoo. There were juvenile records.

Enclosure size and Cage Enrichment: Animals enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds (with the exception of the larger birds such as the ostrich) and herpes, and larger for the primates, herbivores and carnivores. Cage enrichment varies for all the animals; for example there were inner rooms for all the primates and carnivores; hanging bars for the primates, etc. Plate 4.4 shows *Chen caerulenscens* and their enclosure.

Food: Birds were largely fed with grains (groundnut, dried maize and sorghum) with the exception of the carnivorous birds that were fed with flesh. Some such as the ostrich was also given compounded feed. Primates were fed with fruits (banana, water melon, banana, cucumber, pineapple, cabbage and orange) and supplemented with cooked beans and corn mixture with oil. The carnivores were fed with raw meat (cow). The civets were also given banana. The jackals were fed cooked beans too. The herbivores were fed with grasses. It was supplemented with cooked beans for the porcupine. The herpes especially the snakes were fed with live rabbits and giant rat.

The crocodiles were fed with cow meat. The soft shell and hard shelled turtles were fed with the intestine of slaughtered animals and or soft meat. The tortoises were fed with cooked beans and fruits.

Feeding regime: birds were fed generally once daily. The carnivorous ones were fed once in 2 days. Primates were fed twice daily (fruits in the morning and cooked beans/yam in the afternoon). The herpes especially snakes were fed once in 2 or 3 weeks. The turtles were fed twice/thrice weekly. The tortoises were fed on a daily basis. The captive herbivores were fed once/twice daily. The carnivores were fed twice weekly.



**Table 4.3: Number, Enclosure Size and Cage Enrichment of Animals in FUNAAB Zoo**

S/N	SCIENTIFIC NAME	NUMBER			ENCLOSURE SIZE (CENTIMETRES)			CAGE ENRICHMENT	FOOD	FEEDING REGIME
		Ad M	Ad F	Juv	L	B	H,D			
<b>Birds</b>										
1.	<i>Psittacus erithacus</i>	1	1	-	cm616	275		Iron bars	Groundnut, dried maize, sorghum	Once daily
2.	<i>Psittacula krameri</i>	1	-	-	cm616	275		Iron bars	Groundnut, dried maize, sorghum	One daily
3.	<i>Anas platyrhnhchos</i>	1	-	-	900	1200	600	Water bath, sparse trees	Groundnut, dried maize, sorghum	Once daily
4.	<i>Balaerica pavonia</i>	1	2	-						
5.	<i>Chen caerulesucens</i>	4	2	-	1200	1920	220	Water bath	Groundnut, dried maize, sorghum	Twice daily
6.	<i>Struthio camelus</i>	1	1		1650	3300	300	Trees, shrubs, inner room layed with sandy soil	Compounded feed (growers marsh)	Twice daily
				1	600	600	600			
7.	<i>Milvus aegypticus</i>	1	-	-	450	450	450	Shrubs, Hollow box	Cow meat	Once in 2 days
<b>Herpes</b>										
8.	<i>Osteolaemus tetraspis</i>	1	1	1	900	900	250,100	Water bath, dry area,	Cow meat	Twice weekly
9.	<i>Crocodylus niloticus</i>	-	1	2	200	380	100	inner room, grassy enclosure	Cow meat	Twice weekly

10.	<i>Python sebae</i>	^1	-	-	140	720	150	Concrete floor, Tree stump, long tree branch, water bath	Giant rat, rabbit	Once in 2/3 weeks
11.	<i>Python regius</i>	^1	-	-	100	150	180	Gravel floor, tree branch	Giant rat, rabbit	Once in 2/3 weeks
12.	<i>Bitis gabonica</i>	^1	-	-	100	150	180	Gravel floor, tree branch	Giant rat, rabbit	Once in 2/3 weeks
13.	<i>Bitis arietans</i>	^1	-	-	100	140	80	Gravel floor, tree branch	Giant rat, rabbit	Once in 2/3 weeks
14.	<i>Veranus niloticus</i>	1	1	-	200	380	100	Water bath, sandy area	Intestines, liver, kidney	Once in 2/3 weeks
15.	<i>Pelusios castaneus</i>	11*	-	9	200	380	100	Water bath, sandy area	Intestines, liver, kidney	Twice weekly
16.	<i>Chentrochelys sulcata</i>	1, 1	-	-	1800	1800	450	Trees, shrubs, inner house, grasses	Grasses, grains	Once daily
<b>Primates</b>										
17.	<i>Cercopithecis mona</i>	1	1	2	1040	690	450	Tree twigs and branches, iron bars, inner room, grasses	Cooked beans and corn, banana, water melon	Twice daily
18.	<i>Erythrocebus patas</i>	1	4	-	1380	690	450	Tree twigs and branches, iron bars,	Cooked beans and corn, banana, water	Twice daily

19.	<i>Chlorocebus pygerythrus</i>	1	-	-	1040	1040	500	inner room, grasses Tree twigs and branches, iron bars,	melon Cooked beans and corn, banana, water	Twice daily
20.	<i>Cercocebus torquatus</i>	1	-	-	690	690	500	inner room, grasses Tree twigs and branches, iron bars,	melon Cooked beans and corn, banana, water	Twice daily
21.	<i>Papio anubis</i>	1,1	1	-	1040	1040	500	inner room, grasses Tree twigs and branches, iron bars,	melon Cooked beans and corn, banana, water	Twice daily
<b>Herbivores</b>										
22.	<i>Equus asinus</i>	1	1	1	Free range					-
23.	<i>Philantomba maxwelli</i>	2	-	-						Once daily
24.	<i>Hystrix cristata</i>	2	-	-	400	380	280, 110	Cemented floors, concrete burrows	Cooked beans and corn	Once daily
<b>Carnivores</b>										
25.	<i>Canis aureus</i>	1	-	-	990	1320	450	Trees, shrubs, inner room	Cooked beans, cow meat	Twice weekly
26.	<i>Civettictis civetta</i>	3 <sup>^</sup>	-	-	870	870	450	Shrubs, forages, inner room	Banana, cow meat	Twice weekly

Note: Ad M = Adult Male, Ad F = Adult Female, Juv = Juvenile, L = Length, B = Breadth, H = Height, D = Depth  
cm = circular measurement, ^ = sex undetermined



Plate 4.3: Male *Cercocebus torquatus* without a mate in FUNAAB Zoo



Plate 4.4: *Chen caerulenscens* and their enclosure (with water bath) in FUNAAB Zoo

### **4.1.3 Animal diversity, Number, Sex, Enclosure size, Cage enrichment, Food and Feeding regime of animals in OAU Garden**

This is outlined on Table 4.4.

Diversity, Number and Sex: there were thirteen species of animals in the garden. They were largely classified (for the purpose of this study) into four sections namely aviary (5 species), primates (2 species), herpes (4 species) and carnivores (2 species). Most species of animals (10 of 13) had no mate. In total, there were 26 individuals in the zoo. The sexes of the birds and herpes were largely undefined in the zoo. The zoo generally lacks juvenile animals.

Enclosure size and Cage Enrichment: Animals enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds, and larger for the herpes primates, herbivores and carnivores. Cage enrichment varied for all the animals; for example there were inner rooms for all the primates and carnivores; etc.

Plate 4.5 and 4.6 shows the *Panthera leo* and *Cercopithecus mona* in their enclosures

Food: Birds were largely fed with grains (corn, millet and beans). The ostrich was also given compounded feed. Primates were fed with fruits (banana, water melon, banana, cucumber, pineapple, cabbage and orange) and supplemented with cooked beans and corn mixture with oil. The carnivores were fed with raw meat (cow, goat or pig), with special bony parts preference for the hyena. The snake was fed with live rabbits. The crocodile was fed with cow meat. The soft shell turtles were fed with the intestine of slaughtered animals and or diced meat. The tortoises were fed with cooked beans and fruits.

Feeding regime: birds were fed generally twice daily. Primates are fed twice daily (fruits in the morning and cooked beans/yam in the afternoon). The snake was fed once in 3 weeks. The turtles were fed once in two days. The tortoises were fed on a daily basis. The carnivores were fed twice weekly.

**Table 4.4: Number, Enclosure Size and Cage Enrichment of Animals in OAU Garden**

S/N	SCIENTIFIC NAME	NUMBER			ENCLOSURE SIZE (CENTIMETRES)			CAGE ENRICHMENT	FOOD	FEEDING REGIME
		Ad M	Ad F	Juv	L	B	H/D			
<b>Birds</b>										
1.	<i>Anas platyrhynchos</i>	-	1	-	350	350	400	Shrub, water bath, hollow box, twigs and branches	Grains (corn, millet, beans)	Twice daily
2.	<i>Balaerica pavonia</i>	1	-	-	740	1110	255	Same as above	Grains (corn, millet, beans), growers marsh	Twice daily
3.	<i>Columba guinea</i>	1	1	-	340	450	350	Same as above	Grains	Twice daily
4.	<i>Numida meleagris</i>	1	1	-	335	420	275	Same as above	Grains	Twice daily
5.	<i>Struthio camelus</i>	1	-	-	2100	2100	480	Shed, grassed enclosure	Grains (corn, millet, beans), growers marsh, water leaf	Twice daily
<b>Herpes</b>										
6.	<i>Osteolaemus tetraspis</i>	1	-	-	cm <sup>2</sup> 2900		144, 50	Water bath, Tree, grassed dry area	Slaughtered pig, goat or cow meat	Twice weekly
7.	<i>Python sebae</i>	1	-	-	550	200	240	Water bath, rocky bed floor	Live rabbit	Once in three weeks
8.	<i>Trionyx triunguis</i>	1	-	-	450	620	130	Water bath, trees	Liver, meat cut into small pieces	Once in two days
		1			cm <sup>2</sup> 3300		240			
9.	<i>Chentrochelys sulcata</i>	1	-	-	630	840	220	Inner room, Trees	Cooked beans and corn, ripe banana, pawpaw, carpet grass,	Twice daily
				4	740	550	275			

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edible mushroom

<b>Primates</b>										
10.	<i>Cercopithecis mona</i>	1	1	1, 1	cm	3800	435	Shrubs, inner room	Fruits, cooked beans and corn, cooked yam and cocoyam, cooked groundnut	Twice daily
11.	<i>Papio anubis</i>	1	-	-	cm	3800	435	Rocky outcrop, ball, inner room	Fruits, cooked beans and corn, cooked yam and cocoyam, cooked groundnut	Twice daily
<b>Carnivores</b>										
12.	<i>Panthera leo</i>	1	1	2	cm	11600	480	Trees, inner room	Slaughtered pig meat, bones with stripped meat from slaughter slab	Twice weekly
13.	<i>Crocota crocuta</i>	1	-	-	800	1600	200	Trees, inner room	Bony part of slaughtered pig, goat or cow e.g head and leg	Twice weekly

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Note: Ad M = Adult Male, Ad F = Adult Female, Juv = Juvenile, L =Length, B = Breadth, H = Height, D = Depth  
 cm = circular measurement, ^ = sex undetermined





Plate 4.5: *Panthera leo* in their enclosure in OAU Garden



Plate 4.6: *Cercopithecus mona* in their enclosure in OAU Garden

#### **4.1.4 Animal diversity, Number, Sex, Enclosure size, Cage enrichment, Food and Feeding regime of animals in FUTA Park**

This is outlined on Table 4.5.

Diversity, Number and Sex: there were thirteen species of animals in the Park. They were largely classified (for the purpose of this study) into four sections namely aves (6 species), primates (4 species), herpes (2 species) and herbivore (1 species). There was no carnivore in the park. Most species of animals (10 of 13) had no mate. Plate 4.7 shows two male *Struthio camelus* in same enclosure without mates. In total, there were 29 individuals in the zoo. The sexes of the animals were largely defined in the zoo. The zoo generally lacked juvenile animals.

Enclosure size and Cage Enrichment: Animals enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds, and larger for the primates, and herbivores. Cage enrichment varied for all the animals; for example there were inner rooms for some of the primates e.g. baboon and tortoise. Plate 4.8 shows *Chentrochelys sulcata* in its inner chamber.

Food: Birds were largely fed with corn and cooked beans. The ostriches and pea fowl was also given compounded feed. Primates were fed with fruits (banana, water melon, banana, cucumber, pineapple, cabbage and orange) and supplemented with cooked beans and yam with oil. The tortoise was fed with cooked beans and fruits.

Feeding regime: birds are fed generally once daily. Primates are fed twice daily (fruits in the morning and cooked beans/yam in the afternoon). The tortoise was fed on a daily basis. The crocodiles were fed once weekly/biweekly. The herbivore was fed once daily.

**Table 4.5: Number, Enclosure Size and Cage Enrichment of Animals in FUTA Park**

S/N	SCIENTIFIC NAME	NUMBER			ENCLOSURE SIZE (CENTIMETRES)			CAGE ENRICHMENT	FOOD	FEEDING REGIME
		Ad M	Ad F	Juv	L	B	H,D			
<b>Birds</b>										
1.	<i>Psittacus erithacus</i>	1	-	-	60	60	57	Tree twig, iron bars	Cooked beans, corn	Once daily
2.	<i>Cairina moschata</i>	9	3	-	8100 <sup>cm</sup>		280	Natural pond,	Cooked beans, corn	Once daily
3.	<i>Chen caerulesucens</i>	1	-	-				constructed pond, pen house, trees (guava and palm)	Cooked beans, corn	Once daily
4.	<i>Balaerica pavonia</i>	1	-	-	1500	300	300	Covered enclosure,	Cooked beans, corn	Once daily
5.	<i>Pavo cristatus</i>	1	2	-				rock outcrop	Cooked beans, corn, compounded feed	Once daily
6.	<i>Struthio camelus</i>	2	-	-	1500	1500	280	Shed, One Tree	Cooked beans, corn, compounded feed	Once daily
<b>Herpes</b>										
7.	<i>Crocodylus niloticus</i>	1	1	-	750	520	200, 50	Water bath, dry area	Cow meat	Once weekly/biweekly
8.	<i>Chentrochelys sulcata</i>	-	1	-	290	275	170	Water hole, small house	Cooked beans, yam	Twice daily

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<b>Primates</b>										
9.	<i>Cercopithecis mona</i>	1	-	-	500	185	400	Inner room, iron bar	Cooked beans, yam, mango, banana	Twice daily
10.	<i>Cercocebus torquatus</i>	-	1	-						
11.	<i>Chlorocebus sabaesus</i>	1	-	-	330	545	350	Inner room, iron bar, Concrete floor	Cooked beans, yam, mango, banana	Twice daily
12.	<i>Papio anubis</i>	1	1	-	640	640	255	Inner room	Cooked beans, yam, mango, banana	Twice daily
<b>Herbivore</b>										
13.	<i>Cephalophus rufilatus</i>		1		900	1200	280	Bush thicket, shed	Corn	Once daily

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Note: Ad M = Adult Male, Ad F = Adult Female, Juv = Juvenile, L =Length, B = Breadth, H = Height, D = Depth



Plate 4.7: Two male *Struthio camelus* in same enclosure without mates in FUTA Park



Plate 4.8: *Chentrochelys sulcata* in its inner chamber in FUTA Park

## 4.2 Socio-economic and travel characteristics of respondents

### 4.2.1 Socio-economic characteristics of respondents

The results of the socio-economic analysis of the respondents across the study zoos are presented on Table 4.6

**Sex:** Majority of the respondents were male as represented by 54.7%, 62.4% and 54.0% in UI Zoo, OAU Biological Garden and FUTA Park respectively. However, the female folks had the highest representation in FUNAAB Zoo (62.0%). The total male and female representation across the four zoos was 52.3% and 47.7% respectively (Fig 4.2).

**Marital status:** The highest percentages of the respondents were single across all the study zoos with a representation of 78.7%, 80.7%, 97.1% and 77.7% at UI Zoo, OAU Garden, FUNAAB Zoo and FUTA Park respectively. The married counterpart was represented by 21.3%, 19.3%, 2.9% and 9.4% concurrently. The total single and married representation was 86.7% and 13.3% respectively (Fig 4.3).

**Age:** The bulk of the respondents were between the 18-27 years age group as represented by 66.6% (UI Zoo), 78.6% (OAU Garden), 86.8% (FUNAAB Zoo), and 77.7% (FUTA Park). This was followed by the 28 – 37 years age group at 19.7%, 17.8%, 10.3% and 18.0%; and 38 -47 years age group at 7.8%, 2.6%, 2.6% and 4.3% concurrently. The least representation were the 48 -57 and >57 years age groups. Across all the study zoos, the percentages declined with higher age groups: 77.3% (18-27 years), 16.5% (28-37 years), 4.4% (38-47 years), 1.4% (48-57 years) and 0.4% (above 57 years) as presented on Fig 4.4.



**Religion:** Majority of the respondents were Christians as indicated by 82% in UI Zoo, 79.1% in OAU Bio Garden, 76.3% in FUNAAB Zoo and 80.4% in FUTA Park. This was followed by the Muslims at 16.7%, 20.4%, 19.5% and 16.9% concurrently. The respondents that practiced the traditional religion had the least representation at 1.3%, 0.5%, 4.2% and 2.7% respectively. The total representation of Christians, Muslims and Traditionalists was 79.5%, 18.4% and 2.1% respectively (Fig 4.5).

**Educational status:** The bulk of the respondents had tertiary education as represented by 86.3% (UI Zoo), 84.9% (OAU Garden), 76.8% (FUNAAB Zoo) and 67.5% (FUTA Park). The total representation across all the study zoos was 79.0% for those with tertiary education, 15.1% (secondary education), 5.2% (no formal education) and 0.7% for the respondents with primary education (Fig 4.6).

**Nationality:** The respondents were largely Nigerians in all the study zoos (95.2%) while the foreigners had a 4.8% representation (Fig 4.7).

**Employment status:** Across all the study zoos, majority of the respondents were students as represented by 71.9%. 18.2% were employed, 5.6% (self-employed), 4.1% (unemployed) and 0.2% was retired (Fig 4.8).

**Monthly income:** Majority of the respondents across all the study zoos (Fig 4.9) earned less than ₦50000 monthly (75.3%) with a breakdown of 68.1% (UI Zoo), 56.1% (OAU Bio Garden), 86.3% (FUNAAB Zoo) and 91.4% (FUTA Park). This was followed by those that earned between ₦50000 and ₦99999 (15%). The least representation was ₦100000-149999 (4.4%), ₦150000-199999 (2.9%), ₦200000-249999 (0.9%), ₦250000-299999 (0.3%) and  $\geq$ ₦300000 (1.2%).

**Table 4.6: Socio-economic characteristics of respondents in federal institutional-based zoos in South-West Nigeria**

Characters	Variables	U. I. Zoo		OAU GARDEN		FUNAAB ZOO		FUTA PARK	
		F	%	F	%	F	%	F	%
<b>Sex</b>	Male	216	54.7	239	62.4	144	38.0	201	54.0
	Female	179	45.3	144	37.6	235	62.0	171	46.0
<b>Marital status</b>	Single	311	78.7	309	80.7	368	97.1	337	90.6
	Married	84	21.3	74	19.3	11	2.9	35	9.4
<b>Age (years)</b>	18-27	263	66.6	301	78.6	329	86.8	289	77.7
	28-37	78	19.7	68	17.8	39	10.3	67	18.0
	38-47	31	7.8	10	2.6	10	2.6	16	4.3
	48-57	17	4.3	4	1.0	1	0.3	0	0.0
	>57	6	1.5	0	0.0	0	0.0	0	0.0
<b>Religion</b>	Christianity	324	82.0	303	79.1	289	76.3	299	80.4
	Islam	66	16.7	78	20.4	74	19.5	63	16.9
	Traditional	5	1.3	2	0.5	16	4.2	10	2.7
<b>Educational status</b>	None	6	1.5	49	12.8	15	4.0	10	2.7
	Primary	5	1.3	2	0.5	3	0.8	0	0.0
	Secondary	43	10.9	7	1.8	70	18.5	111	29.8
	Tertiary	341	86.3	325	84.9	291	76.8	251	67.5
<b>Nationality</b>	Nigerian	391	99.0	336	47.7	366	96.6	362	97.3
	Non-Nigerian	4	1.0	47	12.3	13	3.4	10	2.7
<b>Employment status</b>	Students	242	61.3	218	56.9	346	91.3	294	79.0
	Employed	101	25.6	111	29.0	14	3.7	52	14.0
	Self employed	44	11.1	7	1.8	13	3.4	21	5.6
	Unemployed	5	1.3	47	12.3	6	1.6	5	1.3
	Retired	3	0.8	0	0.0	0	0.0	0	0.0
<b>Monthly income (₦)</b>	<50000	269	68.1	215	56.1	327	86.3	340	91.4
	50000-99999	59	14.9	122	31.9	27	7.1	22	5.9
	100000-149999	25	6.3	28	7.3	4	1.1	10	2.7
	150000-199999	11	2.8	18	4.7	16	4.2	0	0.0
	200000-249999	13	3.3	0	0.0	1	0.3	0	0.0
	250000-299999	4	1.0	0	0.0	0	0.0	0	0.0
	≥300000	14	3.5	0	0.0	4	1.1	0	0.0

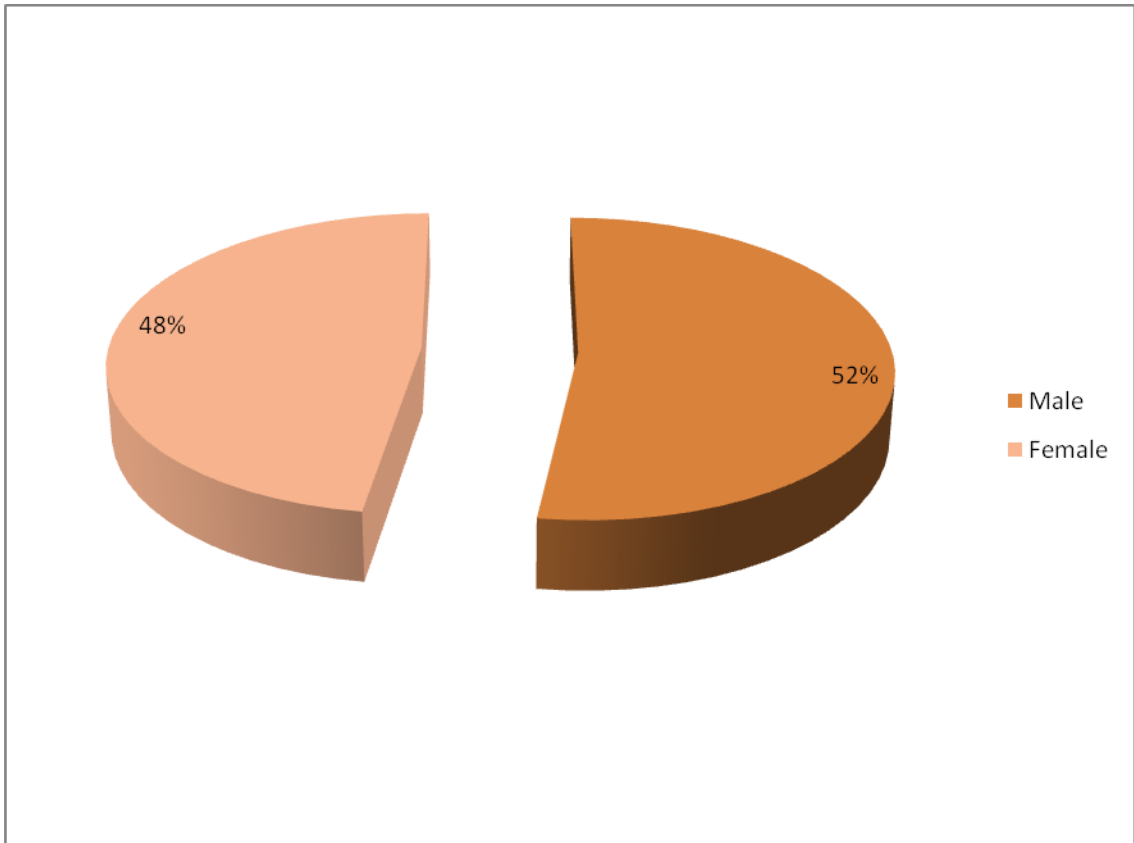


Fig 4.2: Sex of respondents in federal institutional-based zoos in South-West Nigeria

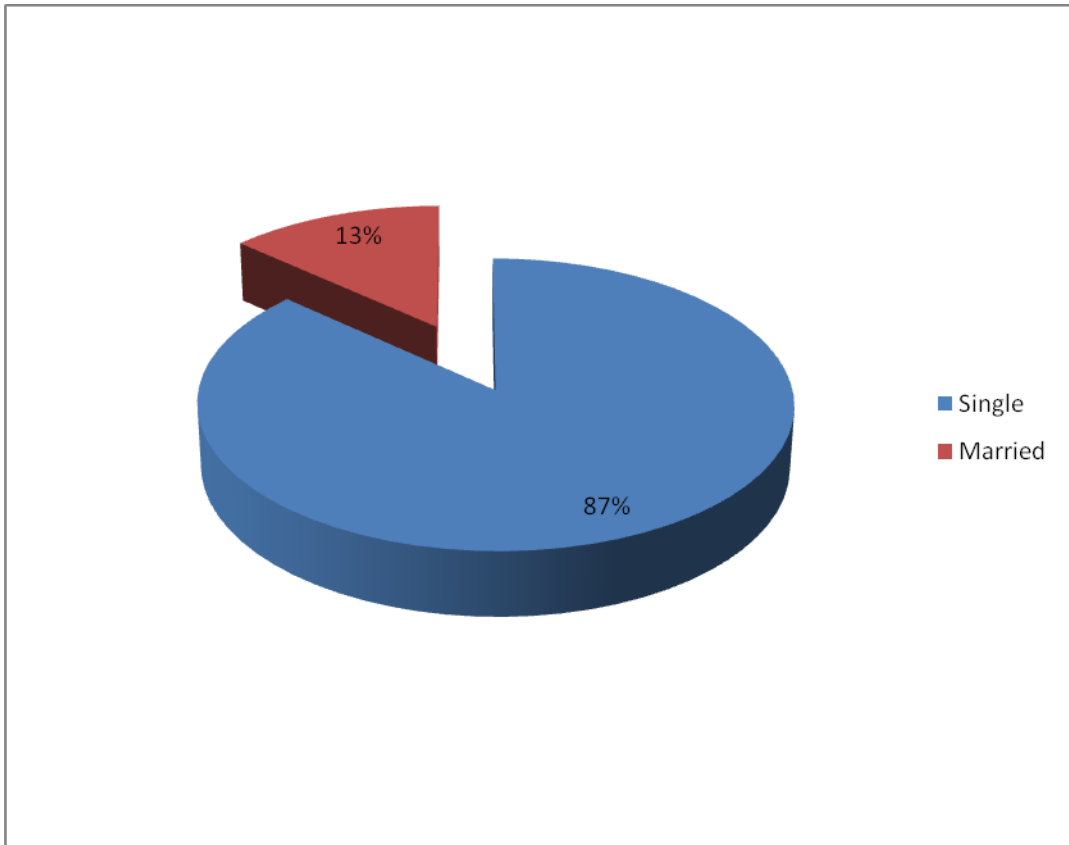


Fig 4.3: Marital Status of respondents in federal institutional-based zoos in South-West Nigeria

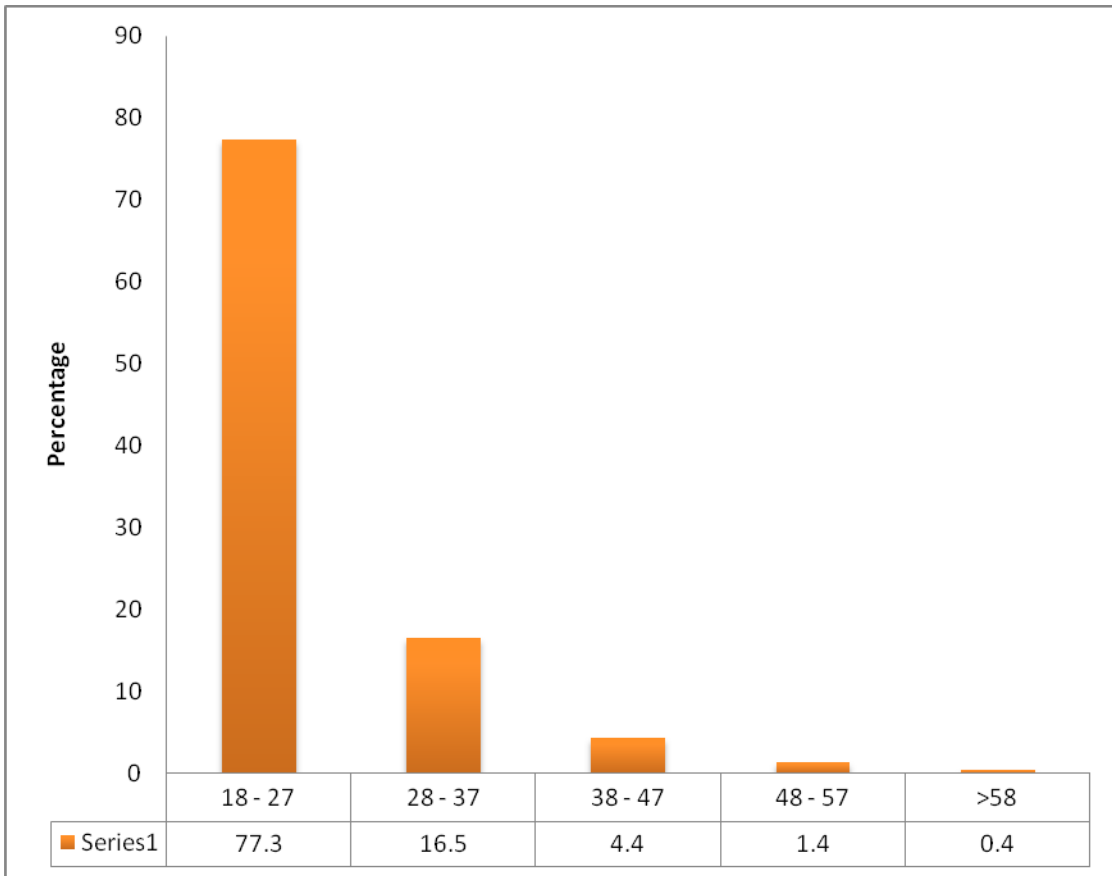


Fig 4.4: Age (years) of respondents in federal institutional-based zoos in South-West Nigeria

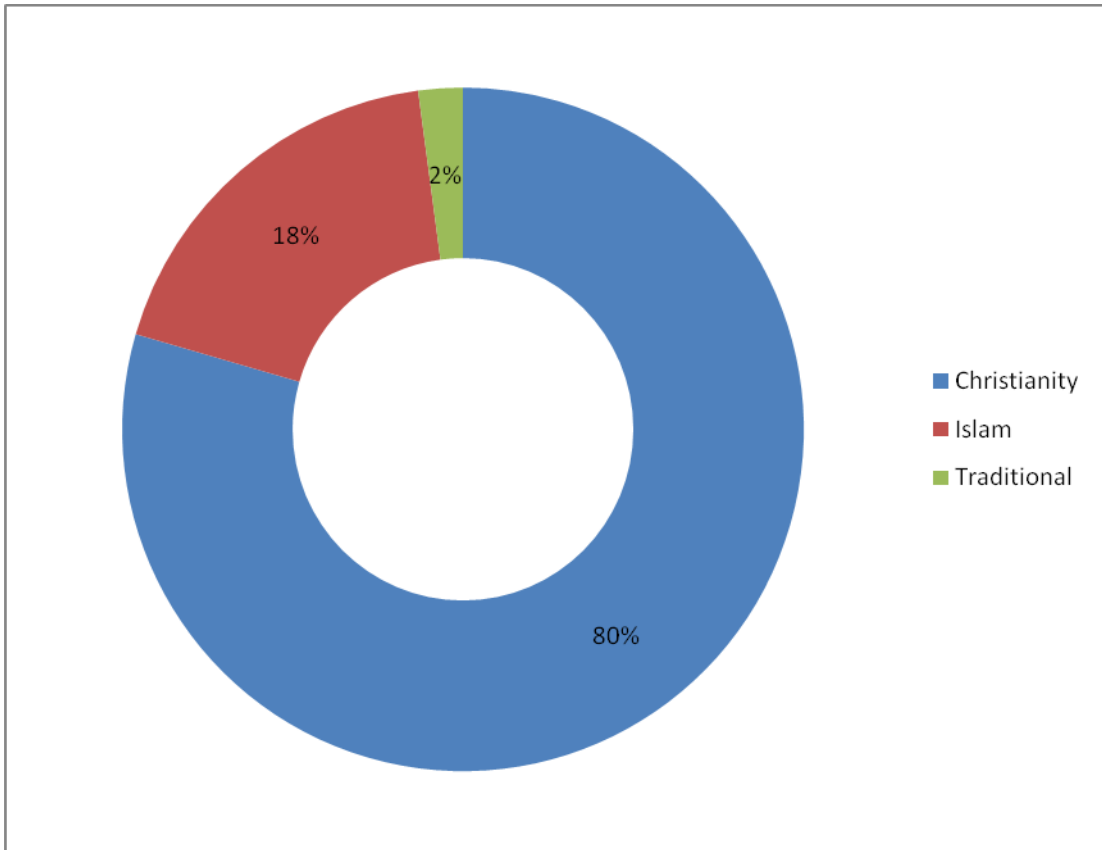


Fig 4.5: Religion of respondents in federal institutional-based zoos in South-West Nigeria

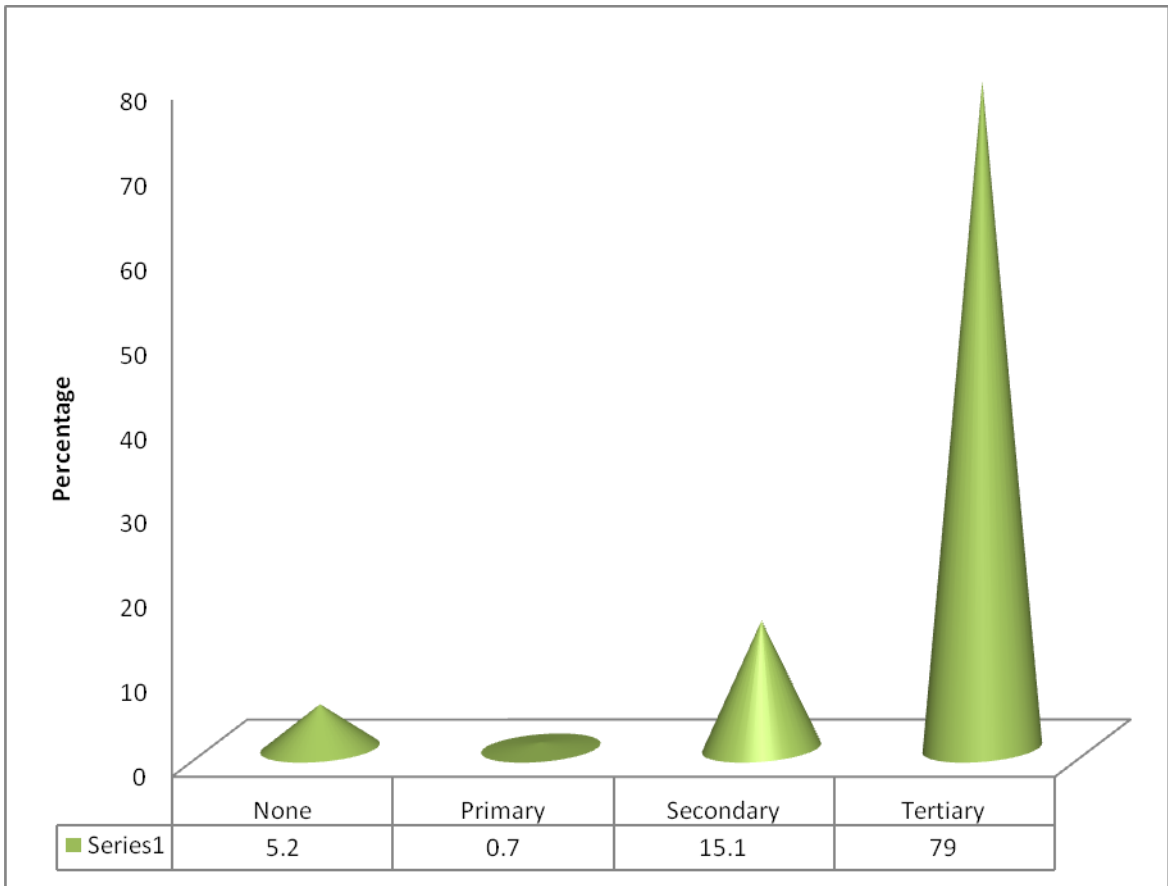


Fig 4.6: Educational status of respondents in federal institutional-based zoos in South-West Nigeria

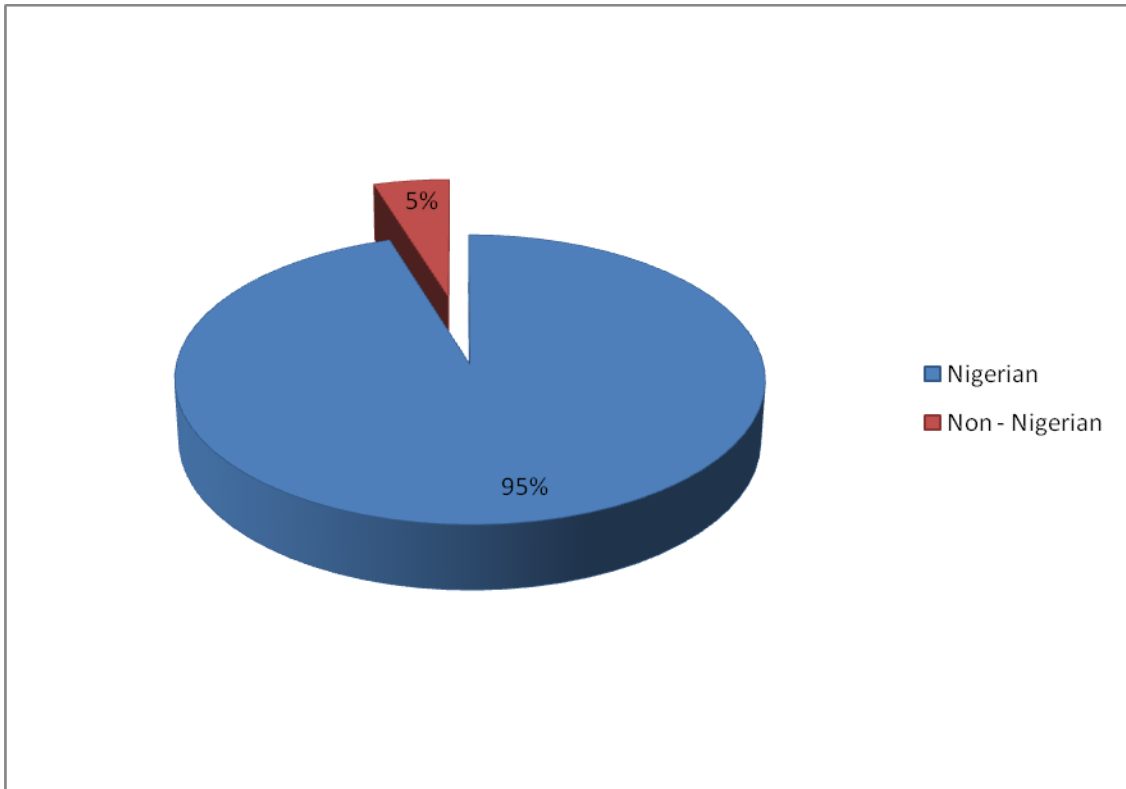


Fig 4.7: Nationality of respondents in federal institutional-based zoos in South-West Nigeria



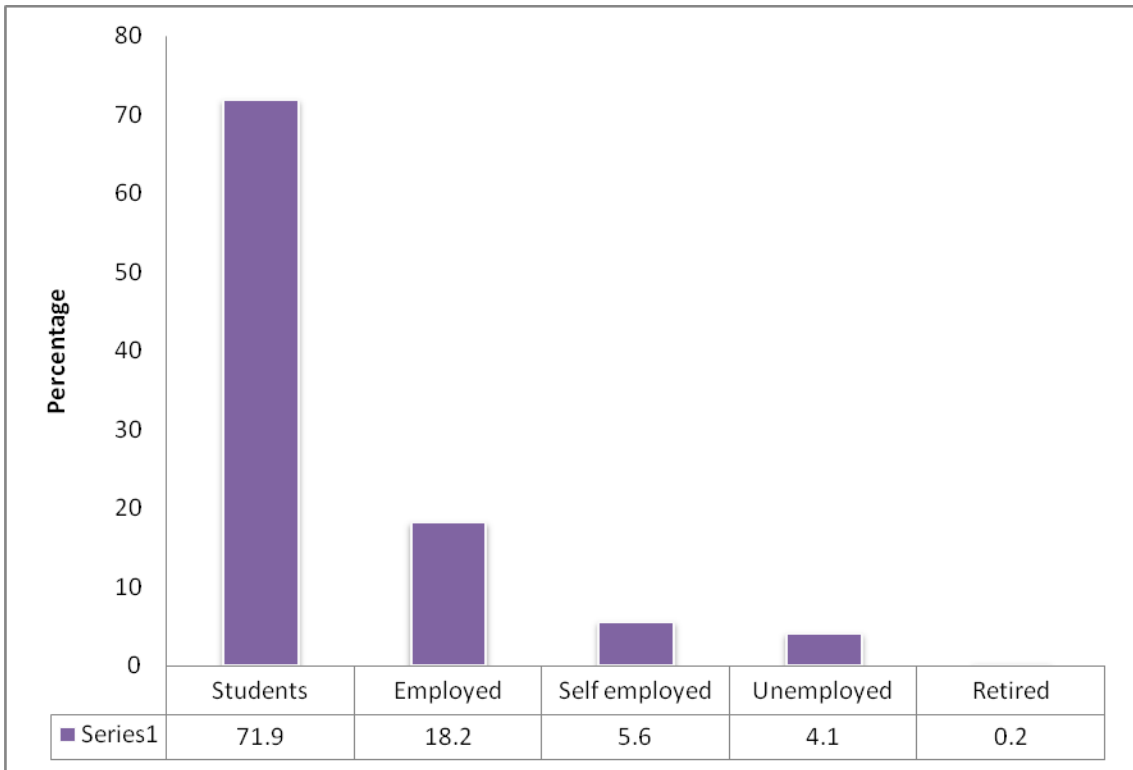


Fig 4.8: Employment status of respondents in federal institutional-based zoos in South-West Nigeria

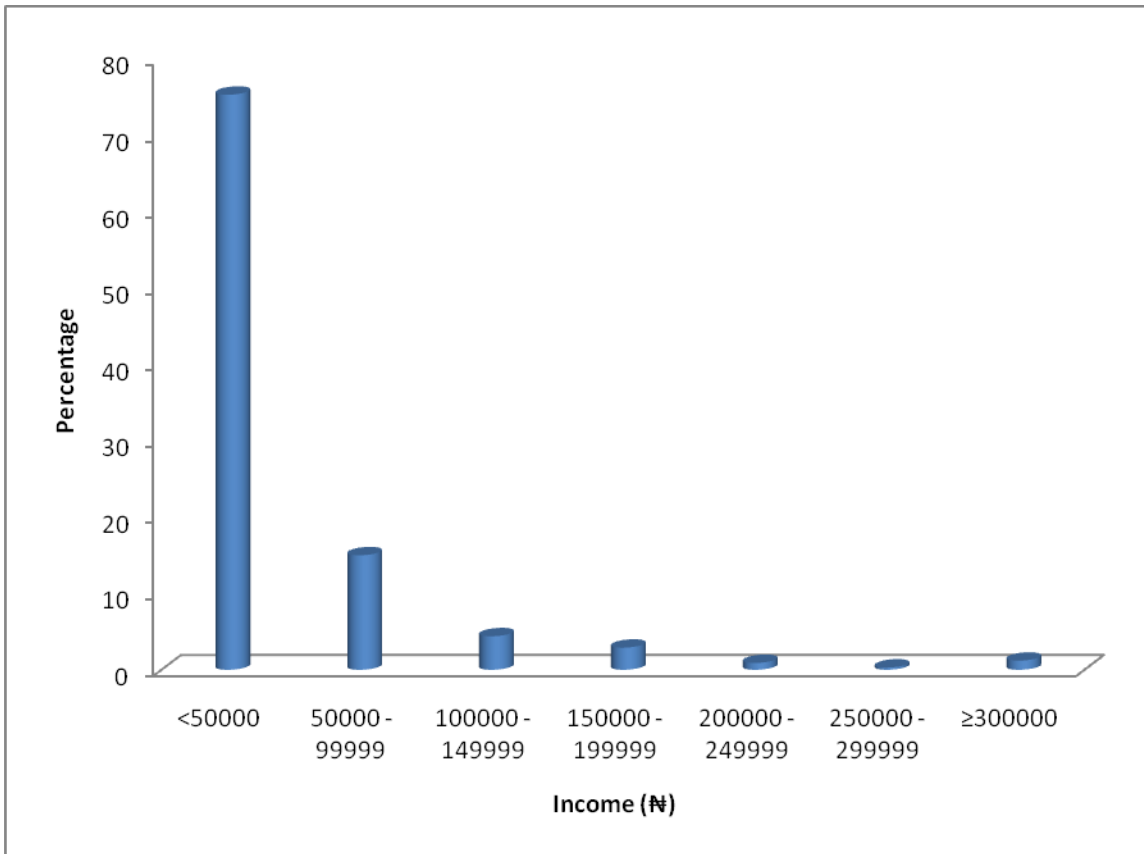


Fig 4.9: Monthly income of respondents in federal institutional-based zoos in South-West Nigeria

#### 4.2.2 Travel Details of Visitors

The travel details of the respondents are presented on Table 4.7.

**Number of Visit:** 41.5% of the respondents at UI Zoo were first time visitors, 30.9% were visiting for the second time while 27.6% were repeat visitors (thrice and above visitation). At OAU Garden, the bulk of the respondents (82.8%) were first time visitors, 11.7% were visiting for the second time while 5.5% were repeat visitors. Likewise, at FUNAAB Zoo and FUTA Park, majority of the respondents (55.4% and 64.5%) were first time visitors, 22.2% and 15.6% were visiting for the second time while 22.4% and 19.9% were repeat visitors respectively. In total, 60.9% were first time visitors, 20.2% were second time visitors and 18.9% were repeat visitors (Fig 4.10).

**Nature of visit:** 41.8% of the respondents at UI Zoo were local travellers, 21.8% were intrastate travellers, 25.1% (interstate travelers) while 5.1% were international visitors. While no international traveler was recorded in the earlier, 1.6% was reported in the latter. At FUNAAB Zoo, majority of the respondents were interstate travelers (39.8%); and keenly followed by the local travelers (39.1%); intrastate travelers (20.3%) and the least – international travelers at 0.8%. Visitors to FUTA Park were mostly local travelers (50.3%); and followed by the intrastate travelers (38.4%), intrastate travelers (9.7%) and the least International travelers (1.6%). In total, 49.6% were local travellers, 27.7% were intrastate travellers visitors, 20.8% interstate travelers and the least (1.9%) international travellers (Fig 4.11).

**Length of stay:** The bulk of the respondents stayed for less than 3 hours at UI Zoo (61.5%) and OAU Garden (91.9%). On the other hand, majority of respondents in FUNAAB Zoo and FUTA Park stayed longer than 3 hours (52% and 56.2% respectively). In total, 61.3% of the respondents across all the zoos stayed less than 3 hours while 38.7% stayed longer (Fig 4.12).

**Medium of awareness about the zoo:** Most of the respondents got to know of the zoos through family/friends in UI Zoo (68.9%), OAU Garden (56.1%) and FUTA Park (48.7%). This was followed by those who got to know in school as represented by 8.9%,

43.9% and 13.7% respectively. In FUNAAB Zoo however, the reverse is the case. Most (35.4%) of the respondents got to know of the zoo in school and closely followed by those who know through family/friends (34.3%). Across all the zoos, 52.2% knew through family/friends, 25.4% in school, brochure (8.8%), radio/television (4.8%), internet (4.4%), newspaper/magazine (1.1%) and other means (3.4%) (Fig 4.13).

**Travel Company:** Majority of the respondents were in the company of their family/friends in UI Zoo (40.3%) and OAU Garden (50.9%). This was followed by those on school excursion (14.2% and 15.7%) and those in the company of their spouse/partner (17% and 12%). In FUNAAB Zoo and FUTA Park on the other hand, respondents on school excursion trips had the highest representation of 46.4% and 25.3% respectively, and followed by those in company of their family/friends, 13.2% and 24.7% respectively. In total (Fig 4.14), the travel company of visitors across the study zoos was family/friends (32.4%), school excursion (25.2%), spouse/partner (12.3%), study/research group (10.3%), tour group (8.2%), alone (7.8%) and the least - company retreat group (1.8%).

**Means of transport:** Most respondents (43.3%) in UI Zoo came with their private vehicles, followed by those who came by public transport (28.9%) and hired vehicles (27.6%). In OAU Garden, most respondents came by public transport (52.5%), followed by those who came in hired vehicles (27.9%) and private cars (13.6%). In FUNAAB Zoo and FUTA Park, most respondents came in hired vehicles (47.2% and 61.3%), followed by those who came in private cars (28% and 29%) and the least – public transport (21.9% and 6.7%). In total (Fig 4.15), those who came in hired vehicles had the highest representation of 40.7%, followed by respondents who came in private cars (28.6%) and through public transport (27.7%). Other means (3%) include walking and cycling.

**Table 4.7: Travel details of visitors to federal institutional-based zoos in South-West Nigeria**

Response categories	U. I. Zoo		OAU GARDEN		FUNAAB ZOO		FUTA PARK	
	F	%	F	%	F	%	F	%
<b>Number of visit</b>								
Once	164	41.5	317	82.8	210	55.4	240	64.5
Twice	122	30.9	45	11.7	84	22.2	58	15.6
Thrice and above	109	27.6	21	5.5	85	22.4	74	19.9
<b>Nature of visit</b>								
Local	165	41.8	259	67.6	148	39.1	187	50.3
Intra-state	111	21.8	92	24.0	77	20.3	143	38.4
Inter-state	99	25.1	32	8.4	151	39.8	36	9.7
International	20	5.1	0	0.0	3	0.8	6	1.6
<b>Length of stay</b>								
<3 hours	243	61.5	352	91.9	179	47.2	163	43.8
>3 hours	152	38.5	31	8.1	197	52.0	209	56.2
<b>Medium of awareness</b>								
Brochure	18	4.6	0	0.0	62	16.4	54	14.5
Family/Friends	272	68.9	215	56.1	130	34.3	181	48.7
Radio/Television	19	4.8	0	0.0	32	8.4	22	5.9
Internet	23	5.8	0	0.0	18	4.7	26	7.0
Newspaper/Magazine	5	1.3	0	0.0	2	0.5	10	2.7
School	13	8.9	168	43.9	134	35.4	51	13.7
Others	35	5.8	0	0.0	1	0.3	28	7.5
<b>Travel company</b>								
Alone	40	10.1	5	1.3	39	10.3	36	9.7
Spouse/Partner	67	17.0	46	12.0	44	11.6	31	8.3
Family/Friends	159	40.3	195	50.9	50	13.2	92	24.7
Tour group	13	3.3	57	14.9	19	5.0	36	9.7
Company retreat	10	2.5	0	0.0	1	0.3	16	4.3
Study/Research group	42	10.6	0	0.0	49	12.9	67	18.0
School excursion	56	14.2	60	15.7	176	46.4	94	25.3
Others	8	2.0	20	5.2	1	0.3	0	0.0
<b>Means of transport</b>								
Private vehicle	171	43.3	52	13.6	106	28.0	108	29.0
Hired vehicle	109	27.6	107	27.9	179	47.2	228	61.3
Public transport	114	28.9	201	52.5	83	21.9	6.7	6.7
Others	1	0.3	23	6.0	11	2.9	11	3.0

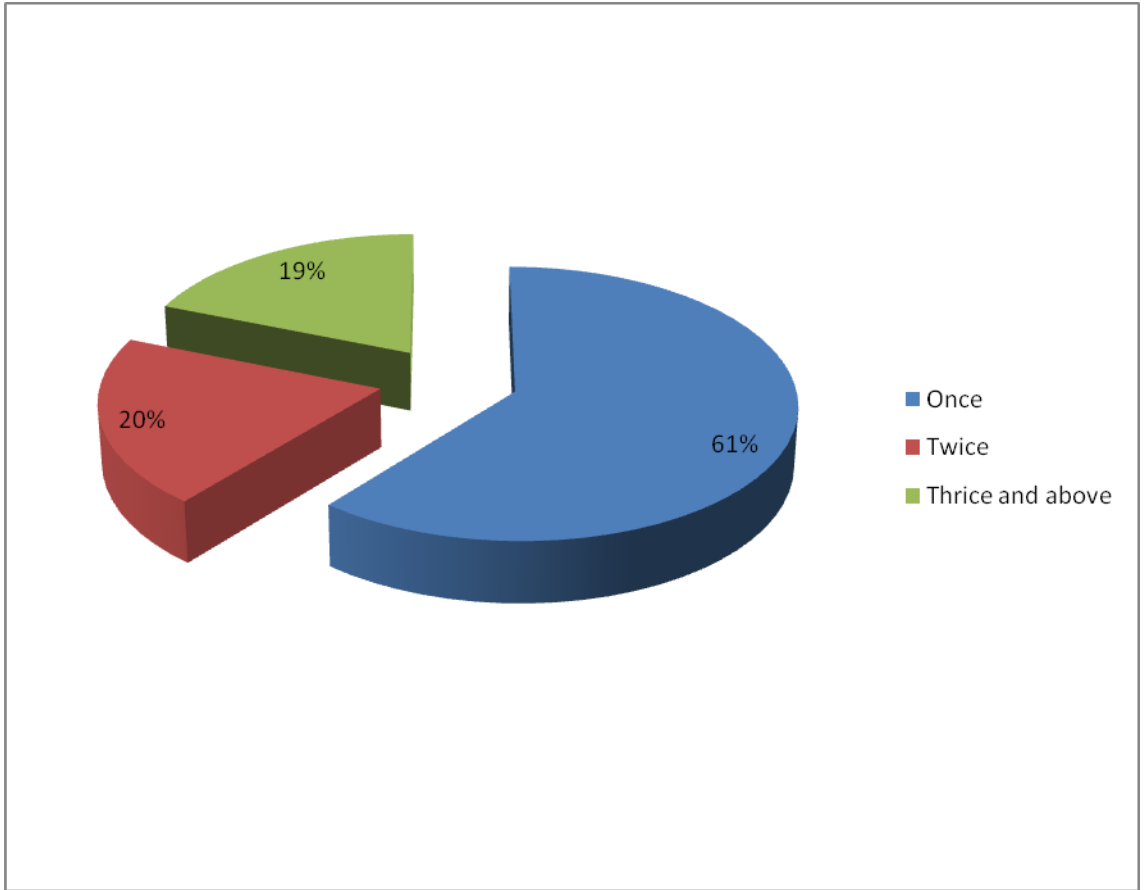


Fig 4.10: Number of visits of respondents in federal institutional-based zoos in South-West Nigeria

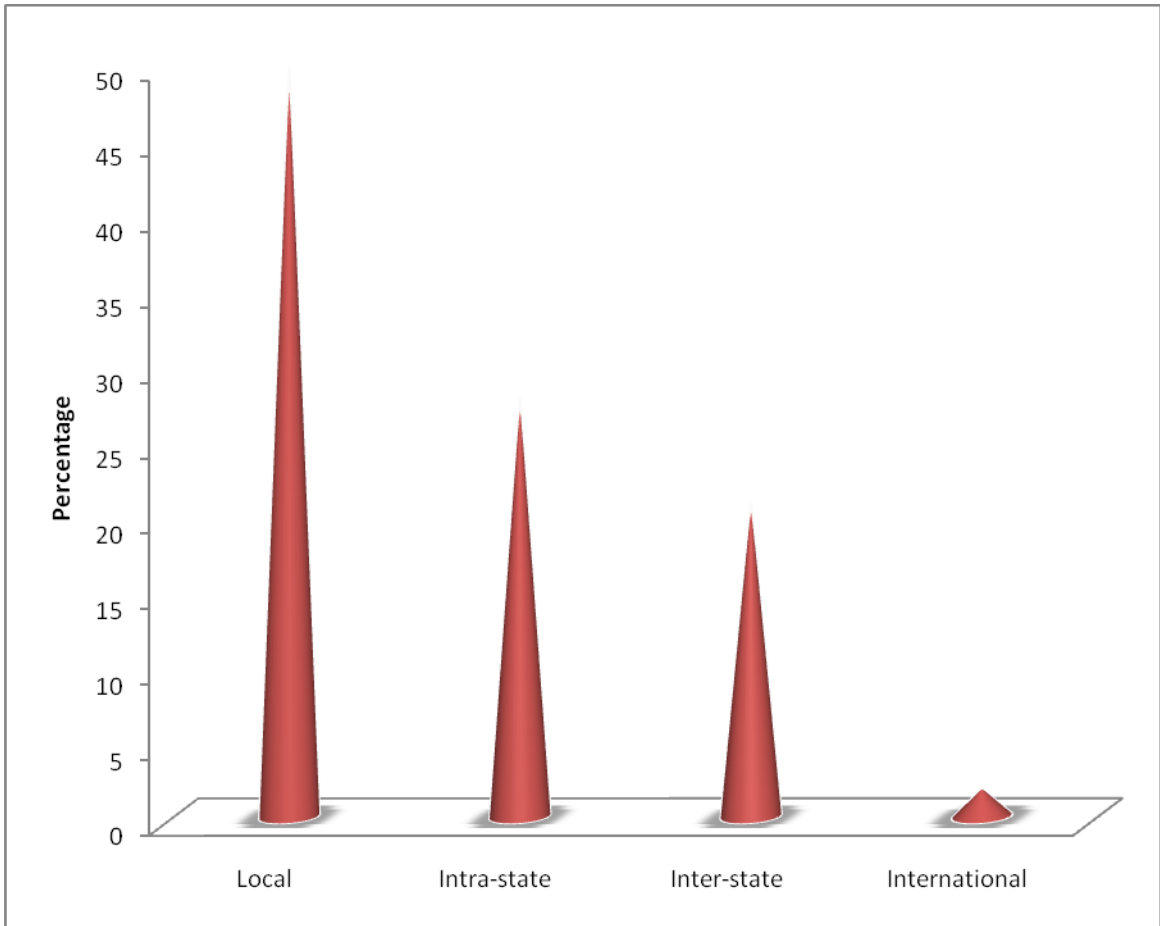


Fig 4.11: Nature of visit of respondents in federal institutional-based zoos in South-West Nigeria

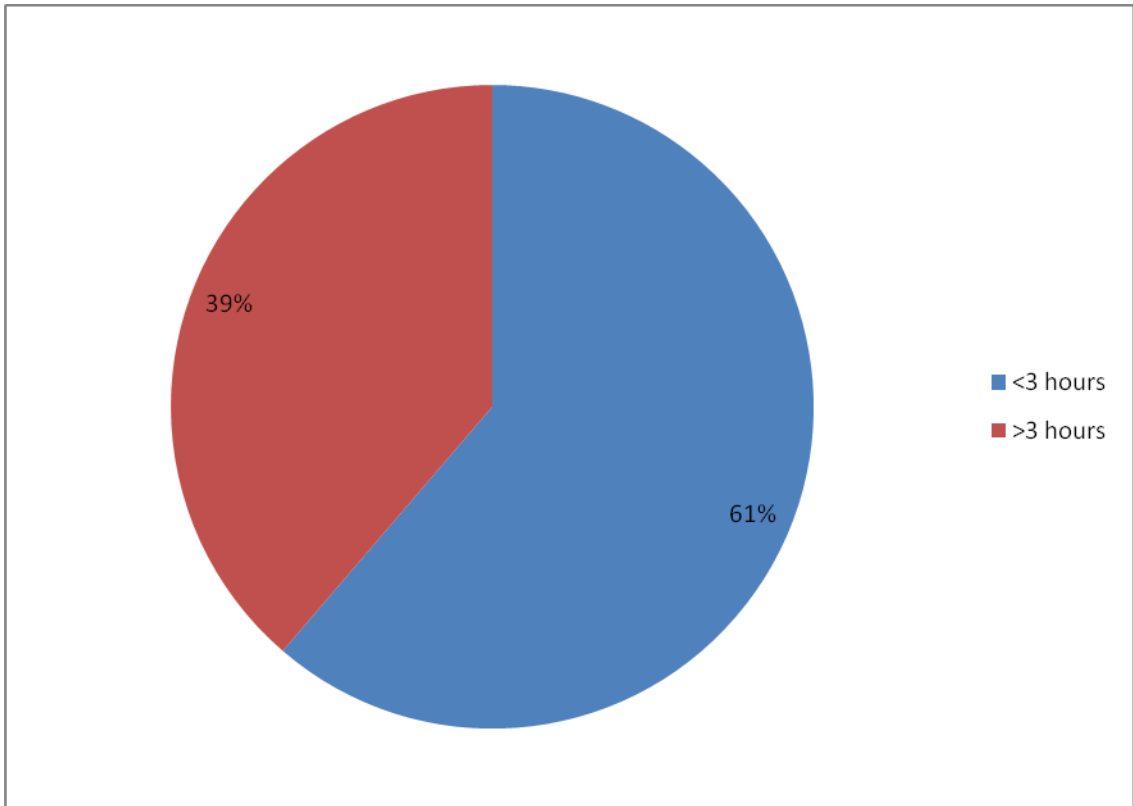


Fig 4.12: Length of stay of visitors to federal institutional-based zoos in South-West Nigeria



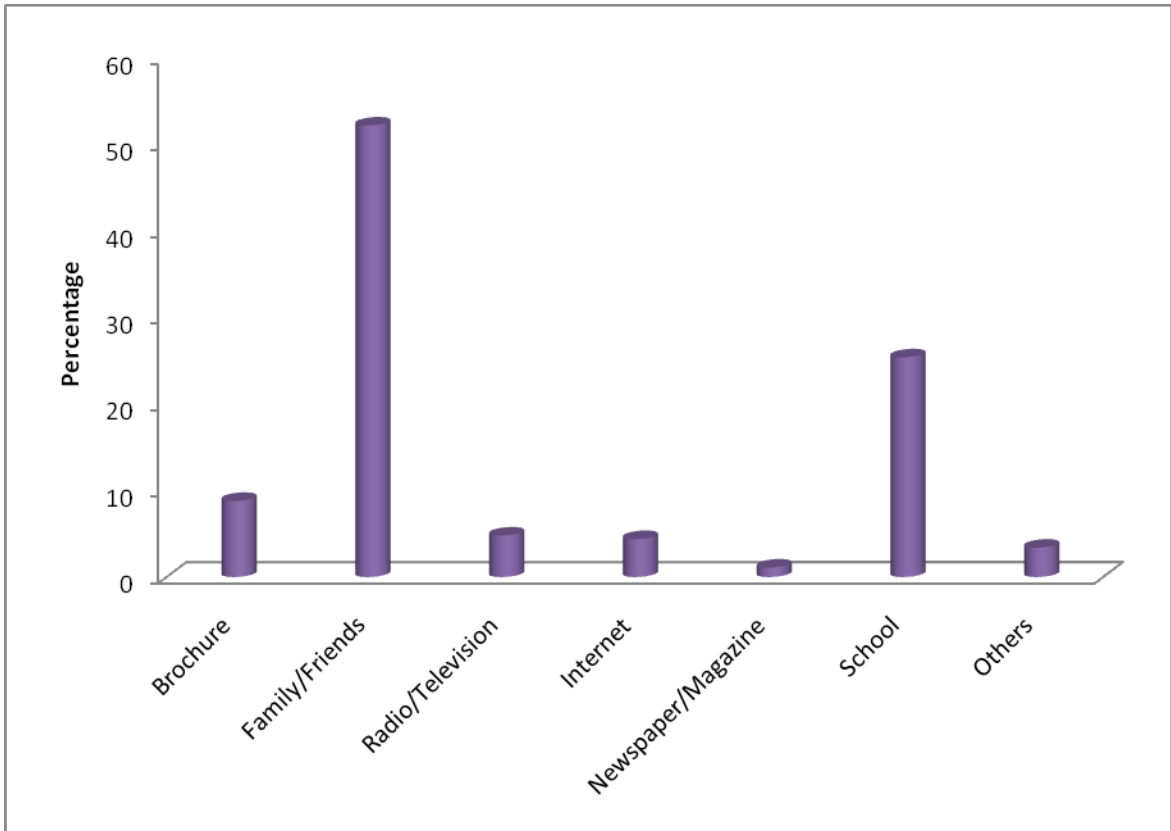


Fig 4.13: Medium of awareness about zoos by respondents in federal institutional-based zoos in South-West Nigeria

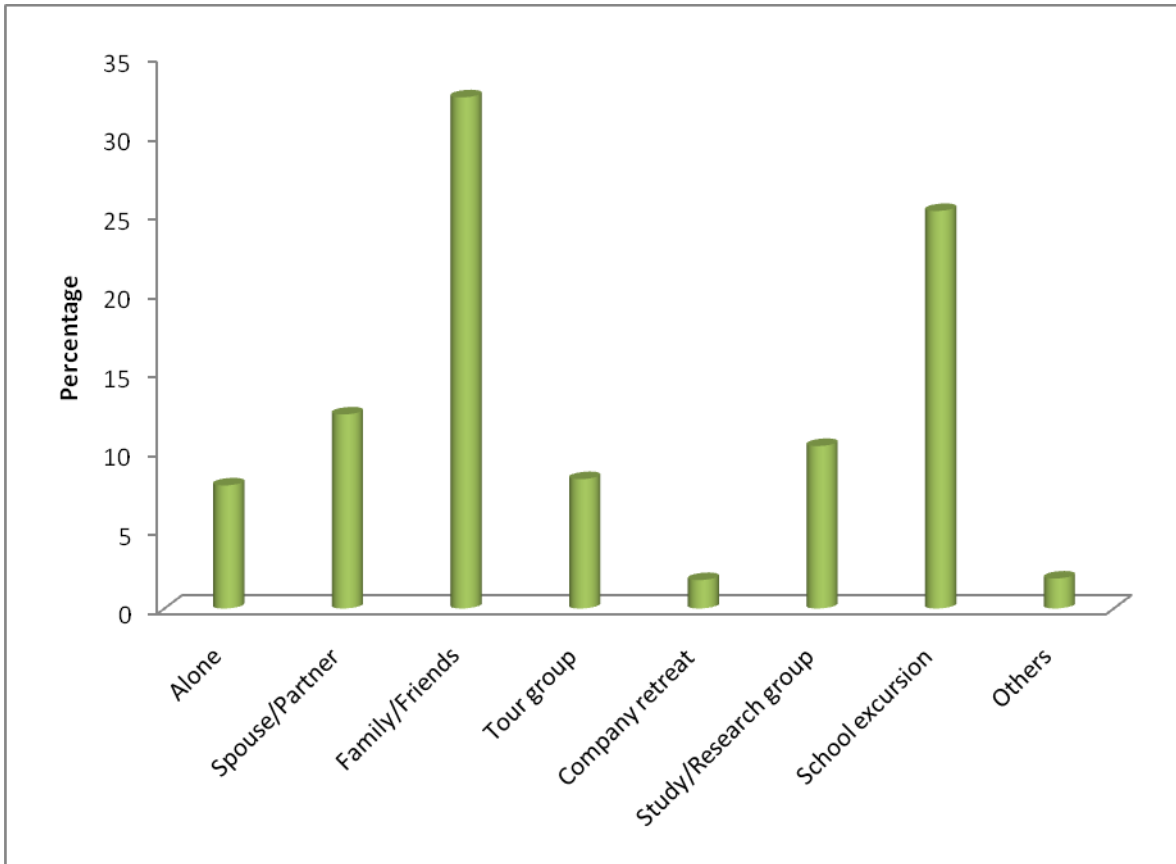


Fig 4.14: Travel company of visitors to federal institutional-based zoos in South-West Nigeria

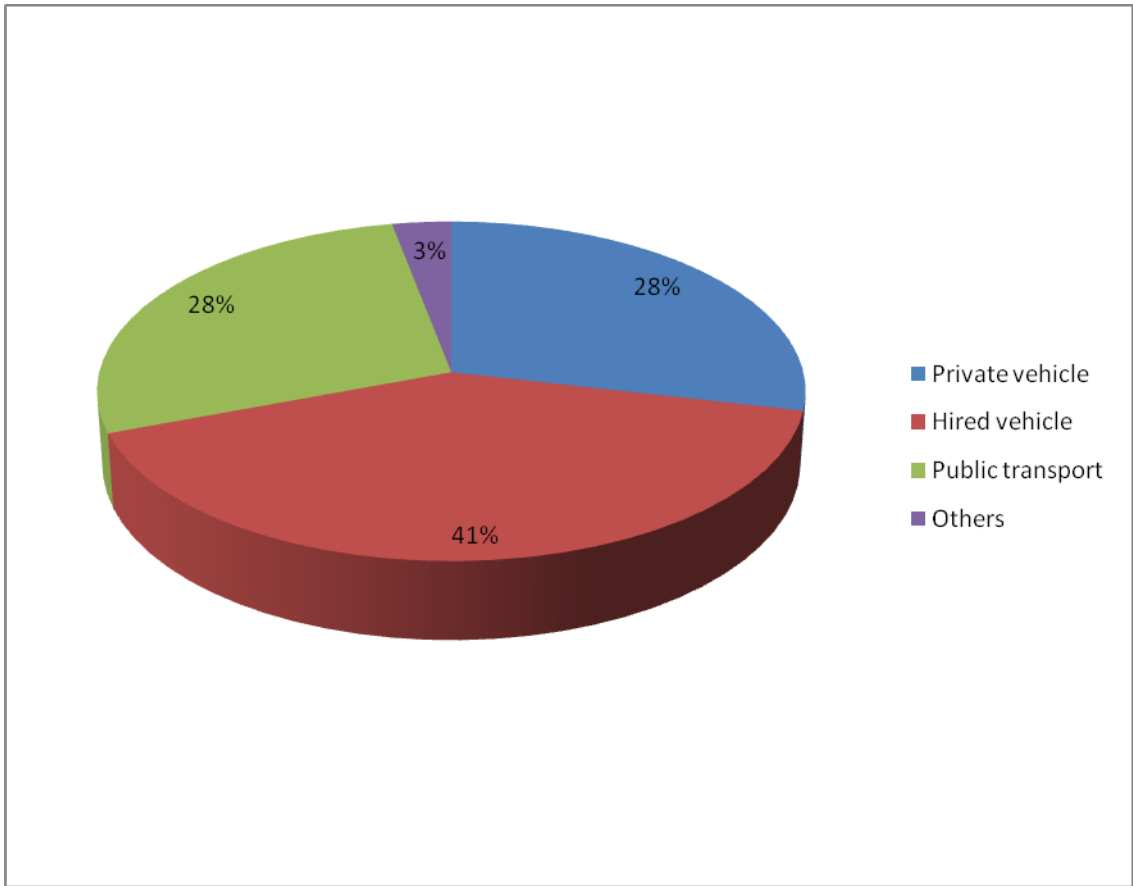


Fig 4.15: Means of transport of visitors to federal institutional-based zoos in South-West Nigeria

### 4.2.3 Preferred Zoo Marketing Strategy

The most preferred marketing strategy by visitors across all the study zoos was by Radio/Television as indicated by 41.6% (Table 4.8). This was followed by social media handles of Facebook, Twitter and Instagram as represented by 24% and through travel websites/blogs (15.3%). Others include e-mail (9.6%), newspaper/magazine (3.9%), billboards (3.8%) and other means (1.9%).

The Chi Square test of association in determining how the age of respondents influenced their choice of a preferred marketing strategy (Table 4.9) revealed a significant association ( $\chi^2 = 154.656$ ,  $df = 24$ ,  $p = 0.000$ ). The result of the Cross Tabulation revealed a great diversity in the responses of the visitors. For example respondents of lower ages e.g. 18-27 years age group indicated television/ radio as well as social media handles, travel websites and electronic mail as their preferred marketing strategies, as the age increases, the preference for the social media handles decreases (Table 4.10).

**Table 4.8: Preferred marketing strategy by visitors in federal institutional-based zoos in South-West Nigeria**

Response categories	U. I. Zoo		OAU		FUNAAB		FUTA		TOTAL	
			GARDEN		ZOO		PARK			
	F	%	F	%	F	%	F	%	F	%
Television/Radio	130	32.9	137	35.8	154	40.6	214	57.5	635	41.6
Travel websites/blogs	84	21.3	65	17.0	67	17.7	18	4.8	234	15.3
E-mail	28	7.1	74	19.3	12	3.2	32	8.6	146	9.6
Facebook/Twitter/Instagram	103	26.1	87	22.7	99	26.1	78	21.0	367	24.0
Newspaper/Magazine	22	5.6	0	0.0	20	5.3	17	4.6	59	3.9
Billboards	14	3.5	20	5.2	14	3.7	10	2.7	58	3.8
Others	13	3.3	0	0.0	13	3.4	3	0.8	29	1.9

Table 4.9: Chi Square test of Association between Visitors Age and Preferred Marketing Strategy

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	154.656 <sup>a</sup>	24	0.000*
Likelihood Ratio	118.019	24	0.000
Linear-by-Linear Association	7.474	1	0.006
N of Valid Cases	1528		

(\* = statistically significant)

Table 4.10: Cross Tabulation between Visitors Age and Preferred Marketing Strategy

		Preferred zoo marketing media							Total
	Age	Television/ Radio	Travel Websites/Blogs	E-Mail	Facebook/Twit ter/Instagram	Newspaper/ Magazine	Billboards	Others	
		18 - 27 years	488	185	102	313	50	41	3
28 - 37 years	111	41	29	38	5	15	13	252	
38 - 47 years	27	6	13	7	2	2	9	66	
48 - 57 years	6	0	2	8	2	0	4	22	
>58 years	3	2	0	1	0	0	0	6	
Total	635	234	146	367	59	58	29	1528	

### **4.3 Environmental attitudes of Visitors to federal institutional based zoos in South-West Nigeria and the antecedent factors**

#### **4.3.1 Environmental attitudes of Visitors**

The items in measuring the environmental attitudes and the influencing factors were assessed using a 5-point Likert scale labeled 1 = *Strongly agree*, 2 = *Agree*, 3 = *Undecided*, 4 = *Disagree*, 5 = *Strongly Disagree*. The New Ecology Paradigm (NEP) scale was divided into three scales: Human over nature (HON), Limits of growth (LOG) and Ecocrisis (EC).

##### **4.3.1.1 Environmental attitudes of UI Zoo visitors**

The result of the environmental attitudes of UI Zoo visitors is outlined on Table 4.11. Respondents showed the highest level of agreement with the HON factors (composite mean (CM) = 1.55) such as '*Mankind was created to rule over the rest of nature*'. The associated mean score (1.38) was the lowest. Others were '*Humans must live in harmony with nature in order to survive*' at a mean score of 1.48, '*Humans have the right to modify the natural environment to suit their needs*' (1.52), and '*Plants and animals exist primarily to be used by humans*' (1.85).

The LOG scale had the second highest level of agreement among respondents (CM = 2.09) with the factor '*To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled*' as that with the highest percentage agreement (1.80). This is followed by other factors: '*The balance of nature is very delicate and easily upset*', '*The earth is like a spaceship with only limited room and*



*resources*' and *'There are limits to growth beyond which our industrialized society cannot expand'* with mean scores of 2.01, 2.23, and 2.33 respectively.

The EC scale had the least level of agreement among respondents (CM = 2.39). The factors include *'When humans interfere with nature it often produces disastrous consequences'*, *'Mankind is severely abusing the environment'*, *'Humans need not adapt to the natural environment because they can remake it to suit their needs'* and *'We are approaching the limit of the number of people the earth can support'* with mean scores of 2.23, 2.25, 2.31, and 2.78 respectively.

#### **4.3.1.2 Environmental attitudes of OAU Garden visitors**

This result of the environmental attitudes of OAU Garden visitors is outlined on Table 4.11. Respondents showed the highest level of agreement with the HON factors (CM = 1.84) such as *'Humans have the right to modify the natural environment to suit their needs'*. The associated mean score (1.72) was the lowest. Others were *'Mankind was created to rule over the rest of nature'* (1.74); *'Plants and animals exist primarily to be used by humans'* (1.91); and *'Humans must live in harmony with nature in order to survive'* (1.99).

The LOG scale had the second highest level of agreement among respondents (CM = 2.34). The factors include *'The balance of nature is very delicate and easily upset'*; *'There are limits to growth beyond which our industrialized society cannot expand'*; *'The earth is like a spaceship with only limited room and resources'*; and *'To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled'* with mean scores of 2.21, 2.25, 2.32, and 2.37 respectively.

The EC scale had the least level of agreement among respondents (CM = 3.13). The factors include '*Mankind is severely abusing the environment*'; '*When humans interfere with nature it often produces disastrous consequences*'; '*We are approaching the limit of the number of people the earth can support*'; and '*Humans need not adapt to the natural environment because they can remake it to suit their needs*' with mean scores of 2.94, 3.01, 3.15, and 3.39 respectively. All the mean scores under the EC scale were in the 'undecided' Likert class.

#### **4.3.1.3 Environmental attitudes of FUNAAB Zoo visitors**

This result of the environmental attitudes of FUNAAB Zoo visitors is outlined on Table 4.11. Respondents showed the highest level of agreement with the HON factors (CM = 1.76) such as '*Humans have the right to modify the natural environment to suit their needs*' at associated mean score of 1.51. Others were '*Mankind was created to rule over the rest of nature*' (1.73); '*Plants and animals exist primarily to be used by humans*' (1.89); and '*Humans must live in harmony with nature in order to survive*' at (1.92).

The LOG scale (CM = 2.39) had the second highest level of agreement among respondents. The factors include '*To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled*'; '*The balance of nature is very delicate and easily upset*'; '*The earth is like a spaceship with only limited room and resources*'; and '*There are limits to growth beyond which our industrialized society cannot expand*' at 2.07, 2.21, 2.53, and 2.74 respectively.

The EC scale (CM = 2.58) had the least level of agreement among respondents. The factors include '*Humans need not adapt to the natural environment because they can*

*remake it to suit their needs*’; *‘When humans interfere with nature it often produces disastrous consequences’*; *‘Mankind is severely abusing the environment’*; and *‘We are approaching the limit of the number of people the earth can support’* with mean scores of 2.41, 2.45, 2.46 and 3.00 respectively.

#### **4.3.1.4 Environmental attitudes of FUTA Park visitors**

This result of the environmental attitudes of FUTA Park visitors is outlined on Table 4.11. Respondents showed the highest level of agreement with the HON factors (CM = 1.56) such as *‘Humans have the right to modify the natural environment to suit their needs’* at an associated mean score of 1.39. Others were *‘Mankind was created to rule over the rest of nature’* (1.45); *‘Plants and animals exist primarily to be used by humans’* (1.70); and *‘Humans must live in harmony with nature in order to survive’* (1.75).

The LOG scale (CM = 2.20) had the second highest level of agreement among respondents. The factors include: *‘To maintain a healthy economy we will have to develop a "steady-state’ economy where industrial growth is controlled’*; *‘The balance of nature is very delicate and easily upset’*; *‘There are limits to growth beyond which our industrialized society cannot expand’*; and *‘The earth is like a spaceship with only limited room and resources’* with mean scores of 1.73, 2.12, 2.43, and 2.53 respectively.

The EC scale (CM = 2.42) had the least level of agreement among respondents. The factors are: *‘Humans need not adapt to the natural environment because they can remake it to suit their needs’*; *‘When humans interfere with nature it often produces disastrous consequences’*; *‘We are approaching the limit of the number of people the earth can*

*support*'; and *'Mankind is severely abusing the environment'* 'at mean scores of 1.34, 2.26, 2.62, and 2.68 respectively.

#### **4.3.1.5 Environmental attitudes of visitors (Total)**

This is presented on Table 4.11. Respondents showed the highest level of agreement with the HON scale (1.68), followed by the LOG scale (2.25) while the least was the EC scale (2.63). The rank order showed the HON factor *'Humans have the right to modify the natural environment to suit their needs'* as the factor with the highest level of agreement (1.54) while the EC factor *'Mankind is severely abusing the environment'* as that with the lowest level of agreement (2.89).

**Table 4.11: Environmental attitudes of Visitors to federal institutional based zoos in South-West Nigeria**

<i>Factors</i>	<b>UI Zoo</b>		<b>OAU Garden</b>		<b>FUNAAB Zoo</b>		<b>FUTA Park</b>		<b>Total</b>		<b>Order*</b>
	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	
<b><i>Human over nature</i></b>	1.55	0.53	1.84	0.79	1.76	0.63	1.56	0.56	1.68	0.65	1^
Humans have the right to modify the natural environment to suit their needs	1.52	0.81	1.72	0.94	1.51	0.66	1.39	0.52	1.54	0.76	1
Mankind was created to rule over the rest of nature	1.38	0.65	1.74	0.82	1.73	0.88	1.45	0.80	1.57	0.81	2
Plants and animals exist primarily to be used by humans	1.85	1.02	1.91	0.94	1.89	0.94	1.70	0.93	1.84	0.96	4
Humans must live in harmony with nature in order to survive	1.48	0.76	1.99	0.93	1.92	1.04	1.75	0.96	1.78	0.95	3
<b><i>Limits of growth</i></b>	2.09	0.71	2.34	0.72	2.39	0.65	2.20	0.60	2.25	0.68	2^
The balance of nature is very delicate and easily upset.	2.01	0.97	2.21	0.82	2.21	0.89	2.12	1.04	2.13	0.94	6
To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled.	1.80	0.80	2.37	0.78	2.07	0.83	1.73	0.86	1.99	0.85	5

The earth is like a spaceship with only limited room and resources	2.23	1.17	2.32	0.80	2.53	1.13	2.53	1.18	2.40	1.09	7
There are limits to growth beyond which our industrialized society cannot expand	2.33	1.07	2.25	0.78	2.74	1.19	2.43	1.22	2.49	1.09	8
<b><i>Ecocrisis</i></b>	2.39	0.86	3.13	0.54	2.58	0.75	2.42	0.80	2.63	0.80	3 <sup>^</sup>
When humans interfere with nature it often produces disastrous consequences	2.23	1.16	3.01	0.81	2.45	1.15	2.26	1.23	2.50	1.15	9
Humans need not adapt to the natural environment because they can remake it to suit their needs.	2.31	1.27	3.39	0.71	2.41	1.15	2.11	1.34	2.56	1.24	10
Mankind is severely abusing the environment.	2.25	1.22	2.94	0.80	2.46	1.00	2.68	1.41	2.58	1.15	11
We are approaching the limit of the number of people the earth can support	2.78	1.26	3.15	0.75	3.00	1.29	2.62	1.35	2.89	1.20	12

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(St.D = Standard Deviation \* and ^: Rank order by ascending mean in total sample)

### **4.3.2 Antecedent factors of visitors' environmental attitude**

#### **4.3.2.1 Antecedent factors of UI Zoo visitors' environmental attitude**

The descriptive result of the influential factors of visitors' environmental attitude is presented on Table 4.12. The factors were classified under three scales: Deontological Status (DES), Law obedience (LOB) and Political action (PAC). Under the DES scale (CM = 1.70), the factor *'I try to create and provide a better living environment for future generations'* had the highest percentage agreement with a mean score of 1.58. The factors: *'I am interested in conserving natural resources'* and *'I am concerned about the environment for my future personal convenience'* had a mean score of 1.69 each, while *'I reduce unnecessary waste'* had a mean score of 1.84.

Under the LOB scale (CM = 1.62), the factor *'I show respect to the laws and especially those for the environment'* had the highest percentage agreement (1.52). This is followed by the factors *'I try to avoid committing briberies in my transactions'* (1.55); *'I abide by the safety law for the protection of the environment'* (1.59), and *'I try to avoid companies that use misleading environmental practices'* (1.82).

The factor *'I support environmental pressure groups in order to combat environmental degradation'* had the highest percentage agreement under the PAC scale (2.53). Other factors: *'I boycott companies that are not environmentally responsible'*, *'I often intervene with the media in order to combat environmental degradation'* and *'I lobby political representatives to support green issues'* had mean scores of 2.47, 2.57 and 2.75 respectively.

#### 4.3.2.2 Antecedent factors of OAU Garden visitors environmental attitude

This is presented on Table 4.12. Under the DES scale (CM = 2.51), the factor '*I am interested in conserving natural resources*' had the highest percentage agreement of with a mean score of 2.34. This was followed by the factors: '*I try to create and provide a better living environment for future generations*', '*I reduce unnecessary waste*', and '*I am concerned about the environment for my future personal convenience*' at mean scores of 2.45, 2.47 and 2.78 respectively.

Under the LOB scale (CM = 2.66), the factor '*I try to avoid committing briberies in my transactions*' had the highest percentage agreement (2.14). This was followed by the factors '*I show respect to the laws and especially those for the environment*' (2.77); '*I abide by the safety law for the protection of the environment*' (2.83), and '*I try to avoid companies that use misleading environmental practices*' (2.83).

The factor '*I boycott companies that are not environmentally responsible*' had the lowest percentage disagreement under the PAC scale (3.40). The respondents displayed high percentage disageeement with the other factors:, '*I often intervene with the media in order to combat environmental degradation*', '*I support environmental pressure groups in order to combat environmental degradation*' and '*I lobby political representatives to support green issues*' at mean scores of 4.06, 4.08 and 4.16 respectively. CM was 3.93.



#### 4.3.2.3 Antecedent factors of FUNAAB Zoo visitors' environmental attitude

This is presented on Table 4.12. Under the DES scale (CM = 2.08), the factor '*I try to create and provide a better living environment for future generations*' had the highest percentage agreement (1.96). This was followed by the factors: '*I am interested in conserving natural resources*', and '*I am concerned about the environment for my future personal convenience*' at mean scores of 2.05 each. The least was '*I reduce unnecessary waste*' factor (2.25).

Under the LOB scale (CM = 1.89), the factor '*I try to avoid committing briberies in my transactions*' had the highest percentage agreement (1.75). This was followed by the factors '*I show respect to the laws and especially those for the environment*' (1.81); '*I try to avoid companies that use misleading environmental practices*' (1.93); and '*I abide by the safety law for the protection of the environment*' (2.09).

The factor '*I lobby political representatives to support green issues*' had the highest percentage agreement under the PAC scale (2.53). Other factors: '*I support environmental pressure groups in order to combat environmental degradation*', '*I boycott companies that are not environmentally responsible*', and '*I often intervene with the media in order to combat environmental degradation*' had mean scores of 2.57, 2.71 and 2.77 respectively. CM was 2.64.

#### 4.3.2.4 Antecedent factors of FUTA Park visitors environmental attitude

This is presented on Table 4.12. Under the DES scale (CM = 1.74), the factor '*I try to create and provide a better living environment for future generations*' had the highest percentage agreement (1.53). This was followed by the factors: '*I am concerned about the environment for my future personal convenience*', '*I am interested in conserving natural resources*', and '*I reduce unnecessary waste*' at mean scores of 1.76, 1.82 and 1.84 respectively.

Under the LOB scale (CM = 1.60), the factor '*I show respect to the laws and especially those for the environment*' had the highest percentage agreement (1.30). This was followed by the factors: '*I try to avoid committing briberies in my transactions*' (1.57); '*I abide by the safety law for the protection of the environment*' (1.74), and '*I try to avoid companies that use misleading environmental practices*' (2.83).

The factor '*I support environmental pressure groups in order to combat environmental degradation*' had the highest percentage agreement under the PAC scale (2.20). Other factors: '*I lobby political representatives to support green issues*', '*I boycott companies that are not environmentally responsible*', and '*I often intervene with the media in order to combat environmental degradation*', had mean scores of 2.44, 2.50 and 2.55 respectively. CM was 2.42.

#### **4.3.5.1 Antecedent factors of visitors' environmental attitude across the study zoos**

This is presented on Table 4.12. The respondents showed the hishest percentage agreement with the LOB scale (1.94). This was followed by the DES scale (2.00) and lastly the PAC scale (2.88). With repect to individual factors, the rank order showed the factor '*I try to avoid committing briberies in my transactions*' as the factor with the highest level of agreement (1.75) while '*I often intervene with the media in order to combat environmental degradation*' as that with the lowest level of agreement (2.99).

**Table 4.12: Antecedent factors of environmental attitude of visitors to federal institutional-based zoos in South-West Nigeria**

<i>Factors</i>	<b>UI Zoo</b>		<b>OAU Garden</b>		<b>FUNAAB Zoo</b>		<b>FUTA Park</b>		<b>Total</b>		<b>Order*</b>
	Mean	St.D	Mean	St.D	Mean	SD	Mean	St.D	Mean	St.D	
<b><i>Deontological status (DES) (<math>\alpha=0.615</math>)</i></b>	1.70	0.59	2.51	0.76	2.08	0.62	1.74	0.55	2.00	0.71	2 <sup>^</sup>
I am interested in conserving natural resources	1.69	0.88	2.34	1/16	2.05	0.88	1.84	1.11	1.98	1.04	4
I reduce unnecessary waste	1.84	0.89	2.47	0.89	2.25	0.86	1.82	1.06	2.09	0.97	7
I try to create and provide a better living environment for future generations	1.58	0.77	2.45	0.86	1.96	0.72	1.53	0.71	1.88	0.85	3
I am concerned about the environment for my future personal convenience	1.69	0.90	2.78	0.78	2.05	0.99	1.76	1.00	2.07	1.02	6
<b><i>Law obedience (LOB) (<math>\alpha=0.804</math>)</i></b>	1.62	0.66	2.66	0.61	1.89	0.73	1.60	0.65	1.94	0.79	1 <sup>^</sup>
I try to avoid committing briberies in my transactions	1.55	0.80	2.14	0.75	1.75	0.76	1.57	0.95	1.75	0.85	1
I show respect to the laws and especially those for the environment	1.52	0.75	2.77	0.83	1.81	0.67	1.30	0.46	1.85	0.89	2
I abide by the safety law for the protection of the environment	1.59	0.82	2.83	0.72	2.09	0.94	1.74	1.07	2.06	1.02	5
I try to avoid companies that use misleading environmental practices	1.80	0.93	2.90	0.69	1.93	0.91	1.80	1.12	2.11	1.03	8

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<b><i>Political action (PAC) (<math>\alpha=0.747</math>)</i></b>	2.53	0.86	3.92	0.65	2.64	0.75	2.42	0.68	2.88	0.96	3 <sup>^</sup>
I often intervene with the media in order to combat environmental degradation	2.57	1.21	4.06	0.71	2.77	0.93	2.55	1.17	2.99	1.20	12
I support environmental pressure groups in order to combat environmental degradation	2.32	1.06	4.08	0.74	2.57	0.87	2.20	0.94	2.80	1.18	10
I lobby political representatives to support green issues	2.75	1.11	4.16	0.74	2.53	0.97	2.44	1.17	2.97	1.22	11
I boycott companies that are not environmentally responsible	2.47	1.20	3.40	0.92	2.71	0.86	2.50	1.03	2.77	1.08	9

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(St.D = Standard Deviation \* and <sup>^</sup>: Rank order by descending mean in total sample)

#### 4.3.6 Test of Hypothesis 1 (H<sub>0</sub>1)

H<sub>0</sub>1: There is no significant relationship between visitors' environmental attitude and their antecedent factors (a) deontological; (b) law obedience; and (c) politically active statuses.

- UI Zoo

This is presented on Table 4.13. The model fit was acceptable with a Goodness of Fit Index (GFI) of 0.9379, Root Mean Square Error of Approximation (RMSEA) of 0.1078 and Standardized Root Mean Residual (SRMR) of 0.091 at 95% Confidence Interval (CI). The full two factor model fit the data significantly with an associated Chi Square of 1403.583 ( $p = 0.000$ ). All the influential factors of environmental attitude (IEA) (deontological status, law obedience and political action) variable had positive estimates and were statistically significant. Most factors under the environmental attitude had negative estimates, and were not statistically significant.

There was no significant relationship between UI Zoo visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses ( $Z = -0.6898$ ,  $p = 0.4903$ ). H<sub>0</sub>1 is therefore accepted.

**Table 4.13: Test of relationship between visitors' environmental attitude and antecedent factors in UI Zoo**

Variables	Op	Factors	Estimate	SE	Z value	P value	CI lower	CI Upper
IEA	≈							
DES		IEA 1	1	0	NA	NA	1	1
		IEA 2	0.4827	0.1231	3.9224	0.0001*	0.2415	0.7239
		IEA 3	0.6868	0.1167	5.8840	0.0000*	0.4580	0.9156
		IEA 4	0.3607	0.1214	2.9704	0.0030*	0.1227	0.5986
LOB		IEA 5	1.1279	0.1426	7.9077	0.0000*	0.8484	1.4075
		IEA 6	1.3726	0.1528	8.9830	0.0000*	1.0731	1.6721
		IEA 7	1.6366	0.1782	9.1858	0.0000*	1.2874	1.9858
		IEA 8	1.3734	0.1689	8.1308	0.0000*	1.0424	1.7045
PAC		IEA 9	1.1731	0.1870	6.2730	0.0000*	0.8066	1.5397
		IEA 10	1.1314	0.1695	6.6769	0.0000*	0.7993	1.4635
		IEA 11	1.2758	0.1843	6.9229	0.0000*	0.9146	1.6369
		IEA 12	1.5190	0.2047	7.4216	0.0000*	1.1179	1.9202
Env.At	≈							
HON		EA1	1	0	NA	NA	1	1
		EA2	-1.0581	1.8758	-0.5641	0.5727	-4.7345	2.6184
		EA3	-1.925	3.3254	-0.5789	0.5627	-8.4426	4.5926
		EA4	0.5482	1.4165	0.387	0.6988	-2.2281	3.3245
LOG		EA5	-16.0241	21.6456	-0.7403	0.4591	-58.4487	26.4004
		EA6	-6.5829	9.0825	-0.7248	0.4686	-24.3842	11.2184
		EA7	-21.1143	28.7865	-0.7335	0.4633	-77.5348	35.3063
		EA8	-18.7124	25.4258	-0.736	0.4618	-68.5461	31.1213
EOC		EA9	-14.6361	19.8371	-0.7378	0.4606	-53.5161	24.2438
		EA10	-13.5475	18.4715	-0.7334	0.4633	-49.751	22.656
		EA11	-19.5561	26.3986	-0.7408	0.4588	-71.2964	32.1841
		EA12	-19.6026	26.6204	-0.7364	0.4615	-71.7777	32.5724
<b>Env.At</b>	<b>~</b>	<b>IEA</b>	<b>-0.0108</b>	<b>0.0156</b>	<b>-0.6898</b>	<b>0.4903</b>	<b>-0.0413</b>	<b>0.0198</b>

(Goodness of fit test (Chi Square ( $\chi^2$ ) = 1403.583, df = 251, P = 0.0000, RMSEA = 0.1078 (95% CI, p = 0.000), SRMR = 0.0912, GFI = 0.9379) \*=statistically significant)

- OAU Garden

This is presented on Table 4.14. The model fit was acceptable with a GFI of 0.9275, RMSEA of 0.2270 and SRMR of 0.1485. The full two factor model fit the data significantly with an associated Chi Square of 5205.125 ( $p = 0.000$ ). Most of the influential factors of environmental attitude (IEA) (deontological status, law obedience and political action) had positive estimates, and were statistically significant. All the factors under the environmental attitude variable had positive estimates and were statistically significant.

There was a significant relationship between OAU Garden visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses ( $Z = 6.5123$ ,  $p = 0.000$ ).  $H_0$  is therefore rejected.

- FUNAAB Zoo

This is presented on Table 4.15. The model fit was acceptable with a GFI of 0.8829, RMSEA of 0.1892 and SRMR of 0.1451. The full two factor model fit the data significantly with an associated Chi Square of 3657.081 ( $p = 0.000$ ). All the influential factors of environmental attitude (IEA) (deontological status, law obedience and political action) had positive estimates, and were statistically significant. Most factors under the environmental attitude variable had positive estimates and were statistically significant.

There was a significant relationship between FUNAAB Zoo visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses ( $Z = 4.0587$ ,  $p = 0.000$ ).  $H_0$  is therefore rejected.



**Table 4.14: Test of relationship between visitors' environmental attitude and antecedent factors in OAU Garden**

Variables	Op	Factors	Estimate	SE	Z value	P value	CI lower	CI Upper
IEA	=~							
DES		IEA 1	1	0	NA	NA	1	1
		IEA 2	0.7904	0.0571	13.8446	0.0000	0.6785	0.9023
		IEA 3	0.7901	0.0547	14.4321	0.0000	0.6828	0.8974
		IEA 4	0.5592	0.0527	10.6210	0.0000	0.4560	0.6624
LOB		IEA 5	0.4996	0.0485	10.2911	0.0000	0.4044	0.5947
		IEA 6	0.8018	0.0572	14.0261	0.0000	0.6898	0.9139
		IEA 7	0.6751	0.0547	12.3377	0.0000	0.5679	0.7824
		IEA 8	0.5973	0.0528	11.3159	0.0000	0.4938	0.7007
PAC		IEA 9	0.0498	0.0491	1.0137	0.3107	-0.0465	0.1462
		IEA 10	0.0871	0.0517	1.6861	0.0918	-0.0142	0.1884
		IEA 11	0.0541	0.0514	1.0523	0.2927	-0.0467	0.1549
		IEA 12	0.7429	0.0619	11.9963	0.0000	0.6215	0.8643
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	0.9267	0.0758	12.2272	0.0000	0.7781	1.0752
		EA3	1.0427	0.0878	11.8691	0.0000	0.8705	1.2148
		EA4	1.1443	0.0894	12.8035	0.0000	0.9691	1.3195
LOG		EA5	1.1415	0.0829	13.7741	0.0000	0.9791	1.3039
		EA6	1.1003	0.0792	13.8922	0.0000	0.9451	1.2556
		EA7	1.0897	0.0806	13.5200	0.0000	0.9318	1.2477
		EA8	1.0804	0.0792	13.6417	0.0000	0.9252	1.2356
EOC		EA9	0.2970	0.0708	4.1925	0.0000	0.1582	0.4359
		EA10	0.2790	0.0622	4.4838	0.0000	0.1570	0.4010
		EA11	0.6892	0.0725	9.5033	0.0000	0.5471	0.8314
		EA12	0.4354	0.0670	6.5028	0.0000	0.3041	0.5666
<b>Env.At</b>	<b>~</b>	<b>IEA</b>	<b>0.2947</b>	<b>0.0452</b>	<b>6.5123</b>	<b>0.0000</b>	<b>0.2060</b>	<b>0.3833</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 5205.125, df = 251, P = 0.0000), RMSEA = 0.2270 (95% CI, p = 0.000), SRMR = 0.1485, GFI = 0.9275) \*=statistically significant)

**Table 4.15: Test of relationship between visitors' environmental attitude and antecedent factors in FUNAAB Zoo**

Variables	Op	Factors	Estimate	SE	Z value	P value	CI lower	CI Upper
IEA	=~							
DES		IEA 1	1	0	NA	NA	1	1
		IEA 2	2.1486	0.3459	6.2115	0.0000*	1.4706	2.8266
		IEA 3	1.9831	0.3123	6.3490	0.0000*	1.3709	2.5953
		IEA 4	2.2096	0.3706	5.9628	0.0000*	1.4833	2.9359
LOB		IEA 5	2.1322	0.3349	6.3671	0.0000*	1.4759	2.7885
		IEA 6	1.9868	0.3092	6.4258	0.0000*	1.3808	2.5928
		IEA 7	2.8826	0.4513	6.3878	0.0000*	1.9982	3.7671
		IEA 8	2.6300	0.4130	6.3687	0.0000*	1.8206	3.4394
PAC		IEA 9	1.5861	0.2841	5.5832	0.0000*	1.0293	2.1429
		IEA 10	1.5782	0.2747	5.7448	0.0000*	1.0397	2.1166
		IEA 11	0.9210	0.2214	4.1608	0.0000*	0.4872	1.3548
		IEA 12	0.5846	0.1788	3.2695	0.0011*	0.2342	0.9351
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	1.6272	0.1846	8.8167	0.0000*	1.2654	1.9889
		EA3	0.5301	0.1539	3.4448	0.0006*	0.2285	0.8317
		EA4	2.5978	0.2787	9.3194	0.0000*	2.0514	3.1441
LOG		EA5	0.3738	0.1529	2.4443	0.0145*	0.0741	0.6736
		EA6	1.7509	0.1839	9.5190	0.0000*	1.3904	2.1114
		EA7	0.2336	0.2040	1.1450	0.2522	-0.1663	0.6334
		EA8	-0.3850	0.2153	-1.7882	0.0738	-0.8071	0.0370
EOC		EA9	0.9128	0.2011	4.5394	0.0000*	0.5187	1.3069
		EA10	-0.0448	0.1942	-0.2307	0.8176	-0.4254	0.3358
		EA11	1.0906	0.1825	5.9741	0.0000*	0.7328	1.4483
		EA12	1.3769	0.2351	5.8556	0.0000*	0.9160	1.8378
<b>Env.At</b>	<b>~</b>	<b>IEA</b>	<b>0.3898</b>	<b>0.0960</b>	<b>4.0587</b>	<b>0.0000*</b>	<b>0.2016</b>	<b>0.5781</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 3657.008, df = 251, P = 0.0000), RMSEA = 0.1892 (95% CI, p = 0.000), SRMR = 0.1451, GFI = 0.8829), \*=statistically significant)

- **FUTA Park**

This is presented on Table 4.16. The model fit was acceptable with a GFI of 0.8986, RMSEA of 0.2027 and SRMR of 0.1517. The full two factor model fit the data significantly with an associated Chi Square of 4087.165 ( $p = 0.000$ ). Most of the influential factors of environmental attitude (IEA) (deontological status, law obedience and political action) had positive estimates, and were statistically significant. Also, most factors under the environmental attitude variable had positive estimates and were statistically significant.

There was a significant relationship between FUTA Park visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses ( $Z = 3.5548$ ,  $p = 0.004$ ).  $H_0$  is therefore rejected.

- **Total**

This is presented on Table 4.17. The model fit was acceptable with a GFI of 0.9033, RMSEA of 0.1220 and SRMR of 0.092. The full two factor model fit the data significantly with an associated Chi Square of 5967.02 ( $p = 0.000$ ). All the influential factors of environmental attitude (IEA) (deontological status, law obedience and political action) had positive estimates, and were statistically significant. Likewise, all the factors under the environmental attitude variable had positive estimates and were statistically significant.

There was a significant relationship between visitors' environmental attitude and their (a) deontological; (b) law obedience; and (c) politically active statuses ( $Z = 10.7585$ ,  $p = 0.000$ ) across all the zoos.  $H_0$  is therefore rejected.

**Table 4.16: Test of relationship between visitors' environmental attitude and antecedent factors in FUTA Park**

Variables	Op	Factors	Estimate	SE	Z value	P value	CI lower	CI Upper
IEA	=~							
DES		IEA 1	1	0	NA	NA	1	1
		IEA 2	0.0156	0.0977	0.1599	0.8730	-0.1759	0.2072
		IEA 3	0.4335	0.0850	5.1033	0.0000*	0.2670	0.6000
		IEA 4	0.7487	0.1015	7.3729	0.0000*	0.5497	0.9477
LOB		IEA 5	1.0428	0.1276	8.1738	0.0000*	0.7928	1.2929
		IEA 6	0.3788	0.0514	7.3714	0.0000*	0.2781	0.4795
		IEA 7	0.7513	0.1341	5.6043	0.0000*	0.4886	1.0140
		IEA 8	0.7891	0.1202	6.5667	0.0000*	0.5536	1.0247
PAC		IEA 9	-0.1786	0.1084	-1.6477	0.0994	-0.3911	0.0339
		IEA 10	-0.2210	0.0901	-2.4515	0.0142*	-0.3976	-0.0443
		IEA 11	0.2694	0.1185	2.2736	0.0230*	0.0372	0.5017
		IEA 12	0.0507	0.0984	0.5157	0.6060	-0.1421	0.2435
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	2.4539	0.5816	4.2191	0.0000*	1.3139	3.5938
		EA3	3.6476	0.8799	4.1454	0.0000*	1.9230	5.3722
		EA4	5.2560	1.3783	3.8132	0.0001*	2.5545	7.9575
LOG		EA5	0.2988	0.4632	0.6451	0.5188	-0.6090	1.2067
		EA6	0.2857	0.3670	0.7785	0.4363	-0.4335	1.0049
		EA7	-0.4798	0.5100	-0.9408	0.3468	-1.4795	0.5198
		EA8	-1.8144	0.6312	-2.8747	0.0040*	-3.0515	-0.5774
EOC		EA9	-0.3603	0.5289	-0.6811	0.4958	-1.3969	0.6764
		EA10	1.0274	0.5970	1.7208	0.0853	-0.1428	2.1976
		EA11	3.3418	1.1419	2.9267	0.0034*	1.1038	5.5799
		EA12	4.1901	1.1528	3.6347	0.0003*	1.9306	6.4496
<b>Env.At</b>	<b>~</b>	<b>IEA</b>	<b>0.1638</b>	<b>0.0461</b>	<b>3.5548</b>	<b>0.0004*</b>	<b>0.0735</b>	<b>0.2541</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 4087.165, df = 251, P = 0.0000), RMSEA = 0.2027 (95% CI, p = 0.000), SRMR = 0.1517, GFI = 0.8986) \*=statistically significant)

**Table 4.17: Test of relationship between visitors' environmental attitude and antecedent factors (Total)**

Variables	Op	Factors	Estimate	SE	Z value	P value	CI lower	CI Upper
IEA	=~							
DES		IEA 1	1	0	NA	NA	1	1
		IEA 2	0.961	0.0654	14.6896	0.0000*	0.8328	1.0892
		IEA 3	1.173	0.0666	17.6149	0.0000*	1.0425	1.3035
		IEA 4	1.1897	0.0736	16.1756	0.0000*	1.0456	1.3339
LOB		IEA 5	1.043	0.0624	16.7089	0.0000*	0.9206	1.1653
		IEA 6	1.5203	0.0789	19.2592	0.0000*	1.3656	1.675
		IEA 7	1.6373	0.0883	18.5501	0.0000*	1.4643	1.8103
		IEA 8	1.4944	0.0836	17.8763	0.0000*	1.3306	1.6583
PAC		IEA 9	1.2768	0.0849	15.039	0.0000*	1.1104	1.4433
		IEA 10	1.4238	0.0878	16.2184	0.0000*	1.2518	1.5959
		IEA 11	1.3325	0.0872	15.2803	0.0000*	1.1616	1.5034
		IEA 12	1.1617	0.0759	15.3119	0.0000*	1.013	1.3104
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	1.1758	0.0768	15.3131	0.0000*	1.0253	1.3263
		EA3	1.0807	0.0848	12.7421	0.0000*	0.9145	1.247
		EA4	1.5878	0.1012	15.6869	0.0000*	1.3895	1.7862
LOG		EA5	0.9613	0.0917	10.4781	0.0000*	0.7815	1.1412
		EA6	1.3147	0.0915	14.3705	0.0000*	1.1354	1.494
		EA7	1.0132	0.1056	9.599	0.0000*	0.8063	1.2201
		EA8	0.7019	0.0981	7.1537	0.0000*	0.5096	0.8942
EOC		EA9	1.045	0.1119	9.3352	0.0000*	0.8256	1.2644
		EA10	0.9587	0.1087	8.8232	0.0000*	0.7457	1.1717
		EA11	1.3523	0.1219	11.0906	0.0000*	1.1133	1.5913
		EA12	1.4406	0.1259	11.438	0.0000*	1.1937	1.6874
<b>Env.At</b>	<b>~</b>	<b>IEA</b>	<b>0.3563</b>	<b>0.0331</b>	<b>10.7585</b>	<b>0.0000*</b>	<b>0.2914</b>	<b>0.4212</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 5967.02, df = 251, P = 0.0000), RMSEA = 0.1220 (95% CI, p = 0.000), SRMR = 0.092, GFI = 0.9033) \*=statistically significant)

**4.3.7 Hypothesis 2 (H<sub>02</sub>): There is no significant difference in visitors' environmental attitude across federal institutional-based zoos in South-West, Nigeria**

The results of the Analysis of Variance (ANOVA) in testing the visitors' environmental attitude across the zoos revealed that a significant difference exists at  $P < 0.05$  (Table 4.18). Therefore H<sub>02</sub> is rejected.

**Table 4.18: Test of difference in visitors' environmental attitude across federal institutional-based zoos in South-West, Nigeria**

		<b>Sum of</b>	<b>df</b>	<b>Mean</b>	<b>F</b>	<b>Sig.</b>
		<b>Squares</b>		<b>Square</b>		
Environmental attitude	Between Groups	22.924	3	7.641	13.526	0.000*
	Within Groups	861.524	1525	0.565		
	Total	884.447	1528			

(\* = statistically significant)

#### **4.4 Visitors Image of Zoos and their Motivation to federal institutional-based zoos in South-West, Nigeria**

##### **4.4.1 Zoo Image**

Visitors' image of zoological gardens across the study zoos is presented on Table 4.19. The mean scores of the factors were measured on a 3 point Likert type of 1= Agree, 2= Neutral and 3= Disagree.

The factors of highest percentage agreement were '*a place to see wild animals*' at 92%, '*a place that provides a fun day out for the public*' at 88.3%, '*supports scientific research*' at 84.1%, '*educate the public about conservation issues*' at 83%, '*a source of generating income*' at 83.1%, '*zoos are important places for conserving wildlife*' at 82.9%, '*a place that offers opportunity to interact with wild animals*' at 78.5% and '*The zoo is a training ground for staff/conservationists*' at 73.4%. Other factors: '*Zoos organize animal conservation campaigns*' had percentage agreement of 72.1%, '*Zoos treat sick and injured animals*' (73.2%), '*Zoos breed animals actively*' (67.2%), '*A place where people see wild animals without having to destroy their natural environment*' (73.2%).

The factors of least percentage agreement were '*Zoos reintroduce wild animals into the wild*' at 60.3% and '*Zoos are venues for social functions such as birthday/ wedding party and conference*' at 26%.



**Table 4.19: Visitors Image of Zoos in federal institutional-based zoos in South-West, Nigeria**

Factors	U. I. Zoo ( $\alpha = 0.688$ )			OAU GARDEN ( $\alpha = 0.751$ )			FUNAAB ZOO ( $\alpha = 0.695$ )			FUTA PARK ( $\alpha = 0.498$ )			TOTAL ( $\alpha = 0.654$ )			M	SD	*
	A	N	D	A	N	D	A	N	D	A	N	D	A	N	D			
A place to see wild animals	91.9	6.6	1.5	100.0	0.0	0.0	84.7	13.5	0.0	89.2	6.5	4.3	92.0	6.6	1.4	1.10	0.34	1
Offer opportunity to interact with animals	75.2	18.5	6.3	100.0	0.0	0.0	84.7	14.5	0.8	53.8	32.3	14.0	78.5	16.2	5.2	1.27	0.55	7
Provides a fun day out for the public	82.8	14.4	2.8	99.5	0.5	0.0	86.0	13.7	0.3	84.9	13.4	1.6	88.3	10.5	1.2	1.13	0.37	2
Venue for social functions e.g. birthday party, conference	32.9	26.6	40.5	8.9	9.4	81.7	23.5	50.9	25.6	38.7	17.2	44.1	26.0	26.0	48.0	2.22	0.83	14
People see wild animals without destroying their natural habitat	77.5	13.4	9.1	62.9	37.1	0.0	91.0	7.7	1.3	49.7	25.5	24.7	70.4	20.9	8.7	1.38	0.64	12
Zoos are important places for conserving wildlife	83.3	14.9	1.8	62.4	37.6	0.0	93.4	6.3	0.3	93.0	7.0	0.0	82.9	16.5	0.5	1.18	0.39	3
Educate the public about conservation issues	81.8	15.2	3.0	76.8	22.7	0.5	86.0	14.0	0.0	87.6	10.8	1.6	83.0	15.7	1.3	1.18	0.42	3
Organize animal	72.7	18.2	9.1	52.0	39.7	8.4	91.6	8.2	0.3	72.6	20.4	7.0	72.1	21.6	6.2	1.34	0.59	9

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conservation campaigns																		
Breed animals actively	72.9	20.3	6.8	38.6	55.1	6.3	91.3	8.2	0.5	66.1	33.9	0.0	67.2	29.3	3.5	1.36	0.55	11
Reintroduce animals into the wild	64.1	24.8	11.1	35.8	53.3	11.0	76.8	13.5	9.8	64.8	25.3	9.9	60.3	29.2	10.5	1.50	0.68	13
Support scientific research	84.1	13.2	2.8	84.9	14.6	0.5	92.3	7.7	0.0	75.0	20.4	4.6	84.1	13.9	2.0	1.18	0.43	3
Treat sick and injured animals	77.7	14.9	7.3	63.7	34.7	1.6	78.9	14.2	6.9	72.3	12.6	15.1	73.2	19.2	7.7	1.35	0.62	10
Source of generating income	83.8	12.2	4.1	94.8	5.2	0.0	68.3	31.7	0.0	85.5	9.1	5.4	83.1	14.5	2.4	1.18	0.45	6
Training ground for keepers/staff/conservationists	79.5	12.4	8.1	65.0	32.9	2.1	84.4	6.9	8.7	64.5	30.1	5.4	73.4	20.5	6.1	1.33	0.59	8

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A = Agree, N = Neutral, D = Disagree

\*Rank order by ascending mean in total sample

## 4.4.2 Visitors motivation to federal institutional-based zoos in South-West, Nigeria

### 4.4.2.1 Push Motivation to the Zoos

This is presented on Table 4.20.

- **UI Zoo**

The factor *'to experience and appreciate nature (animals and plants)'* had the highest percentage agreement with an associated mean score of 1.36. This was followed by *'to increase my knowledge'* (1.43); *'to be part of recreational activities'* (1.52); *'to spend time with family/friends'* (1.64); *'being entertained and having fun'* (1.68); *'to relax'* (1.74); *'to break away from routine of everyday life, pressure and surrounding'* (1.98); *'going places I have not been'* (2.04); *'to meet and mix with new people with the same interest as mine'* (2.20); *'to enjoy good weather'* (2.31); and *'to visit a destination that would impress my friends and family'* (2.36).

Other factors include *'to gain a feeling of belonging'* (2.25); *'rediscovering past good times'* (2.48); *'to visit a place my friends/family have not been to'* (2.49); *'to challenge my abilities'* (2.57); *'rediscovering myself'* (2.58); and *'to increase my social status'* (2.79).

- **OAU Garden**

The factor *'to be part of recreational activities'* had the highest with an associated mean score of 1.08. This was followed by *'being entertained and having fun'* (1.12); *'to*

*experience and appreciate nature (animals and plants)*' (1.30); *'going places I have not been'* (1.63); *'to spend time with family/friends'* (1.78); *'to increase my knowledge'* (1.87); *'to break away from routine of everyday life, pressure and surrounding'* (1.93); and *'to relax'* (2.26).

The factors which tended towards the 'Undecided' or 'Neutral Likert class of score 3 include: *'to visit a place my friends/family have not been to'* (2.66); and *'to visit a destination that would impress my friends and family'* (2.86). The factors which had the highest percentage disagreement were: *'rediscovering myself'* (S4.64); *'to enjoy good weather'* (4.29); *'to increase my social status'* (4.27); *'rediscovering past good times'* (4.26); *'to challenge my abilities'* (4.20); *'to meet and mix with new people with the same interest as mine'* (3.81); and *'to gain a feeling of belonging'* (3.67).

- **FUNAAB Zoo**

The factor *'to experience and appreciate nature (animals and plants)'* had the highest percentage agreement with an associated mean score of 1.15. This was followed by *'to increase my knowledge'* (1.48); *'going places I have not been'* (1.53); *'being entertained and having fun'* (1.57); *'to break away from routine of everyday life, pressure and surrounding'* (1.69); *'to be part of recreational activities'* (1.76); *'to visit a destination that would impress my friends and family'* (1.91); *'to visit a place my friends/family have not been to'* (1.91); *'rediscovering myself'* (2.02); *'to meet and mix with new people with the same interest as mine'* (2.10); *'to relax'* (2.15); *'to gain a feeling of belonging'* (2.19); *'to spend time with family/friends'* (2.25); *'to increase my social status'* (2.27); and *'to challenge my abilities'* (2.32). Other factors include *'to enjoy good weather'* (2.64); and *'rediscovering past good times'* (3.01).

- **FUTA Park**

The factor *'to experience and appreciate nature (animals and plants)'* had the highest percentage with an associated mean score of 1.40. This was followed by *'to be part of recreational activities'* (1.76); *'to relax'* (1.87); *'to spend time with family/friends'* (1.91); *'to increase my knowledge'* (1.91); *'to break away from routine of everyday life, pressure and surrounding'* (1.98); *'to gain a feeling of belonging'* (2.16); *'going places I have not been'* (2.35); *'to visit a destination that would impress my friends and family'* (2.42); and *'to visit a place my friends/family have not been to'* (2.43);

Other factors include *'to challenge my abilities'* (2.47); *'to meet and mix with new people with the same interest as mine'* (2.51); *'being entertained and having fun'* (2.56); *'to enjoy good weather'* (2.64); *'rediscovering myself'* (3.00); *'to increase my social status'* (3.06); and *'rediscovering past good times'* (3.20).

- **Combined findings**

Across the zoos, the factor *'to experience and appreciate nature (animals and plants)'* had the highest percentage agreement with an associated mean score of 1.30. This was followed by *'to be part of recreational activities'* (1.53); *'to increase my knowledge'* (1.67); *being entertained and having fun'* (1.73); and *'going places I have not been'* (1.89). The factors with the least percentage agreement were: *'to challenge my abilities'* (2.90); *'to enjoy good weather'* (2.97); *'rediscovering myself'* (3.06); *to increase my social status'* (3.10) and *'rediscovering past good times'* (3.23).

**Table 4.20: Visitors push motivational factors to federal institutional-based zoos in South-West, Nigeria**

<i>Factors</i>	<b>UI Zoo</b>		<b>OAU Garden</b>		<b>FUNAAB Zoo</b>		<b>FUTA Park</b>		<b>Total</b>		
	<i>(<math>\alpha=0.901</math>)</i>		<i>(<math>\alpha=0.728</math>)</i>		<i>(<math>\alpha=0.858</math>)</i>		<i>(<math>\alpha=0.589</math>)</i>		<i>(<math>\alpha=0.827</math>)</i>		
	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Order*</b>
To experience and appreciate nature (animals and plants)	1.36	0.72	1.30	0.70	1.15	0.38	1.40	0.57	1.30	0.62	1
To spend time with my family /friends	1.64	0.88	1.78	1.34	2.25	0.94	1.91	1.23	1.90	1.13	6
To be part of recreational activities	1.52	0.86	1.08	0.27	1.76	0.89	1.76	0.75	1.53	0.78	2
To break away from routine of everyday life, pressure, surrounding	1.98	1.19	1.93	1.09	1.69	0.95	1.97	0.98	1.90	1.06	6
To meet and mix new people with the same interests as mine	2.20	1.23	3.81	1.14	2.10	1.02	2.51	1.04	2.63	1.32	11
To relax	1.74	1.06	2.26	1.27	2.15	1.13	1.87	1.10	2.00	1.16	8
To enjoy good weather	2.31	1.35	4.29	0.87	2.64	1.13	2.64	1.38	2.97	1.43	14
To challenge my abilities	2.57	1.27	4.20	0.96	2.32	1.20	2.47	1.27	2.90	1.41	13
To gain a feeling of belonging	2.45	1.29	3.67	1.36	2.19	1.11	2.16	1.08	2.62	1.36	12
To increase my knowledge	1.43	0.81	1.87	1.01	1.48	0.55	1.91	1.08	1.67	0.91	3
Being entertained and having fun	1.68	0.99	1.12	0.49	1.57	0.86	2.56	1.46	1.73	1.13	4
Rediscovering myself	2.58	1.34	4.64	0.75	2.02	1.31	3.00	1.51	3.06	1.59	15
Rediscovering past good times	2.48	1.33	4.26	1.30	3.01	1.38	3.20	1.37	3.23	1.49	17
To increase my social status	2.79	1.43	4.27	1.08	2.27	1.24	3.06	1.52	3.10	1.52	16

Going places I have not been	2.04	1.30	1.63	1.37	1.53	0.83	2.35	1.28	1.89	1.26	5
To visit a place my friends/family have not been to	2.49	1.46	2.66	1.65	1.92	0.89	2.43	1.57	2.38	1.45	9
To visit a destination that would impress my friends and family	2.36	1.46	2.86	1.58	1.91	0.84	2.42	1.56	2.39	1.43	10

(St.D = Standard Deviation, \*Rank order by ascending mean in total sample)

#### 4.4.2.2 Pull motivation to the zoos

This is presented on Table 4.21.

##### – UI Zoo

The factor '*fame/reputation of the zoo*' had the highest percentage agreement for pull motivating factor to visit UI Zoo (1.85). This was followed by '*diversity of animal species in the zoo*' (2.09); '*time and distance of travel*' (2.15); '*recommendation by family/friends*' (2.34); '*unique eco-environment of the zoo*' (2.35); '*preferred animal species*' (2.35); '*past experience*' (2.36); '*the zoo is family oriented*' (2.42); and '*affordability*' (2.44). Other factors include '*personal safety*' (2.46); '*availability and adequateness of transit system*' (2.49); '*value for money*' (2.55); '*tidiness/cleanliness*' (2.63); '*hospitality/friendliness/receptiveness*' (2.66); '*availability of visitor guidance/reception centres*' (2.66); '*quality of the zoos marketing strategies*' (2.80); '*environmental management initiative of the zoo*' (2.80); and '*unique souvenirs*' (2.81).

##### • OAU Garden

The factor '*fame/reputation of the zoo*' had the highest percentage agreement for pull motivating factor with an associated mean score of 1.62. This was followed by '*time and distance of travel*' (1.63), '*availability and adequateness of transit system*' (1.95); '*affordability*' (2.54); and '*recommendation by family/friends*' (2.57). The factors with the highest percentage disagreement were '*environmental management initiative of the zoo*' (4.75); '*quality of the zoos marketing strategies*' (4.69); '*availability of visitor*



*guidance/reception centres* (4.68); *unique souvenirs* (4.63); *hospitality/friendliness/receptiveness* (4.59); *tidiness/cleanliness* (4.58); *preferred animal species* (4.54); *diversity of animal species in the zoo* (4.49); *value for money* (4.22); *past experience* (4.19); *unique eco-environment of the zoo* (3.99); *the zoo is family oriented* (3.89); and *personal safety* (3.52).

- **FUNAAB Zoo**

The factor *time and distance of travel* had the highest percentage agreement with an associated mean score of 1.84. This was followed by *affordability* (2.01); *availability and adequateness of transit system* (2.04); *unique eco-environment of the zoo* (2.08); *personal safety* (2.16); *tidiness/cleanliness* (2.16); *diversity of animal species in the zoo* (2.27); *fame/reputation of the zoo* (2.33); and *the zoo is family oriented* (2.39).

Other factors include *value for money* (2.55); *preferred animal species* (2.55); *hospitality/friendliness/receptiveness* (2.65); *recommendation by family/friends* (2.71); *quality of the zoos marketing strategies* (2.83); *unique souvenirs* (2.87); *past experience* (2.90); *availability of visitor guidance/reception centres* (3.08); and *environmental management initiative of the zoo* (3.19).

- **FUTA Park**

The factor *fame/reputation of the zoo* had the highest percentage agreement (1.88). This was followed by *diversity of animal species in the zoo* (2.14); *affordability* (2.19); *time and distance of travel* (2.26); and *availability and adequateness of transit system* (2.28). Other factors were *preferred animal species* (2.46); *unique eco-environment of*

*the zoo* (2.58); *personal safety* (2.79); *value for money* (2.87); *the zoo is family oriented* (3.12); *unique souvenirs* (3.14); *quality of the zoos marketing strategies* (3.21); *past experience* (3.38); *availability of visitor guidance/reception centres* (3.38); and *hospitality/friendliness/receptiveness* (3.41). The factors with the highest percentage disagreement were *tidiness/cleanliness* (4.19); *environmental management initiative of the zoo* (3.79); and *recommendation by family/friends* (3.45).

- **Combined findings**

Across the zoos, the factors that pulled visitors most were *fame/reputation of the zoo* (1.92), *time and distance of travel* (1.97); *availability and adequateness of transit system* (2.49); *affordability* (2.30); and *personal safety* (2.73). The factors with the highest percentage disagreement were *environmental management initiative of the zoo* (3.63); *availability of visitor guidance/reception centres* (3.45); *quality of the zoos marketing strategies* (3.39); *unique souvenirs* (3.36); and *hospitality/friendliness/receptiveness* (3.33).

**Table 4.21: Visitors pull motivation factors to federal institutional-based zoos in South-West, Nigeria**

<i>Factors</i>	<b>UI Zoo</b> <i>(<math>\alpha=0.907</math>)</i>		<b>OAU Garden</b> <i>(<math>\alpha=0.720</math>)</i>		<b>FUNAAB Zoo</b> <i>(<math>\alpha=0.850</math>)</i>		<b>FUTA Park</b> <i>(<math>\alpha=0.622</math>)</i>		<b>Total</b> <i>(<math>\alpha=0.892</math>)</i>		Order*
	Mean	St.D	Mean	St.D	Mean	St.D	Mean	St.D	Mean	St.D	
Diversity of animal species in the zoo	2.09	1.23	4.49	0.79	2.27	1.06	2.14	1.20	2.78	1.54	8
Preferred animal species	2.35	1.19	4.54	0.66	2.55	0.97	2.46	1.23	3.08	1.98	12
Unique eco-environment of the zoo	2.35	1.25	3.99	1.32	2.08	1.19	2.58	1.27	2.75	1.46	6
Unique souvenirs	2.81	1.36	4.63	0.66	2.87	1.08	3.14	1.50	3.36	1.41	15
Personal safety	2.46	1.27	3.52	1.54	2.16	0.96	2.79	1.35	2.73	1.39	5
Quality of the zoos marketing strategies	2.80	1.46	4.69	0.53	2.83	1.60	3.21	1.43	3.39	1.53	16
Value for money	2.55	1.38	4.22	1.16	2.55	1.18	2.87	1.49	3.05	1.48	10
Hospitality/friendliness/receptiveness	2.66	1.41	4.59	0.58	2.65	1.23	3.41	1.31	3.33	1.42	14
Tidiness/cleanliness of the place	2.63	1.38	4.58	0.71	2.16	1.49	4.19	8.58	3.06	1.59	11
Fame/reputation of the zoo	1.85	1.07	1.62	1.06	2.33	1.09	1.88	1.04	1.92	1.09	1
The zoo is family oriented	2.42	1.36	3.89	1.36	2.39	1.09	3.12	1.45	2.95	1.46	9
Affordability	2.44	1.41	2.54	1.36	2.01	0.67	2.19	1.08	2.30	1.46	4
Past experience	2.36	1.24	4.19	1.34	2.90	1.38	3.38	1.47	3.21	1.52	13
Time and distance of travel	2.15	1.21	1.63	0.81	1.84	0.62	2.26	0.96	1.97	0.96	2
Availability and adequateness of transit system	2.49	1.29	1.95	0.98	2.04	0.93	2.28	1.18	2.19	1.12	3
Availability of visitor guidance/ reception centres	2.66	1.39	4.68	0.61	3.08	1.43	3.38	1.17	3.45	1.42	17
Recommendation by family/friends	2.34	1.31	2.57	1.59	2.71	0.93	3.45	1.27	2.76	1.36	7
Environmental management initiative e.g. Eco labels	2.80	1.35	4.75	0.52	3.19	1.04	3.79	1.30	3.63	1.32	18

(St.D = Standard Deviation, \*Rank order by ascending mean in total sample)

#### 4.4.3 Test of Hypothesis 3

**Hypothesis 3 (H<sub>0</sub>3): Visitors motivation is not significantly influenced by socio-economic characteristics**

The results of the Chi Square Test of Association are outlined on Tables 4.22 and 4.23.

The variables with high percentage agreement were selected for each of the zoos

**H<sub>0</sub>3a: Visitors motivation (push) is not significantly influenced by socio-economic characteristics (Table 4.22)**

- **UI Zoo**

- Sex:** Significant associations exist with respect to recreational activities, entertainment and fun, relaxation and breaking away from routine factors at p values of 0.001, 0.019, 0.013 and 0.003 respectively. There was no significant relationship with nature experience and appreciation, increase of knowledge (both educational goals) and social factor (spending time with family and friends) at p values of 0.267, 0.166 and 0.232 respectively. H<sub>0</sub>3a is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- Marital status:** there was no significant association between marital status and all the push motivational factors tested ( $p > 0.05$ ). H<sub>0</sub>3a is therefore accepted.
- Age:** Significant associations exist with respect to experience and appreciation of nature, increase of knowledge, entertainment and fun, and breaking away from routine at p values of 0.005, 0.027, 0.035 and 0.000 respectively. There was no significant association with respect to recreational activities, spending time with

family and friends and relaxation at p values of 0.973, 0.385 and 0.071. H<sub>0</sub>3a is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).

- d. **Education:** there was no significant association between educational level and all the push motivational factors tested ( $p > 0.05$ ). H<sub>0</sub>3a is therefore accepted.
  - e. **Nationality:** a significant association exists with respect to increase of knowledge at p value of 0.013. There was no significant association for the remaining factors. H<sub>0</sub>3a is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
  - f. **Monthly income:** Significant associations exist with respect to increase of knowledge and breaking away from everyday routine at p values of 0.013 and 0.000. There was no significant association for the remaining factors. H<sub>0</sub>3a is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- **OAU Garden**
    - a. **Sex:** Significant associations exist with respect to experience and appreciation of nature, spending time with family and friends and going places not yet visited before (exploratory visit) at p values of 0.006, 0.011 and 0.015 respectively. There was no significant association for recreational visit and being entertained and having fun at p values of 0.304 and 0.220 respectively. H<sub>0</sub>3a is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).

- b. Marital status:** there were significant associations with the factors ‘spending time with family and friends’ and ‘going places not yet visited before’ at p values of 0.000 and 0.036 respectively. No significant association exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- c. Age:** there were significant associations with the factors ‘spending time with family and friends’ and ‘going places not yet visited before’ at p values of 0.000 and 0.036 respectively. No significant association exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- d. Education:** there were significant associations with the factors ‘spending time with family and friends’, ‘being part of recreational activities’ and ‘going places not yet visited before’ at p values of 0.000, 0.033 and 0.005 respectively. No significant associations exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- e. Nationality:** there were significant associations between nationality and all the push motivational factors tested ( $p < 0.05$ ).  $H_{03a}$  is therefore rejected.
- f. Monthly income:** there were significant associations with the factors ‘experience and appreciate nature’, ‘spending time with family and friends’, ‘being entertained and having fun’ and ‘going places not yet visited before’ at p values of 0.000 each. no significant association exist for the remaining factor.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factor ( $p > 0.05$ ).

- **FUNAAB Zoo**

- a. Sex:** there were significant associations between visitors sex and all the push motivational factors (experience and appreciate nature, increase of knowledge, being entertained and having fun, to break away from everyday routine and going places not yet visited) tested ( $p < 0.05$ ).  $H_{03a}$  is therefore rejected.
- b. Marital status:** there was no significant association between respondents' marital status and all the push motivational factors tested ( $p > 0.05$ ).  $H_{03a}$  is therefore accepted.
- c. Age:** there were significant associations with the factors 'experience and appreciate nature' and 'breaking away from everyday routine' at p values of 0.000 and 0.002 respectively. No significant associations exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- d. Education:** there were significant associations with the factors 'experience and appreciate nature', 'increase of knowledge' and 'entertainment and having fun' at p values of 0.000, 0.000 and 0.004. No significant associations exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).
- e. Nationality:** no significant association exists for the factor 'experience and appreciate nature'. There were significant associations for the other factors.  $H_{03a}$  is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).

**f. Monthly income:** No significant association exists for the factor ‘increase of knowledge’. There were significant associations for the other factors.  $H_{03a}$  is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).

- **FUTA Park**

**a. Sex:** no significant association exists for the factor ‘experience and appreciate nature’. There were significant associations for the other factors (increase of knowledge, being part of recreational activities, spending time with family and friends and being entertained and having fun).  $H_{03a}$  is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).

**b. Marital status:** no significant association exists for the factor ‘experience and appreciate nature’. There were significant associations for the other factors.  $H_{03a}$  is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).

**c. Age:** there were significant associations with the factors ‘experience and appreciate nature’, ‘being part of recreational activities’ and ‘spending time with family and friends’ at  $p$  values of 0.000 each. No significant associations exist for the remaining factors.  $H_{03a}$  is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the remaining factors ( $p > 0.05$ ).

**d. Education:** there were significant associations between educational level and all the push motivational factors tested ( $p < 0.05$ ).  $H_{03a}$  is therefore rejected.

**e. Nationality:** there were significant associations between nationality and all the push motivational factors tested ( $p < 0.05$ ).  $H_{03a}$  is therefore rejected.



- f. Monthly income:** there were significant associations between nationality and all the push motivational factors tested ( $p < 0.05$ ). Ho3a is therefore rejected.
- **Total**
- a. Sex:** no significant association exists for the factor ‘being entertained and having fun’ and ‘*to experience and appreciate nature*’. There were significant associations for the other factors (increase of knowledge, being part of recreational activities, and going to places not yet visited). Ho3a is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).
- b. Marital status:** no significant association exists for the factor ‘experience and appreciate nature’. There were significant associations for the other factors. Ho3a is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).
- c. Age:** no significant association exists for the factor ‘being part of recreational activities’. There were significant associations for the other factors. Ho3a is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).
- d. Education:** there were significant associations between educational level and all the push motivational factors tested ( $p < 0.05$ ). Ho3a is therefore rejected.
- e. Nationality:** no significant association exists for the factor ‘experience and appreciate nature’. There were significant associations for the other factors. Ho3a is therefore accepted for the earlier factor ( $p > 0.05$ ) and rejected for the remaining factors ( $p < 0.05$ ).
- f. Monthly income:** there were significant associations between income and all the push motivational factors tested ( $p < 0.05$ ). Ho3a is therefore rejected.

**Table 4.22: Chi Square Results: Socio-demographics and Push Motivational factors (Ho3a) of visitors to federal institutional-based zoos in South-West, Nigeria**

Socio-demographic	Motivational factor	UI Zoo		OAU Garden		FUNAAB Zoo		FUTA Park		Total	
		$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value
Sex	Experience and appreciate nature	5.207	0.267	12.465	0.006*	10.897	0.004*	0.513	0.774	4.709	0.318
	To increase my knowledge	6.484	0.166	-	-	33.310	0.000*	40.422	0.000*	36.724	0.000*
	To be part of recreational activities	18.710	0.001*	1.055	0.304	-	-	26.474	0.000*	29.608	0.000*
	To spend time with family/friends	5.587	0.232	11.090	0.011*	-	-	21.741	0.000*	-	-
	Being entertained and having fun	11.734	0.019*	5.733	0.220	24.547	0.000*	-	-	8.228	0.084
	To relax	12.659	0.013*	-	-	-	-	48.924	0.000*	-	-
	To break away from everyday routine	16.086	0.003*	-	-	18.458	0.001*	-	-	-	-
	Going places I have not been	-	-	12.284	0.015*	12.274	0.015*	-	-	23.077	0.000*
Marital status	Experience and appreciate nature	7.573	0.109	2.228	0.526	1.761	0.414	2.672	0.263	7.281	0.122
	To increase my knowledge	3.290	0.511	-	-	6.179	0.103	32.923	0.000*	26.741	0.000*
	To be part of recreational activities	2.016	0.733	3.584	0.058	-	-	21.029	0.000*	15.578	0.004*
	To spend time with family/friends	5.922	0.205	79.078	0.000*	-	-	12.187	0.016*	-	-
	Being entertained and having fun	4.551	0.337	7.103	0.131	8.012	0.091	-	-	50.616	0.000*
	To relax	8.944	0.063	-	-	-	-	17.084	0.002*	-	-
	To break away from everyday routine	5.685	0.224	-	-	3.522	0.475	-	-	-	-
	Going places I have not been	-	-	10.295	0.036*	2.107	0.716	-	-	22.516	0.000*
Age	Experience and appreciate nature	34.009	0.005*	2.228	0.526	154.050	0.000*	23.911	0.000*	57.358	0.000*
	To increase my knowledge	28.508	0.027*	-	-	5.173	0.819	17.015	0.385	66.160	0.000*
	To be part of recreational activities	7.036	0.973	2.314	0.510	-	-	49.394	0.000*	19.144	0.261
	To spend time with family/friends	17.015	0.385	79.078	0.000*	-	-	49.593	0.000*	-	-
	Being entertained and having fun	27.653	0.035*	20.318	0.061	7.011	0.857	-	-	62.252	0.000*
	To relax	24.927	0.071	-	-	-	-	7.036	0.973	-	-

	To break away from everyday routine	42.429	0.000*	-	-	31.731	0.002*	-	-	-	-
	Going places I have not been	-	-	10.295	0.036*	13.918	0.306	-	-	68.138	0.000*
Education	Experience and appreciate nature	10.662	0.558	12.299	0.197	41.311	0.000*	30.715	0.000*	21.311	0.046*
	To increase my knowledge	8.084	0.779	-	-	57.289	0.000*	113.647	0.000*	414.871	0.000*
	To be part of recreational activities	9.658	0.646	8.738	0.033*	-	-	58.759	0.000*	93.489	0.000*
	To spend time with family/friends	7.966	0.788	77.133	0.000*	-	-	32.935	0.000*	-	-
	Being entertained and having fun	17.714	0.125	11.974	0.448	28.828	0.004*	-	-	69.278	0.000*
	To relax	17.256	0.140	-	-	-	-	48.088	0.000*	-	-
	To break away from everyday routine	17.944	0.117	-	-	17.333	0.137	-	-	-	-
	Going places I have not been	-	-	28.327	0.005*	20.746	0.054	-	-	65.883	0.000*
Nationality	Experience and appreciate nature	0.270	0.992	13.701	0.003*	0.434	0.805	22.397	0.000*	4.233	0.375
	To increase my knowledge	2.029	0.730	-	-	38.143	0.000*	63.238	0.000*	390.659	0.000*
	To be part of recreational activities	15.681	0.003*	4.718	0.030*	-	-	43.565	0.000*	19.594	0.001*
	To spend time with family/friends	6.820	0.148	24.445	0.000*	-	-	10.166	0.038*	-	-
	Being entertained and having fun	8.254	0.083	4.553	0.336	15.069	0.005*	-	-	37.472	0.000*
	To relax	2.384	0.666	-	-	-	-	10.728	0.030*	-	-
	To break away from everyday routine	2.145	0.709	-	-	113.504	0.000*	-	-	-	-
	Going places I have not been	-	-	14.145	0.007*	32.911	0.000*	-	-	14.122	0.007*
Income (M)	Experience and appreciate nature	28.320	0.247	45.925	0.000*	57.962	0.000*	34.177	0.000*	64.507	0.000*
	To increase my knowledge	41.999	0.013*	-	-	21.934	0.110	36.605	0.000*	47.846	0.003*
	To be part of recreational activities	21.854	0.588	0.517	0.915	-	-	31.788	0.000*	53.213	0.001*
	To spend time with family/friends	31.462	0.141	67.108	0.000*	-	-	35.647	0.000*	-	-
	Being entertained and having fun	32.361	0.118	44.688	0.000*	68.616	0.000*	-	-	92.348	0.000*
	To relax	32.844	0.107	-	-	-	-	71.837	0.000*	-	-
	To break away from everyday routine	77.185	0.000*	-	-	39.277	0.006*	-	-	-	-
	Going places I have not been	-	-	58.203	0.000*	92.272	0.000*	-	-	145.055	0.000*

(\*=statistically significant)

**H<sub>0</sub>3b: Visitors motivation (pull) is not significantly influenced by socio-economic characteristics (Table 4.23)**

➤ **UI Zoo**

- a. **Sex:** there was significant associations with the factors ‘zoo’s fame/reputation’ and ‘time and distance of travel’ at p values of 0.001 and 0.000 respectively. Other factors (diversity of animal species, recommendation by family/friends, unique eco-environment of the zoo and preferred animal species) had no significant association with respondents’ sex. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- b. **Marital status:** No significant association exists between respondents’ marital status and all the pull motivational factors. Ho3b is therefore accepted ( $p > 0.05$ ).
- c. **Age:** No significant association exists for the factor ‘preferred animal species’ at p value of 0.494. All other factors had a significant association with age. Ho3b is therefore accepted ( $p > 0.05$ ) for the earlier and rejected for the earlier group ( $p < 0.05$ ).
- d. **Education:** there were significant associations with the factors ‘zoo’s fame/reputation’, ‘time and distance of travel’, recommendation by family/friends and preferred animal species at p values of 0.000, 0.035, 0.021 and 0.002 respectively. Other factors had no significant association with respondents’ educational level. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- e. **Nationality:** there were significant associations with the factor ‘zoo’s fame/reputation’ at p values of 0.045. Other factors had no significant association

with respondents' nationality. Ho3b is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).

- f. Monthly income:** there were significant associations with the factors 'zoo's fame/reputation' and 'preferred animal species' at  $p$  values of 0.002 and 0.004 respectively. Other factors had no significant association with respondents' monthly income. Ho3b is therefore rejected for the earlier factor ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).

➤ **OAU Garden**

- a. Sex:** there were significant associations with the factors 'diversity of animal species', 'time and distance of travel', and 'affordability' at  $p$  values of 0.009, 0.001 and 0.015 respectively. Other factors (fame/reputation of zoo, recommendation by family/friends and availability and adequateness of transit system) had no significant association with respondents' sex. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- b. Marital status:** no significant association exists for the factors 'time and distance of travel' and 'availability and adequateness of transit system'. All other factors had a significant association with marital status. Ho3b is therefore accepted ( $p > 0.05$ ) for the earlier and rejected for the earlier group ( $p < 0.05$ ).
- c. Age:** no significant association exists for the factors 'time and distance of travel' and 'availability and adequateness of transit system'. All other factors had a significant association with marital status. Ho3b is therefore accepted ( $p > 0.05$ ) for the earlier and rejected for the earlier group ( $p < 0.05$ ).

- d. Education:** there were significant associations between respondents' educational level and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- e. Nationality:** there were significant associations between respondents' nationality and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- f. Monthly income:** there were significant associations between respondents' monthly income and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).

➤ **FUNAAB Zoo**

- a. Sex:** there were significant associations with the factors 'unique eco-environment of the zoo', 'availability and adequateness of transit system', and 'personal safety' at p values of 0.000, 0.018 and 0.000 respectively. Other factors (time and distance of travel, and affordability) had no significant association with respondents' sex. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- b. Marital status:** there were significant associations with the factors 'time and distance of travel' and 'availability and adequateness of transit system', and 'personal safety' at p values of 0.001 and 0.006 respectively. Other factors had no significant association with respondents' sex. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).
- c. Age:** there were significant associations with the factors 'unique eco-environment of the zoo', 'availability and adequateness of transit system', and 'personal safety' at p values of 0.031, 0.002 and 0.000 respectively. Other factors had no

significant association with respondents' age. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).

- d. Education:** there were significant associations between respondents' educational level and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- e. Nationality:** there were significant associations between respondents' nationality and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- f. Monthly income:** there were significant associations between respondents' monthly income and all the pull motivational factors except for affordability ( $p$  value = 0.066). Ho3b is therefore rejected ( $p < 0.05$ ) for all but affordability (accepted at  $p > 0.05$ ).

➤ **FUTA Park**

- a. Sex:** there were significant associations between respondents' sex and all the pull motivational factors (fame/reputation of the zoo, diversity of animal species, time and distance of travel, availability and adequateness of transit system and affordability). Ho3b is therefore rejected ( $p < 0.05$ ).
- b. Marital status:** there were significant associations between respondents' marital status and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- c. Age:** there were significant associations between respondents' age and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- d. Education:** there were significant associations between respondents' educational level and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).
- e. Nationality:** there were significant associations between respondents' nationality and all the pull motivational factors except for affordability ( $p$  value = 0.060).

Ho3b is therefore rejected ( $p < 0.05$ ) for all but affordability (accepted at  $p > 0.05$ ).

**f. Monthly income:** there were significant associations between respondents' educational level and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).

➤ **Total**

**a. Sex:** there were significant associations between respondents' sex and all the pull motivational factors (fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety). Ho3b is therefore rejected ( $p < 0.05$ ).

**b. Marital status:** there were significant associations between respondents' marital status and the factors 'fame/reputation of the zoo', 'affordability' and 'personal safety' at  $p$  values of 0.000, 0.000 and 0.009 respectively. Other factors had no significant association. Ho3b is therefore rejected for the earlier group ( $p < 0.05$ ) and accepted for the latter ( $p > 0.05$ ).

**c. Age:** there were significant associations between respondents' age and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).

**d. Education:** there were significant associations between respondents' educational level and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).

**e. Nationality:** there were significant associations between respondents' nationality and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).

**f. Monthly income:** there were significant associations between respondents' monthly income and all the pull motivational factors. Ho3b is therefore rejected ( $p < 0.05$ ).



**Table 4.23: Chi Square Results: Socio-demographics and Pull Motivational factor (Ho3b) of visitors to federal institutional-based zoos in South-West, Nigeria**

Socio-demographic	Motivational factor	UI Zoo		OAU Garden		FUNAAB Zoo		FUTA Park		Total	
		$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value	$\chi^2$	P Value
Sex	Fame/reputation of the zoo	18.167	0.001*	3.034	0.552	-	-	18.129	0.001*	27.287	0.000*
	Diversity of animal species	8.927	0.063	13.544	0.009*	-	-	32.348	0.000*	-	-
	Time and distance of travel	20.689	0.000*	19.733	0.001*	3.528	0.474	71.224	0.000*	32.755	0.000*
	Recommendation	3.902	0.419	9.253	0.055	-	-	-	-	-	-
	Unique eco-environment	7.902	0.095	-	-	65.317	0.000*	-	-	-	-
	Preferred animal species	3.741	0.442	-	-	-	-	-	-	-	-
	Availability and adequateness of transit system	-	-	8.397	0.078	11.858	0.018*	44.033	0.000*	26.029	0.000*
	Affordability	-	-	12.367	0.015*	2.630	0.622	26.628	0.000*	27.116	0.000*
	Personal safety	-	-	-	-	46.896	0.000*	-	-	42.541	0.000*
Marital status	Fame/reputation of the zoo	4.105	0.392	26.484	0.000*	-	-	12.270	0.015*	39.532	0.000*
	Diversity of animal species	3.513	0.476	18.872	0.001*	-	-	60.564	0.000*	-	-
	Time and distance of travel	2.893	0.576	2.252	0.690	19.504	0.001*	19.456	0.001*	0.522	0.971
	Recommendation	1.860	0.762	123.015	0.000*	-	-	-	-	-	-
	Unique eco-environment	2.349	0.672	-	-	8.418	0.077	-	-	-	-
	Preferred animal species	1.115	0.892	-	-	-	-	-	-	-	-
	Availability and adequateness of transit system	-	-	6.290	0.179	14.555	0.006*	12.171	0.016*	6.236	0.182
	Affordability	-	-	43.205	0.000*	3.765	0.439	40.301	0.000*	23.327	0.000*
	Personal safety	-	-	-	-	7.657	0.105	-	-	13.489	0.009*

Age	Fame/reputation of the zoo	44.248	0.000*	49.953	0.000*	-	-	68.667	0.000*	29.688	0.020*
	Diversity of animal species	35.409	0.003*	38.883	0.000*	-	-	21.706	0.005*	-	-
	Time and distance of travel	34.036	0.005*	7.628	0.813	13.777	0.315	82.726	0.000*	56.295	0.000*
	Recommendation	31.671	0.011*	82.665	0.000*	-	-	-	-	-	-
	Unique eco-environment	15.427	0.494	-	-	22.673	0.031*	-	-	-	-
	Preferred animal species	30.522	0.015*	-	-	-	-	-	-	-	-
	Availability and adequateness of transit system	-	-	19.989	0.067	30.584	0.002*	22.158	0.005*	51.648	0.000*
	Affordability	-	-	68.818	0.000*	20.152	0.064	34.698	0.000*	54.748	0.000*
	Personal safety	-	-	-	-	45.008	0.000*	-	-	86.634	0.000*
Education	Fame/reputation of the zoo	35.088	0.000*	160.501	0.000*	-	-	26.129	0.001*	74.039	0.000*
	Diversity of animal species	10.413	0.580	112.116	0.000*	-	-	29.432	0.000*	-	-
	Time and distance of travel	22.212	0.035*	71.718	0.000*	66.565	0.000*	53.323	0.000*	127.800	0.000*
	Recommendation	23.962	0.021*	97.205	0.000*	-	-	-	-	-	-
	Unique eco-environment	14.905	0.247	-	-	253.859	0.000*	-	-	-	-
	Preferred animal species	30.622	0.002*	-	-	-	-	-	-	-	-
	Availability and adequateness of transit system	-	-	57.360	0.000*	119.987	0.000*	36.666	0.000*	108.664	0.000*
	Affordability	-	-	41.474	0.000*	159.612	0.000*	38.731	0.000*	79.754	0.000*
	Personal safety	-	-	-	-	68.388	0.000*	-	-	205.944	0.000*
Nationality	Fame/reputation of the zoo	9.756	0.045*	153.688	0.000*	-	-	10.961	0.027*	77.201	0.000*
	Diversity of animal species	5.621	0.229	105.488	0.000*	-	-	16.645	0.002*	-	-
	Time and distance of travel	6.106	0.191	56.743	0.000*	22.511	0.000*	28.732	0.000*	77.576	0.000*
	Recommendation	4.032	0.402	90.926	0.000*	-	-	-	-	-	-
	Unique eco-environment	0.627	0.960	-	-	19.047	0.001*	-	-	-	-
	Preferred animal species	7.582	0.108	-	-	-	-	-	-	-	-

	Availability and adequateness of transit system	-	-	41.421	0.000*	29.435	0.000*	20.552	0.000*	71.585	0.000*
	Affordability	-	-	43.672	0.000*	32.008	0.000*	9.031	0.060	66.386	0.000*
	Personal safety	-	-	-	-	30.838	0.000*	-	-	172.233	0.000*
Income (M)	Fame/reputation of the zoo	48.400	0.002*	135.657	0.000*	-	-	40.866	0.000*	120.874	0.000*
	Diversity of animal species	32.167	0.123	121.845	0.000*	-	-	42.789	0.000*	-	-
	Time and distance of travel	34.842	0.071	26.457	0.009*	44.225	0.001*	131.208	0.000*	81.456	0.000*
	Recommendation	19.027	0.751	128.820	0.000*	-	-	-	-	-	-
	Unique eco-environment	25.687	0.369	-	-	49.768	0.000*	-	-	-	-
	Preferred animal species	46.698	0.004*	-	-	-	-	-	-	-	-
	Availability and adequateness of transit system	-	-	71.961	0.000*	48.287	0.000*	73.023	0.000*	84.045	0.000*
	Affordability	-	-	129.911	0.000*	30.244	0.066	32.521	0.000*	98.413	0.000*
	Personal safety	-	-	-	-	40.190	0.005*	-	-	122.471	0.000*

(\* = statistically significant)

#### **4.4.4 Test of hypothesis 4**

**Hypothesis 4 ( $H_04$ ): There is no significant difference in visitors' motivation across the study zoos**

The results of the Analysis of Variance (ANOVA) in testing the visitors' motivation across the zoos revealed that a significant difference exists at  $P < 0.05$  (Table 4.24). Therefore  $H_04$  is rejected.

**Table 4.24: Test of Hypothesis 4: There is no significant difference in visitors' motivation across federal institutional-based zoos in South-West, Nigeria**

		<b>Sum of</b>	<b>df</b>	<b>Mean</b>	<b>F</b>	<b>Sig.</b>
		<b>Squares</b>		<b>Square</b>		
Push motivation	Between Groups	14.022	3	4.674	12.523	0.000*
	Within Groups	569.188	1525	0.373		
	Total	583.210	1528			
Pull motivation	Between Groups	1520.333	3	506.778	371.994	0.000*
	Within Groups	2077.549	1525	1.362		
	Total	3597.882	1528			

(\* = statistically significant)

#### **4.4.5 Test of relationship between visitors' image of zoos and related push motivational factors**

This is presented on Table 4.25. The Chi Square test of association between the image visitors' have of zoos and their push factors revealed significant associations with all but one. The results of visitors image of the zoo as '*a place to see wild animals*' merged with the pull factor '*to experience and appreciate nature*' revealed a significant association ( $p = 0.000$ ). Likewise, '*a place that offers opportunity to interact with animals*' and '*to experience and appreciate nature*' ( $p = 0.000$ ); and '*a place where people see wild animals without destroying their natural habitat*' and '*to experience and appreciate nature*' ( $p = 0.000$ ).

There was no significant association between the image factor '*zoos educate the public about conservation issues*' and '*to increase my knowledge*' at  $p = 0.108$ . A significant association exists for visitors image of the zoo as '*a place that provides a fun day out for the public*' and the push factor '*to spend time with family/friends*' ( $p = 0.000$ ). Likewise '*a place that provides a fun day out for the public*' and '*to be part of recreational activities*' ( $p = 0.000$ ); and '*a place that provides a fun day out for the public*' and '*being entertained and having fun*' ( $p = 0.000$ ).

**Table 4.25: Chi Square Test of Association between Visitors Image of Zoos and Push Motivational factors to federal institutional-based zoos in South-West, Nigeria**

<b>Variables</b>	<b><math>\chi^2</math> Value</b>	<b>P Value</b>	<b>Inference</b>
A place to see wild animals * To experience and appreciate nature	275.712	0.000	p < 0.05, Significant association
A place that offers opportunity to interact with animals * To experience and appreciate nature	110.071	0.000	p < 0.05, Significant association
A place where people see wild animals without destroying their natural habitat * To experience and appreciate nature	123.109	0.000	p < 0.05, Significant association
Zoos educate the public about conservation issues * To increase my knowledge	13.116	0.108	p > 0.05, Non - significant association
A place that provides a fun day out for the public * To spend time with family/friends	19.787	0.011	p < 0.05, Significant association
A place that provides a fun day out for the public * To be part of recreational activities	267.811	0.000	p < 0.05, Significant association
A place that provides a fun day out for the public * Being entertained and having fun	121.066	0.000	p < 0.05, Significant association

Source: Field Survey, 2017 - 2018

#### 4.5 Place attachment of visitors to federal institutional-based zoos in South-West, Nigeria

This is presented on Table 4.26.

- **Place Identity**

In UI Zoo, This scale had the third highest percentage agreement (CM = 3.03) among the five place attachment scales. The factor '*I identify strongly with this zoo*' had the highest percentage agreement (2.79). This was followed by '*I feel this zoo is part of me*' (2.84), '*I have a strong sense of belonging to this zoo*' (2.90), and the least, '*visiting this zoo says a lot about who I am*' (2.97).

In OAU Garden, this scale had the fourth highest percentage agreement among the five place attachment scales (CM = 4.56). Majority of the respondents disagreed with the factors under this scale; '*I feel this zoo is part of me*' (4.54), '*I identify strongly with this zoo*', (4.54), '*I have a strong sense of belonging to this zoo*' (4.55), and '*visiting this zoo says a lot about who I am*' (4.61).

In FUNAAB Zoo, this scale had the second highest percentage agreement among the five place attachment scales (CM = 2.93). The factor '*I feel this zoo is part of me*' had the highest percentage agreement (2.84). This was followed by '*I have a strong sense of belonging to this zoo*' (2.87), '*visiting this zoo says a lot about who I am*' (3.00), and the least '*I identify strongly with this zoo*' (3.02).

IN FUTA Park, this scale had the fourth highest percentage agreement among the five place attachment scales (CM = 2.89). The factor '*I identify strongly with this zoo*' had the



highest percentage agreement under the PID scale (2.63). This was followed by '*I have a strong sense of belonging to this zoo*' (2.75), '*I feel this zoo is part of me*' (2.82) and the least '*visiting this zoo says a lot about who I am*' (3.36).

- **Place Dependence**

In UI Zoo, this scale had the second highest percentage agreement (CM = 2.88). The factor '*I enjoy visiting this zoo more than any other zoo/natural attraction*' had the highest percentage agreement (2.58). This was followed by '*for the activities I enjoy the most, the settings and facilities provided by this zoo is the best*' (2.75), '*for what I like to do, I could not imagine anything better than the settings and facilities provided by the zoo*' (2.77) , and the least '*no other place can substitute for the attractions of this zoo*' (2.96).

In OAU Garden, this scale had the second highest percentage disagreement (CM = 4.60). Majority of the respondents disagreed with the factors under this scale; '*no other place can substitute for the attractions of this zoo*' (4.68); '*for the activities I enjoy the most, the settings and facilities provided by this zoo is the best*' (4.61); '*I enjoy visiting this zoo more than any other zoo/natural attraction*' (4.59); and '*for what I like to do, I could not imagine anything better than the settings and facilities provided by the zoo*' (4.54).

In FUNAAB Zoo, this scale had the third highest percentage agreement (CM = 3.03). The factor '*for what I like to do, I could not imagine anything better than the settings and facilities provided by the zoo*' 'had the highest percentage agreement (2.83). This was followed by '*no other place can substitute for the attractions of this zoo*' (3.05), '*for the activities I enjoy the most, the settings and facilities provided by this zoo is the best*'

(3.07), and the least '*I enjoy visiting this zoo more than any other zoo/natural attraction*' (3.19).

IN FUTA Park, this scale had the second highest percentage agreement (CM = 2.61). The individual factors were '*for what I like to do, I could not imagine anything better than the settings and facilities provided by the zoo*' (2.25), '*for the activities I enjoy the most, the settings and facilities provided by this zoo is the best*' (2.55), '*I enjoy visiting this zoo more than any other zoo/natural attraction*' (2.78), and the least '*no other place can substitute for the attractions of this zoo*' (2.87).

- **Place affect**

In UI Zoo, this scale had the second least percentage agreement (CM = 3.03). The factors '*I am very attached to this zoo*' had the highest percentage agreement under this (2.90). This was followed by '*this zoo means a lot to me*' (2.90); '*I feel a strong sense of belonging to this zoo and its settings/facilities*' (3.11), and the least '*I have a special connection to the people who visit here*' (3.17).

In OAU Garden, this scale had the highest percentage disagreement (CM = 4.66). The bulk of the respondents disagreed with the factors under this scale: '*I have a special connection to the people who visit here*' (4.80); '*I feel a strong sense of belonging to this zoo and its settings/facilities*' (4.64); '*I am very attached to this zoo*' (4.62); and '*this zoo means a lot to me*' (4.56).

In FUNAAB Zoo, this scale had the least percentage disagreement among the five place attachment scales (CM = 3.20). The factors include '*I am very attached to this zoo*' (3.14), '*this zoo means a lot to me*' (3.14), '*I feel a strong sense of belonging to this zoo*

*and its settings/facilities*' (3.24), and the least '*I have a special connection to the people who visit here*' (3.30).

IN FUTA Park, this scale had the third highest percentage agreement (CM = 2.87). The factors include '*I feel a strong sense of belonging to this zoo and its settings/facilities*' (2.84), '*I have a special connection to the people who visit here*' (2.77), '*I am very attached to this zoo*' (2.86) and the least '*this zoo means a lot to me*' (3.00).

- **Place social bonding**

This scale had the least (CM = 3.10) percentage agreement. The factor '*I prefer to visit this attraction with people who are important to me*' had the highest percentage agreement (2.23). This was followed by '*many of my friends/family prefer this zoo over many other natural attractions*' (2.88). The factors with high percentage disagreement were '*my friends/family would be disappointed if I were to start visiting other settings/facilities*' (3.69) and '*if I were to stop visiting this zoo, I would lose contact with a number of friends*' (3.60).

In OAU Garden, this scale had the third highest percentage (CM = 4.59). The bulk of the respondents disagreed with the factors under this scale: '*my friends/family would be disappointed if I were to start visiting other settings/facilities*' (4.85); '*if I were to stop visiting this zoo, I would lose contact with a number of friends*' (4.84); '*many of my friends/family prefer this zoo over many other natural attractions*' (4.76); and the least '*I prefer to visit this attraction with people who are important to me*' (3.90).

In FUNAAB Zoo, this scale had the second least percentage agreement (CM = 3.05). The factor '*I prefer to visit this attraction with people who are important to me*' had the

highest percentage (2.64). This was followed by '*many of my friends/family prefer this zoo over many other natural attractions*' (3.01). The factors with high percentage disagreement were '*my friends/family would be disappointed if I were to start visiting other settings/facilities*' (3.16) and '*if I were to stop visiting this zoo, I would lose contact with a number of friends*' (3.41).

IN FUTA Park, this scale had the least percentage agreement (CM = 3.37). The factors include '*I prefer to visit this attraction with people who are important to me*' (2.08), '*if I were to stop visiting this zoo, I would lose contact with a number of friends*' (4.07), '*my friends/family would be disappointed if I were to start visiting other settings/facilities*' (4.01) and '*many of my friends/family prefer this zoo over many other natural attractions*' (3.33).

- **Place satisfaction and loyalty**

In UI Zoo, this scale had the highest percentage agreement (CM = 1.63). The factor '*this zoo is a pleasant place*' had the highest percentage agreement under this scale (1.55). This was followed by '*I believe I did the right thing when I chose to visit the zoo*' (1.62); '*I will recommend this zoo to others*' (1.69); '*I will visit this zoo again*' (1.69); and '*the overall sight and impression of the zoo inspired me*' (1.70).

In OAU Garden, this scale was the only scale with high percentage agreement among the five place attachment scales (CM = 1.42). The factor '*this zoo is a pleasant place*' had the highest percentage agreement (1.28). This was followed by '*I will recommend this zoo to others*' (1.36); '*I believe I did the right thing when I chose to visit the zoo*' (1.37); '*I will*

*visit this zoo again*' (1.47); and the least '*the overall sight and impression of the zoo inspired me*' (1.66).

In FUNAAB Zoo, this scale had the highest percentage agreement (CM = 1.63). The factor '*this zoo is a pleasant place*' had the highest percentage agreement under this scale (1.34). This was followed by '*the overall sight and impression of the zoo inspired me*' (1.55) '*I will recommend this zoo to others*' (1.73); '*I believe I did the right thing when I chose to visit the zoo*' (1.73); and the least '*I will visit this zoo again*' (1.78).

IN FUTA Park, this scale had the highest percentage agreement among the five place attachment scales (CM = 1.97). The factors include '*this zoo is a pleasant place*' (1.79), '*I will visit this zoo again*' (1.89), '*the overall sight and impression of the zoo inspired me*' (1.95), '*I believe I did the right thing when I chose to visit the zoo*' (2.11); and '*I will recommend this zoo to others*' (1.95).

Across the zoos, the scale with the highest percentage agreement was place satisfaction and loyalty (1.66) while the least was place social bonding (3.53).

**Table 4.26: Place attachment of visitors to federal insitutional-based zoos in South-West, Nigeria**

<i>Factors</i>	<b>UI Zoo</b>		<b>OAU Garden</b>		<b>FUNAAB Zoo</b>		<b>FUTA Park</b>		<b>Total</b>		<b>Order*</b>
	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	<b>Mean</b>	<b>St.D</b>	
<b>Place identity(<math>\alpha=0.901</math>)</b>	2.88	1.10	4.56	1.00	2.93	1.32	2.89	1.15	3.32	1.35	3
I feel this zoo is part of me	2.84	1.25	4.54	1.02	2.84	1.59	2.82	1.21	3.27	1.48	
I identify strongly with this zoo	2.79	1.24	4.54	1.10	3.02	1.36	2.63	1.34	3.25	1.47	
I have a strong sense of belonging to this zoo	2.90	1.27	4.55	1.04	2.87	1.55	2.75	1.37	3.27	1.51	
Visiting this zoo says a lot about who I am	2.97	1.24	4.61	1.00	3.00	1.17	3.36	1.37	3.48	1.37	
<b>Place dependence (<math>\alpha=0.822</math>)</b>	2.77	0.98	4.60	0.80	3.03	1.21	2.61	1.11	3.26	1.30	2
For what I like to do, I could not imagine anything better than the settings and facilities provided by this zoo	2.77	1.19	4.54	0.92	2.83	1.59	2.25	1.34	3.10	1.54	
For the activities I enjoy the most, the settings and facilities provided by this zoo are the best	2.75	1.21	4.61	0.84	3.07	1.17	2.55	1.23	3.25	1.38	
I enjoy visiting this zoo more than any other zoo / nature attractions	2.58	1.22	4.59	0.86	3.19	1.27	2.78	1.21	3.28	1.39	
No other place can substitute for the attractions of this zoo	2.96	1.24	4.68	0.75	3.05	1.12	2.87	1.30	3.40	1.35	
<b>Place Affect (<math>\alpha=0.872</math>)</b>	3.03	1.03	4.66	0.73	3.20	1.13	2.87	1.07	3.44	1.23	4
I am very attached to this zoo	2.90	1.24	4.62	0.87	3.14	1.37	2.86	1.13	3.38	1.37	

I feel a strong sense of belonging to this zoo and its settings/facilities	3.11	1.21	4.64	0.86	3.24	1.10	2.84	1.36	3.46	1.34	
This zoo means a lot to me	2.90	1.22	4.56	0.95	3.14	1.36	3.00	1.12	3.40	1.35	
I have a special connection to the people who visit here.	3.17	1.20	4.80	0.49	3.30	1.01	2.77	1.29	3.52	1.30	
<b><i>Place Social Bonding (<math>\alpha=0.552</math>)</i></b>	3.10	0.80	4.59	0.55	3.05	0.87	3.37	0.64	3.53	0.96	5
Many of my friends/family prefer this zoo over many other natural attractions	2.88	1.24	4.76	0.56	3.01	1.04	3.33	1.22	3.49	1.29	
If I were to stop visiting this zoo, I would lose contact with a number of friends	3.60	1.23	4.84	0.38	3.41	0.85	4.07	1.03	3.98	1.08	
My friends/family would be disappointed if I were to start visiting other settings and facilities	3.69	1.23	4.85	0.63	3.16	1.45	4.01	0.81	3.93	1.24	
I prefer to visit this attraction with people who are important to me	2.23	1.25	3.90	1.68	2.64	1.13	2.08	0.91	2.71	1.46	
<b><i>Place Satisfaction and loyalty(<math>\alpha=0.735</math>)</i></b>	1.63	0.73	1.43	0.76	1.63	0.62	1.97	0.64			1
This zoo is a pleasant place.	1.55	0.73	1.28	0.73	1.34	0.63	1.79	0.70	1.49	0.72	
I believe I did the right thing when I chose to visit this zoo	1.62	0.73	1.37	0.81	1.73	0.71	2.11	0.88	1.70	0.83	
The overall sight and impression of the zoo inspired me	1.70	0.88	1.66	0.93	1.55	0.80	1.95	0.78	1.71	0.86	
I will recommend this zoo to others	1.59	0.73	1.36	0.77	1.73	0.73	2.11	0.85	1.69	0.82	
I will visit this zoo again	1.69	1.75	1.47	0.91	1.78	0.76	1.89	0.98	1.70	1.18	

(St.D = Standard Deviation, \*Rank order by ascending mean in total sample)

#### **4.5.6 Test of hypothesis 5**

**Hypothesis 5 (H<sub>05</sub>): There is no significant difference in visitors' place attachment across the study zoos**

The results of the Analysis of Variance (ANOVA) in testing the visitors' place attachment across the zoos revealed that a significant difference exists at  $P < 0.05$  (Table 4.27). Therefore H<sub>05</sub> is rejected.



**Table 4.27: Test of Hypothesis 5: There is no significant difference in visitors' place attachment across federal institutional-based zoos in South-West, Nigeria**

		Sum of	df	Mean	F	Sig.
		Squares		Square		
	Between Groups	791.205	3	263.735	200.731	<b>0.000*</b>
Place identity	Within Groups	2003.660	1525	1.314		
	Total	2794.865	1528			
	Between Groups	963.151	3	321.050	300.518	<b>0.000*</b>
Place	Within Groups	1629.192	1525	1.068		
dependence	Total	2592.343	1528			
	Between Groups	775.931	3	258.644	257.089	<b>0.000*</b>
Place affect	Within Groups	1534.223	1525	1.006		
	Total	2310.154	1528			
	Between Groups	597.067	3	199.022	376.526	<b>0.000*</b>
Place social	Within Groups	806.078	1525	0.529		
bonding	Total	1403.145	1528			
	Between Groups	57.115	3	19.038	39.763	<b>0.000*</b>
Place satisfaction	Within Groups	730.164	1525	0.479		
and loyalty	Total	787.279	1528			

(\* = statistically significant)

#### **4.6 Test of Hypotheses 6 (Ho6), 7 (Ho7) and 8 (Ho8)**

1. Ho6: Visitors motivation is not significantly influenced by their environmental attitudes
2. Ho7: No significant relationship exists between visitors motivation and place attachment
3. Ho8: No significant relationship exist between visitors environmental attitude and place attachment

The result of the Structural Equation Modelling (SEM) is presented in Tables 4.28 to 4.32:

- **UI Zoo**

This is presented on Table 4.28. The model fit was acceptable with a Goodness of Fit Index (GFI) of 0.7169 (this measures whether the model fits the data better than a restricted baseline model, the closer to 1, the better) and an Root Mean Square Error of Approximation (RMSEA) of 0.1145 at 95% CI and Standardized Root Mean Residual (SRMR) of 0.1171 (these measure how closely the model reproduces data patterns, the closer to 0, the better). The full three factor model fit the data significantly with an associated Chi Square of 13236.36 ( $p = 0.000$ ). Most factors under the environmental attitude variable had negative factor loadings and were not statistically significant. All the motivational factors (both push and pull) had positive factor loadings and were statistically significant. All the factors for the first four scales (PID, PAF, PDE and PSB) of place attachment had positive factor loadings and were statistically significant. Most

factors of the last scale (PSL) had negative factor loadings, and were not statistically significant.

1. Visitors motivation to visit UI Zoo was not significantly influenced by their environmental attitudes ( $Z = 0.6133$ ,  $p = 0.5397$ ). Ho6 is therefore accepted.
2. There was a significant (positive) relationship between visitors motivation and place attachment ( $Z = 5.7071$ ,  $p = 0.0000$ ). Ho7 therefore rejected.
3. No significant relationship exist between visitors environmental attitude and place attachment to UI Zoo ( $Z = 0.1092$ ,  $p = 0.9130$ ). Ho8 is therefore accepted.

**Table 4.28: Test of relationship between environmental attitude, motivation and place attachment of visitors in UI Zoo**

Variables	op	Factors	Estimate	Standard error	Z value	P value	Confidence interval (CI) lower	CI upper
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	-1.1189	2.3112	-0.4841	0.6283	-5.6487	3.4109
		EA3	-2.4208	4.6439	-0.5213	0.6022	-11.5227	6.6811
		EA4	0.5839	1.7221	0.3391	0.7346	-2.7913	3.9591
LOG		EA5	-19.2409	30.7465	-0.6258	0.5315	-79.5030	41.0212
		EA6	-7.8412	12.7349	-0.6157	0.5381	-32.8011	17.1188
		EA7	-25.3400	40.7766	-0.6214	0.5343	-105.2606	54.5807
		EA8	-23.0096	36.9459	-0.6228	0.5334	-95.4222	49.4030
EOC		EA9	-17.4627	27.9818	-0.6241	0.5326	-72.3061	37.3807
		EA10	-16.5378	26.5921	-0.6219	0.5340	-68.6573	35.5817
		EA11	-23.4617	37.4454	-0.6266	0.5309	-96.8534	49.9300
		EA12	-23.7620	38.1254	-0.6233	0.5331	-98.4864	50.9623
Motivation	=~							
PUSH		PUSH1	1	0	NA	NA	1	1
		PUSH2	1.6805	0.3013	5.5769	0.0000*	1.0899	2.2711
		PUSH3	1.7048	0.3001	5.6811	0.0000*	1.1167	2.2930
		PUSH4	1.8977	0.3715	5.1078	0.0000*	1.1695	2.6259
		PUSH5	2.9538	0.4914	6.0105	0.0000*	1.9906	3.9170
		PUSH6	1.7953	0.3396	5.2871	0.0000*	1.1297	2.4608
		PUSH7	3.4976	0.5716	6.1185	0.0000*	2.3772	4.6180
		PUSH8	3.3907	0.5503	6.1620	0.0000*	2.3122	4.4691
		PUSH9	3.6442	0.5820	6.2619	0.0000*	2.5036	4.7848
		PUSH10	1.1073	0.2343	4.7258	0.0000*	0.6480	1.5665
		PUSH11	1.1891	0.2721	4.3701	0.0000*	0.6558	1.7224
		PUSH12	3.6725	0.5918	6.2055	0.0000*	2.5125	4.8324
		PUSH13	3.1340	0.5278	5.9379	0.0000*	2.0996	4.1685
		PUSH14	3.6830	0.6062	6.0755	0.0000*	2.4949	4.8711
		PUSH15	2.6872	0.4697	5.7213	0.0000*	1.7666	3.6078
		PUSH16	3.4675	0.5825	5.9532	0.0000*	2.3259	4.6091
		PUSH17	3.7668	0.6158	6.1169	0.0000*	2.5598	4.9737
PULL		PULL1	2.7223	0.4708	5.7829	0.0000*	1.7997	3.6450
		PULL2	2.3133	0.4176	5.5393	0.0000*	1.4948	3.1318
		PULL3	3.2172	0.5308	6.0617	0.0000*	2.1770	4.2575
		PULL4	3.7577	0.6110	6.1501	0.0000*	2.5602	4.9553
		PULL5	3.6436	0.5826	6.2542	0.0000*	2.5017	4.7854

	PULL6	3.9243	0.6428	6.1055	0.0000*	2.6646	5.1841
	PULL7	2.8442	0.5028	5.6570	0.0000*	1.8588	3.8297
	PULL8	3.9489	0.6399	6.1709	0.0000*	2.6947	5.2031
	PULL9	3.6580	0.6005	6.0919	0.0000*	2.4811	4.8349
	PULL10	0.8455	0.2638	3.2052	0.0013*	0.3285	1.3625
	PULL11	2.9287	0.5112	5.7296	0.0000*	1.9269	3.9306
	PULL12	2.8926	0.5115	5.6557	0.0000*	1.8902	3.8950
	PULL13	2.5880	0.4536	5.7050	0.0000*	1.6989	3.4771
	PULL14	2.1146	0.3981	5.3123	0.0000*	1.3344	2.8948
	PULL15	2.3845	0.4386	5.4371	0.0000*	1.5249	3.2440
	PULL16	3.7347	0.6067	6.1553	0.0000*	2.5455	4.9239
	PULL17	3.0431	0.5161	5.8966	0.0000*	2.0316	4.0546
	PULL18	3.5598	0.5842	6.0930	0.0000*	2.4147	4.7049
Place Att	==~						
PID	PA1	1	0	NA	NA	1	1
	PA2	0.9499	0.0525	18.0773	0.0000*	0.8469	1.0529
	PA3	1.0440	0.0518	20.1390	0.0000*	0.9424	1.1456
	PA4	0.9167	0.0538	17.0423	0.0000*	0.8113	1.0221
PDE	PA5	0.7952	0.0545	14.5795	0.0000*	0.6883	0.9021
	PA6	0.8074	0.0557	14.5066	0.0000*	0.6983	0.9164
	PA7	0.6136	0.0592	10.3673	0.0000*	0.4976	0.7295
	PA8	0.6830	0.0600	11.3841	0.0000*	0.5654	0.8006
PAF	PA10	0.9759	0.0514	19.0034	0.0000*	0.8752	1.0765
	PA11	0.8419	0.0553	15.2252	0.0000*	0.7335	0.9502
	PA12	0.8686	0.0538	16.1376	0.0000*	0.7631	0.9741
PSB	PA13	0.3571	0.0619	5.7715	0.0000*	0.2358	0.4783
	PA14	0.6889	0.0585	11.7782	0.0000*	0.5743	0.8036
	PA15	0.5229	0.0598	8.7517	0.0000*	0.4058	0.6400
	PA16	0.1515	0.0638	2.3731	0.0176*	0.0264	0.2766
PSL	PA17	-0.0523	0.0372	-1.4070	0.1594	-0.1251	0.0205
	PA18	-0.0260	0.0376	-0.6919	0.4890	-0.0996	0.0476
	PA19	0.0284	0.0454	0.6259	0.5314	-0.0605	0.1173
	PA20	-0.0313	0.0374	-0.8358	0.4033	-0.1046	0.0420
	PA21	-0.0633	0.0381	-1.6632	0.0963	-0.1380	0.0113
<b>Motivation</b>	~ <b>Env.At</b>	<b>2.0148</b>	<b>3.2853</b>	<b>0.6133</b>	<b>0.5397</b>	<b>-4.4243</b>	<b>8.4540</b>
<b>Place.Att</b>	~ <b>Env.At</b>	<b>0.2059</b>	<b>1.8855</b>	<b>0.1092</b>	<b>0.9130</b>	<b>-3.4895</b>	<b>3.9013</b>
<b>Place.Att</b>	~ <b>Motivation</b>	<b>2.4501</b>	<b>0.4293</b>	<b>5.7071</b>	<b>0.0000*</b>	<b>1.6087</b>	<b>3.2915</b>

(Goodness of fit test (Chi Square ( $\chi^2$ ) = 13236.36, df = 2141, P = 0.000, Normed Chi Square Index (NCI) = 6.182, Root Mean Square Error of Approximation (RMSEA) = 0.1145 (95% CI, p = 0.000), SRMR = 0.1171, Goodness of Fit (GFI) = 0.7169) \* = statistically significant)

- **OAU Garden**

This is presented on Table 4.29. The model fit was acceptable with a GFI of 0.9410, RMSEA of 0.1825 at 95% CI and SRMR of 0.1556. The full three factor model fit the data significantly with an associated Chi Square of 29440.02 ( $p = 0.000$ ). All the factors under the environmental attitude variable had positive estimates and were statistically significant. Most motivational factors (both push and pull) had negative estimates and were not statistically significant. All the factors for the first four scales (PID, PAF, PDE and PSB) of place attachment had estimates and were statistically significant. Most factors of the last scale (PSL) had positive factor loadings, and were not statistically significant.

1. Visitors motivation to visit OAU Biological Garden was not significantly influenced by their environmental attitudes ( $Z = 0.9592$ ,  $p = 0.3375$ ).  $H_06$  is therefore accepted.
2. There was no significant relationship between visitors motivation and place attachment to the garden ( $Z = -1.0235$ ,  $p = 0.3061$ ).  $H_07$  is therefore accepted.
3. A significant relationship exist between visitors environmental attitude and place attachment to the garden ( $Z = 3.4452$ ,  $p = 0.0006$ ).  $H_08$  is therefore rejected.

**Table 4.29: Test of relationship between environmental attitude, motivation and place attachment of visitors in OAU Garden**

Variables	op	Factors	Estimate	Standard error	Z value	P value	CI lower	CI upper
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	0.9265	0.0750	12.3521	0.0000*	0.7795	1.0735
		EA3	1.0460	0.0870	12.0192	0.0000*	0.8755	1.2166
		EA4	1.1443	0.0885	12.9323	0.0000*	0.9709	1.3177
LOC		EA5	1.1387	0.0822	13.8561	0.0000*	0.9777	1.2998
		EA6	1.0922	0.0785	13.9102	0.0000*	0.9383	1.2461
		EA7	1.0747	0.0798	13.4672	0.0000*	0.9183	1.2311
		EA8	1.0689	0.0785	13.6233	0.0000*	0.9151	1.2227
EOC		EA9	0.2848	0.0704	4.0460	0.0000*	0.1469	0.4228
		EA10	0.2832	0.0619	4.5763	0.0000*	0.1619	0.4045
		EA11	0.6813	0.0719	9.4798	0.0000*	0.5404	0.8221
		EA12	0.4312	0.0665	6.4881	0.0000*	0.3010	0.5615
Motivation	=~							
PUSH		PUSH1	1	0	NA	NA	1	1
		PUSH2	-6.8209	6.9341	-0.9837	0.3253	-20.4115	6.7698
		PUSH3	0.4600	0.5961	0.7718	0.4402	-0.7083	1.6284
		PUSH4	-8.1079	8.0746	-1.0041	0.3153	-23.9338	7.7180
		PUSH5	4.3337	4.5266	0.9574	0.3384	-4.5382	13.2057
		PUSH6	-3.6744	4.0696	-0.9029	0.3666	-11.6507	4.3020
		PUSH7	0.4014	1.3153	0.3052	0.7602	-2.1764	2.9793
		PUSH8	0.7021	1.5700	0.4472	0.6547	-2.3751	3.7792
		PUSH9	2.0868	2.8724	0.7265	0.4675	-3.5430	7.7167
		PUSH10	3.8663	4.0164	0.9626	0.3357	-4.0056	11.7382
		PUSH11	2.0569	2.1120	0.9739	0.3301	-2.0825	6.1962
		PUSH12	-8.3114	8.1751	-1.0167	0.3093	-24.3344	7.7115
		PUSH13	-22.8225	22.3016	-1.0234	0.3061	-66.5328	20.8878
		PUSH14	3.9013	4.1046	0.9505	0.3419	-4.1436	11.9462
		PUSH15	25.3801	24.7885	1.0239	0.3059	-23.2044	73.9646
		PUSH16	23.7029	23.2770	1.0183	0.3085	-21.9191	69.3249
		PUSH17	22.7003	22.2842	1.0187	0.3084	-20.9760	66.3765
PULL		PULL1	-14.8727	14.5810	-1.0200	0.3077	-43.4509	13.7055
		PULL2	-13.1610	12.9008	-1.0202	0.3076	-38.4461	12.1241
		PULL3	-23.9704	23.4552	-1.0220	0.3068	-69.9417	22.0009
		PULL4	-1.9036	2.1187	-0.8985	0.3689	-6.0562	2.2490
		PULL5	-17.0998	16.9325	-1.0099	0.3126	-50.2868	16.0873
		PULL6	-2.8191	2.8859	-0.9769	0.3286	-8.4754	2.8371

	PULL7	-21.4080	20.9551	-1.0216	0.3070	-62.4793	19.6633	
	PULL8	-7.6345	7.5196	-1.0153	0.3100	-22.3726	7.1036	
	PULL9	-7.5625	7.4919	-1.0094	0.3128	-22.2462	7.1213	
	PULL10	17.8855	17.4769	1.0234	0.3061	-16.3686	52.1396	
	PULL11	-6.5069	6.6361	-0.9805	0.3268	-19.5135	6.4997	
	PULL12	-18.2493	17.9438	-1.0170	0.3091	-53.4186	16.9199	
	PULL13	-26.5638	25.9699	-1.0229	0.3064	-77.4640	24.3363	
	PULL14	-2.8245	2.9992	-0.9417	0.3463	-8.7027	3.0538	
	PULL15	0.2046	1.4100	0.1451	0.8846	-2.5590	2.9682	
	PULL16	-2.8864	2.9829	-0.9676	0.3332	-8.7327	2.9600	
	PULL17	18.4578	18.1033	1.0196	0.3079	-17.0240	53.9395	
	PULL18	-2.8963	2.9602	-0.9784	0.3279	-8.6982	2.9057	
Place.Att	≈							
PID	PA1	1	0	NA	NA	1	1	
	PA2	0.9991	0.0252	39.6735	0.0000*	0.9497	1.0485	
	PA3	1.0157	0.0137	74.3445	0.0000*	0.9889	1.0425	
	PA4	0.9084	0.0234	38.8977	0.0000*	0.8627	0.9542	
PDE	PA5	0.7142	0.0306	23.3294	0.0000*	0.6542	0.7742	
	PA6	0.6676	0.0269	24.8093	0.0000*	0.6149	0.7203	
	PA7	0.7081	0.0262	27.0751	0.0000*	0.6569	0.7594	
	PA8	0.5574	0.0265	21.0456	0.0000*	0.5055	0.6093	
PAF	PA10	0.7698	0.0205	37.5185	0.0000*	0.7296	0.8100	
	PA11	0.8363	0.0238	35.0694	0.0000*	0.7895	0.8830	
	PA12	0.3345	0.0188	17.8218	0.0000*	0.2977	0.3713	
PSB	PA13	0.1380	0.0280	4.9288	0.0000*	0.0832	0.1929	
	PA14	0.0911	0.0188	4.8488	0.0000*	0.0543	0.1279	
	PA15	0.3634	0.0268	13.5661	0.0000*	0.3109	0.4159	
	PA16	0.7723	0.0765	10.0914	0.0000*	0.6223	0.9223	
PSL	PA17	0.0997	0.0368	2.7069	0.0068*	0.0275	0.1719	
	PA18	0.0547	0.0416	1.3151	0.1885	-0.0268	0.1362	
	PA19	0.1092	0.0472	2.3127	0.0207*	0.0167	0.2017	
	PA20	0.0723	0.0392	1.8464	0.0648	-0.0044	0.1491	
	PA21	0.0075	0.0467	0.1607	0.8724	-0.0840	0.0989	
<b>Motivation</b>	~	<b>Env.At</b>	<b>0.0098</b>	<b>0.0102</b>	<b>0.9592</b>	<b>0.3375</b>	<b>-0.0102</b>	<b>0.0298</b>
<b>Place.Att</b>	~	<b>Env.At</b>	<b>0.2382</b>	<b>0.0692</b>	<b>3.4452</b>	<b>0.0006*</b>	<b>0.1027</b>	<b>0.3738</b>
<b>Place.Att</b>	~	<b>Motivation</b>	<b>-19.2771</b>	<b>18.8352</b>	<b>-1.0235</b>	<b>0.3061</b>	<b>-56.1934</b>	<b>17.6392</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) =29440.02, df = 2141, P = 0.0000, RMSEA = 0.1825 (95% CI, p = 0.000), SRMR = 0.1556, GFI = 0.9410; \*=statistically significant)



- **FUNAAB Zoo**

This is presented on Table 4.30. The model fit was acceptable with a GFI of 0.6616, RMSEA of 0.2082 at 95% CI and SRMR of 0.2040. The full three factor model fit the data significantly with an associated Chi Square of 37306.1 ( $p = 0.000$ ). Most factors under the environmental attitude variable had positive estimates and were statistically significant. Most motivational factors (both push and pull) had positive estimates and were statistically significant. All the factors for the first four scales (PID, PAF, PDE and PSB) of place attachment had positive estimates and were statistically significant. Most factors of the last scale (PSL) had negative estimates, and were statistically significant.

1. Visitors motivation to visit FUNAAB Zoo Park was not significantly influenced by their environmental attitudes ( $Z = -0.4183$ ,  $p = 0.6757$ ).  $H_06$  is therefore accepted.
2. There was a significant relationship between visitors motivation and place attachment to the park ( $Z = 2.3863$ ,  $p = 0.0170$ ).  $H_07$  is therefore rejected.
3. A significant relationship exist between visitors environmental attitude and place attachment to the garden ( $Z = -5.8524$ ,  $p = 0.0000$ ).  $H_08$  is therefore rejected.

**Table 4.30: Test of relationship between environmental attitude, motivation and place attachment of visitors in FUNAAB Zoo**

Variables	op	Factors	Estimate	SE	Z value	P value	CI Lower	CI Upper
Env.At	=~							
HON		EA1	1	0	NA	NA	1	1
		EA2	1.7897	0.2154	8.3074	0.0000*	1.3675	2.2119
		EA3	0.4888	0.1643	2.9745	0.0029*	0.1667	0.8109
		EA4	3.0964	0.4201	7.3704	0.0000*	2.2730	3.9198
LOG		EA5	0.2325	0.1660	1.4010	0.1612	-0.0928	0.5578
		EA6	1.8020	0.2114	8.5225	0.0000*	1.3876	2.2164
		EA7	-0.0837	0.2251	-0.3718	0.7100	-0.5250	0.3575
		EA8	-0.7167	0.2491	-2.8769	0.0040*	-1.2050	-0.2284
EOC		EA9	0.8442	0.2089	4.0413	0.0001*	0.4348	1.2536
		EA10	-0.2641	0.2398	-1.1014	0.2707	-0.7340	0.2059
		EA11	1.0422	0.1900	5.4838	0.0000*	0.6697	1.4147
		EA12	1.2601	0.2460	5.1222	0.0000*	0.7779	1.7423
Motivation	=~							
PUSH		PUSH1	1	0	NA	NA	1	1
		PUSH2	7.4334	3.0161	2.4646	0.0137*	1.5221	13.3448
		PUSH3	0.6263	0.9528	0.6573	0.5110	-1.2411	2.4938
		PUSH4	9.9709	3.9405	2.5304	0.0114*	2.2478	17.6941
		PUSH5	14.5220	5.6775	2.5578	0.0105*	3.3943	25.6497
		PUSH6	17.5014	6.8235	2.5649	0.0103*	4.1275	30.8752
		PUSH7	12.6070	4.9973	2.5227	0.0116*	2.8124	22.4016
		PUSH8	16.2188	6.3553	2.5520	0.0107*	3.7626	28.6751
		PUSH9	15.4697	6.0463	2.5586	0.0105*	3.6192	27.3201
		PUSH10	-0.8139	0.6617	-1.2300	0.2187	-2.1108	0.4830
		PUSH11	3.4548	1.5794	2.1874	0.0287*	0.3592	6.5504
		PUSH12	20.9719	8.1724	2.5662	0.0103*	4.9542	36.9895
		PUSH13	11.2891	4.6026	2.4528	0.0142*	2.2682	20.3101
		PUSH14	17.0124	6.6720	2.5498	0.0108*	3.9356	30.0892
		PUSH15	3.2892	1.5145	2.1718	0.0299*	0.3208	6.2576
		PUSH16	4.5688	1.9845	2.3023	0.0213*	0.6793	8.4583
		PUSH17	4.3920	1.8897	2.3242	0.0201*	0.6883	8.0957
PULL		PULL1	10.4486	4.1974	2.4893	0.0128*	2.2219	18.6752
		PULL2	8.6727	3.5149	2.4674	0.0136*	1.7836	15.5619
		PULL3	12.4432	4.9580	2.5097	0.0121*	2.7258	22.1607
		PULL4	16.0145	6.2609	2.5579	0.0105*	3.7433	28.2856
		PULL5	11.9124	4.6821	2.5442	0.0110*	2.7357	21.0892
		PULL6	13.0128	5.3075	2.4518	0.0142*	2.6104	23.4153
		PULL7	16.7415	6.5623	2.5512	0.0107*	3.8796	29.6034

	PULL8	16.2748	6.3988	2.5434	0.0110*	3.7335	28.8161	
	PULL9	20.8380	8.1595	2.5538	0.0107*	4.8457	36.8303	
	PULL10	2.4447	1.4852	1.6461	0.0998	-0.4662	5.3557	
	PULL11	6.4728	2.7259	2.3746	0.0176*	1.1302	11.8155	
	PULL12	3.2506	1.4215	2.2868	0.0222*	0.4646	6.0367	
	PULL13	-0.5628	1.4768	-0.3811	0.7032	-3.4573	2.3318	
	PULL14	-0.1878	0.6431	-0.2921	0.7702	-1.4482	1.0725	
	PULL15	0.5078	0.9869	0.5145	0.6069	-1.4265	2.4420	
	PULL16	11.3826	4.6641	2.4405	0.0147*	2.2412	20.5241	
	PULL17	1.3498	1.0960	1.2316	0.2181	-0.7983	3.4979	
	PULL18	13.0797	5.1677	2.5310	0.0114*	2.9512	23.2081	
Place.Att	=~							
PID	PA1	1	0	NA	NA	1	1	
	PA2	0.8438	0.0278	30.4012	0.0000*	0.7894	0.8981	
	PA3	0.8806	0.0366	24.0882	0.0000*	0.8090	0.9523	
	PA4	0.6790	0.0267	25.4376	0.0000*	0.6267	0.7313	
PDE	PA5	1.0204	0.0300	33.9562	0.0000*	0.9615	1.0793	
	PA6	0.7337	0.0235	31.2163	0.0000*	0.6876	0.7797	
	PA7	0.7927	0.0258	30.7200	0.0000*	0.7421	0.8433	
	PA8	0.6740	0.0244	27.5746	0.0000*	0.6261	0.7219	
PAF	PA10	0.5910	0.0279	21.1991	0.0000*	0.5364	0.6457	
	PA11	0.8475	0.0277	30.5463	0.0000*	0.7931	0.9018	
	PA12	0.5287	0.0263	20.1303	0.0000*	0.4772	0.5802	
PSB	PA13	0.4502	0.0304	14.8002	0.0000*	0.3906	0.5098	
	PA14	0.3033	0.0271	11.1872	0.0000*	0.2501	0.3564	
	PA15	0.6592	0.0413	15.9649	0.0000*	0.5783	0.7402	
	PA16	0.4212	0.0349	12.0811	0.0000*	0.3528	0.4895	
PSL	PA17	0.0365	0.0222	1.6457	0.0998	-0.0070	0.0799	
	PA18	-0.0664	0.0251	-2.6496	0.0081*	-0.1156	-0.0173	
	PA19	0.1289	0.0280	4.6068	0.0000*	0.0740	0.1837	
	PA20	-0.1224	0.0253	-4.8382	0.0000*	-0.1719	-0.0728	
	PA21	-0.1019	0.0267	-3.8161	0.0001*	-0.1543	-0.0496	
<b>Motivation</b>	~	<b>Env.At</b>	<b>-0.0042</b>	<b>0.0101</b>	<b>-0.4183</b>	<b>0.6757</b>	<b>-0.0241</b>	<b>0.0156</b>
<b>Place.Att</b>	~	<b>Env.At</b>	<b>-1.9025</b>	<b>0.3251</b>	<b>-5.8524</b>	<b>0.0000*</b>	<b>-2.5397</b>	<b>-1.2654</b>
<b>Place.Att</b>	~	<b>Mot.</b>	<b>9.0522</b>	<b>3.7934</b>	<b>2.3863</b>	<b>0.0170*</b>	<b>1.6172</b>	<b>16.4872</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 37306.1, df = 2141, P = 0.0000, RMSEA = 0.2081 (95% CI, p = 0.000), SRMR = 0.2040, GFI = 0.6616) \*=statistically significant)

- **FUTA Park**

This is presented on Table 4.31. The model fit was acceptable with a GFI of 0.7566, RMSEA of 0.4522 and SRMR of 0.1783 at 95% CI. The full three factor model fit the data significantly with an associated Chi Square of 16503.2 ( $p = 0.000$ ). Most factors under the environmental attitude variable had negative estimates and were not statistically significant. Most motivational factors (both push and pull) had negative estimates and were statistically significant. Almost all the factors of place attachment had positive estimates and were statistically significant.

1. Visitors motivation to visit FUTA Park was significantly influenced by their environmental attitudes ( $Z = -2.1938$ ,  $p = 0.0283$ ).  $H_{o6}$  is therefore rejected.
2. A significant relationship exists between visitors motivation and place attachment to the park ( $Z = -7.6087$ ,  $p = 0.0000$ ).  $H_{o7}$  is therefore rejected.
3. There was no significant relationship exist between visitors environmental attitude and place attachment to the garden ( $Z = 1.3966$ ,  $p = 0.1625$ ).  $H_{o8}$  is therefore accepted.

**Table 4.31: Test of relationship between environmental attitude, motivation and place attachment of visitors in FUTA Park**

Variables	op	Factors	Estimate	SE	Z value	P value	CI Lower	CI Upper
Env.At	≈							
HON		EA1	1	0	NA	NA	1	1
		EA2	3.2959	1.3285	2.4809	0.0131*	0.6921	5.8997
		EA3	6.0208	2.2752	2.6462	0.0081*	1.5615	10.4802
		EA4	11.8492	4.5578	2.5998	0.0093*	2.9162	20.7823
LOG		EA5	1.2433	0.9655	1.2877	0.1978	-0.6491	3.1356
		EA6	0.8530	0.7035	1.2125	0.2253	-0.5259	2.2320
		EA7	-0.0125	0.8568	-0.0145	0.9884	-1.6918	1.6669
		EA8	-2.6235	1.3820	-1.8984	0.0576	-5.3322	0.0851
EOC		EA9	0.4105	0.9346	0.4393	0.6605	-1.4213	2.2423
		EA10	0.9185	1.0185	0.9018	0.3671	-1.0777	2.9147
		EA11	8.0667	3.1539	2.5577	0.0105*	1.8851	14.2483
		EA12	6.7526	2.6836	2.5162	0.0119*	1.4928	12.0124
Motivation	≈							
PUSH		PUSH1	1	0	NA	NA	1	1
		PUSH2	-1.0617	0.2569	-4.1327	0.0000*	-1.5652	-0.5582
		PUSH3	1.3137	0.1848	7.1080	0.0000*	0.9514	1.6759
		PUSH4	-0.6322	0.2017	-3.1348	0.0017*	-1.0274	-0.2369
		PUSH5	1.7989	0.2545	7.0674	0.0000*	1.3000	2.2978
		PUSH6	-0.8723	0.2297	-3.7972	0.0001*	-1.3226	-0.4221
		PUSH7	1.6112	0.3050	5.2827	0.0000*	1.0134	2.2090
		PUSH8	-0.9006	0.2640	-3.4118	0.0006*	-1.4179	-0.3832
		PUSH9	0.1971	0.2130	0.9255	0.3547	-0.2203	0.6146
		PUSH10	1.8368	0.2608	7.0422	0.0000*	1.3256	2.3480
		PUSH11	0.9790	0.2993	3.2709	0.0011*	0.3924	1.5657
		PUSH12	-1.7611	0.3308	-5.3237	0.0000*	-2.4094	-1.1127
		PUSH13	0.5373	0.2754	1.9512	0.0510	-0.0024	1.0770
		PUSH14	-2.1755	0.3517	-6.1858	0.0000*	-2.8648	-1.4862
		PUSH15	0.4309	0.2598	1.6587	0.0972	-0.0783	0.9401
		PUSH16	3.1042	0.4055	7.6561	0.0000*	2.3095	3.8989
		PUSH17	-1.9517	0.3492	-5.5896	0.0000*	-2.6360	-1.2673
PULL		PULL1	-2.8213	0.3463	-8.1479	0.0000*	-3.5000	-2.1427
		PULL2	-1.8990	0.2985	-6.3612	0.0000*	-2.4842	-1.3139
		PULL3	-1.0901	0.2731	-3.9908	0.0001*	-1.6254	-0.5547
		PULL4	-4.3338	0.4742	-9.1382	0.0000*	-5.2633	-3.4043
		PULL5	-0.4665	0.2735	-1.7056	0.0881	-1.0027	0.0696
		PULL6	-4.1123	0.4511	-9.1167	0.0000*	-4.9964	-3.2282
		PULL7	-3.8531	0.4486	-8.5897	0.0000*	-4.7322	-2.9739

	PULL8	-1.6993	0.3047	-5.5774	0.0000*	-2.2964	-1.1021	
	PULL9	-4.7074	0.4964	-9.4823	0.0000*	-5.6804	-3.7344	
	PULL10	-0.3888	0.2078	-1.8711	0.0613	-0.7960	0.0185	
	PULL11	-3.6896	0.4163	-8.8634	0.0000*	-4.5054	-2.8737	
	PULL12	-1.7366	0.2622	-6.6232	0.0000*	-2.2505	-1.2227	
	PULL13	0.7546	0.2992	2.5220	0.0117*	0.1682	1.3411	
	PULL14	0.3717	0.1916	1.9397	0.0524	-0.0039	0.7473	
	PULL15	-1.4797	0.2668	-5.5459	0.0000*	-2.0027	-0.9568	
	PULL16	-3.4650	0.3686	-9.4009	0.0000*	-4.1874	-2.7426	
	PULL17	-1.6391	0.2862	-5.7263	0.0000*	-2.2001	-1.0781	
	PULL18	-3.7616	0.4018	-9.3617	0.0000*	-4.5492	-2.9741	
Place.Att	≈							
PID	PA1	1	0	NA	NA	1	1	
	PA2	1.3528	0.0634	21.3529	0.0000*	1.2286	1.4770	
	PA3	1.1676	0.0690	16.9156	0.0000*	1.0323	1.3029	
	PA4	0.9295	0.0714	13.0131	0.0000*	0.7895	1.0695	
PDE	PA5	1.1539	0.0675	17.1008	0.0000*	1.0216	1.2861	
	PA6	0.8718	0.0641	13.6103	0.0000*	0.7463	0.9974	
	PA7	0.8129	0.0639	12.7243	0.0000*	0.6877	0.9381	
	PA8	1.0614	0.0665	15.9613	0.0000*	0.9311	1.1918	
PAF	PA10	1.3755	0.0658	20.9069	0.0000*	1.2466	1.5045	
	PA11	0.6222	0.0598	10.4073	0.0000*	0.5050	0.7394	
	PA12	1.2443	0.0638	19.4934	0.0000*	1.1192	1.3694	
PSB	PA13	0.8098	0.0650	12.4548	0.0000*	0.6824	0.9372	
	PA14	0.4915	0.0564	8.7102	0.0000*	0.3809	0.6021	
	PA15	0.4148	0.0444	9.3444	0.0000*	0.3278	0.5018	
	PA16	-0.0729	0.0514	-1.4201	0.1556	-0.1736	0.0277	
PSL	PA17	-0.1296	0.0391	-3.3106	0.0009*	-0.2063	-0.0529	
	PA18	-0.3096	0.0490	-6.3222	0.0000*	-0.4056	-0.2136	
	PA19	0.1248	0.0439	2.8404	0.0045*	0.0387	0.2110	
	PA20	-0.1959	0.0479	-4.0867	0.0000*	-0.2898	-0.1019	
	PA21	-0.1184	0.0551	-2.1476	0.0317*	-0.2265	-0.0103	
<b>Motivation</b>	~	<b>Env.At</b>	<b>-0.8489</b>	<b>0.3869</b>	<b>-2.1938</b>	<b>0.0283*</b>	<b>-1.6073</b>	<b>-0.0905</b>
<b>Place.Att</b>	~	<b>Env.At</b>	<b>0.9969</b>	<b>0.7138</b>	<b>1.3966</b>	<b>0.1625</b>	<b>-0.4021</b>	<b>2.3960</b>
<b>Place.Att</b>	~	<b>Motivation</b>	<b>-2.0959</b>	<b>0.2755</b>	<b>-7.6087</b>	<b>0.0000*</b>	<b>-2.6358</b>	<b>-1.5560</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 16503.2, df = 2141, P = 0.0000, RMSEA = 0.4522 (95% CI, p = 0.000), SRMR = 0.1783, GFI = 0.7566) \*=statistically significant)

- **Combined findings**

This is presented on Table 4.32. The model fit was acceptable with a GFI of 0.7996, RMSEA of 0.1184 and SRMR of 0.1061 at 95% CI. The full three factor model fit the data significantly with an associated Chi Square of 48037.9 ( $p = 0.000$ ). All the factors under the environmental attitude variable had positive estimates and were statistically significant. Most motivational factors (both push and pull) had positive estimates, but were not statistically significant. Most factors of place attachment had positive estimates and were statistically significant.

1. Visitors motivation across the study zoos was not significantly influenced by their environmental attitudes ( $Z = 1.2374$ ,  $p = 0.2159$ ).  $H_06$  is therefore accepted.
2. No significant relationship exists between visitors motivation and place attachment to the zoos ( $Z = 1.2961$ ,  $p = 0.1950$ ).  $H_07$  is therefore accepted.
3. There was no significant relationship exist between visitors environmental attitude and place attachment to the zoos ( $Z = 1.7472$ ,  $p = 0.0806$ ).  $H_08$  is therefore accepted.

**Table 4.32: Test of relationship between environmental attitude, motivation and place attachment of visitors (Total)**

Variables	op	Factors	Estimate	SE	Z value	P value	CI Lower	CI Upper	
Env.At HON	≈	EA1	1	0	NA	NA	1	1	
		EA2	1.1861	0.0786	15.0816	0.0000	1.0320	1.3403	
		EA3	1.1487	0.0882	13.0226	0.0000	0.9758	1.3216	
		EA4	1.6148	0.1051	15.3613	0.0000	1.4088	1.8209	
		LOG	EA5	0.9798	0.0973	10.0706	0.0000	0.7891	1.1705
			EA6	1.3034	0.0948	13.7535	0.0000	1.1176	1.4891
			EA7	1.0532	0.1138	9.2576	0.0000	0.8302	1.2761
		EOC	EA8	0.7419	0.1050	7.0654	0.0000	0.5361	0.9478
			EA9	1.0131	0.1172	8.6457	0.0000	0.7834	1.2427
			EA10	0.9003	0.1108	8.1259	0.0000	0.6832	1.1175
			EA11	1.3779	0.1304	10.5629	0.0000	1.1222	1.6335
			EA12	1.4411	0.1333	10.8097	0.0000	1.1798	1.7025
Motivation PUSH	≈	PUSH1	1	0	NA	NA	1	1	
		PUSH2	8.2144	6.4847	1.2667	0.2053	-4.4954	20.9241	
		PUSH3	-8.1440	6.3646	-1.2796	0.2007	-20.6185	4.3304	
		PUSH4	10.8550	8.4599	1.2831	0.1995	-5.7261	27.4360	
		PUSH5	32.9641	25.4339	1.2961	0.1950	-16.8854	82.8137	
		PUSH6	18.6540	14.4400	1.2918	0.1964	-9.6479	46.9558	
		PUSH7	41.2647	31.8284	1.2965	0.1948	-21.1178	103.6472	
		PUSH8	45.3202	34.9517	1.2967	0.1948	-23.1838	113.8243	
		PUSH9	34.5135	26.6246	1.2963	0.1949	-17.6697	86.6967	
		PUSH10	3.5814	2.9643	1.2082	0.2270	-2.2285	9.3913	
		PUSH11	-6.5271	5.2419	-1.2452	0.2131	-16.8010	3.7468	
		PUSH12	53.2835	41.0920	1.2967	0.1947	-27.2554	133.8225	
		PUSH13	39.1683	30.2279	1.2958	0.1951	-20.0773	98.4138	
		PUSH14	44.5408	34.3619	1.2962	0.1949	-22.8073	111.8890	
		PUSH15	-2.4618	2.4740	-0.9951	0.3197	-7.3108	2.3872	
		PUSH16	6.2161	5.1047	1.2177	0.2233	-3.7889	16.2212	
		PUSH17	20.5572	15.9359	1.2900	0.1971	-10.6766	51.7911	
PULL	PULL1	58.0015	44.7260	1.2968	0.1947	-29.6597	145.6628		
	PULL2	50.1665	38.6841	1.2968	0.1947	-25.6528	125.9859		
	PULL3	47.2792	36.4637	1.2966	0.1948	-24.1883	118.7468		
	PULL4	52.2658	40.3051	1.2968	0.1947	-26.7308	131.2625		
	PULL5	36.8115	28.3915	1.2966	0.1948	-18.8349	92.4578		
	PULL6	55.2806	42.6347	1.2966	0.1948	-28.2818	138.8431		
	PULL7	53.1751	41.0068	1.2967	0.1947	-27.1967	133.5469		



	PULL8	50.7676	39.1433	1.2970	0.1946	-25.9519	127.4870	
	PULL9	61.5160	47.4333	1.2969	0.1947	-31.4515	154.4836	
	PULL10	-4.0618	3.4227	-1.1867	0.2353	-10.7702	2.6465	
	PULL11	39.6599	30.6159	1.2954	0.1952	-20.3461	99.6659	
	PULL12	21.8510	16.8933	1.2935	0.1958	-11.2593	54.9613	
	PULL13	32.2860	24.9447	1.2943	0.1956	-16.6046	81.1766	
	PULL14	-1.7374	1.8095	-0.9601	0.3370	-5.2839	1.8092	
	PULL15	4.2500	3.5575	1.1947	0.2322	-2.7226	11.2225	
	PULL16	48.2083	37.1866	1.2964	0.1948	-24.6762	121.0927	
	PULL17	7.3620	5.9145	1.2447	0.2132	-4.2302	18.9543	
	PULL18	46.9062	36.1826	1.2964	0.1948	-24.0104	117.8229	
Place.Att	≈							
PID	PA1	1	0	NA	NA	1	1	
	PA2	1.0106	0.0179	56.3917	0.0000	0.9755	1.0457	
	PA3	0.9888	0.0196	50.4488	0.0000	0.9504	1.0272	
	PA4	0.8452	0.0191	44.2850	0.0000	0.8078	0.8826	
PDE	PA5	1.0331	0.0196	52.6289	0.0000	0.9946	1.0716	
	PA6	0.9093	0.0180	50.4379	0.0000	0.8740	0.9447	
	PA7	0.8754	0.0192	45.5508	0.0000	0.8378	0.9131	
	PA8	0.8538	0.0185	46.2468	0.0000	0.8176	0.8900	
PAF	PA10	0.8879	0.0173	51.4389	0.0000	0.8541	0.9217	
	PA11	0.8521	0.0184	46.3503	0.0000	0.8161	0.8882	
	PA12	0.8272	0.0176	46.9712	0.0000	0.7926	0.8617	
PSB	PA13	0.6317	0.0211	29.9889	0.0000	0.5904	0.6730	
	PA14	0.4744	0.0185	25.7084	0.0000	0.4383	0.5106	
	PA15	0.5743	0.0207	27.7817	0.0000	0.5337	0.6148	
	PA16	0.5310	0.0261	20.3742	0.0000	0.4800	0.5821	
PSL	PA17	-0.0726	0.0141	-5.1567	0.0000	-0.1003	-0.0450	
	PA18	-0.1540	0.0159	-9.6771	0.0000	-0.1851	-0.1228	
	PA19	0.0321	0.0169	1.8989	0.0576	-0.0010	0.0653	
	PA20	-0.1563	0.0156	-9.9921	0.0000	-0.1870	-0.1257	
	PA21	-0.1199	0.0168	-7.1324	0.0000	-0.1528	-0.0869	
<b>Motivation</b>	~	<b>Env.At</b>	<b>0.0073</b>	<b>0.0059</b>	<b>1.2374</b>	<b>0.2159</b>	<b>-0.0043</b>	<b>0.0188</b>
<b>Place.Att</b>	~	<b>Env.At</b>	<b>0.1306</b>	<b>0.0748</b>	<b>1.7472</b>	<b>0.0806</b>	<b>-0.0159</b>	<b>0.2771</b>
<b>Place.Att</b>	~	<b>Motivation</b>	<b>46.5707</b>	<b>35.9326</b>	<b>1.2961</b>	<b>0.1950</b>	<b>-23.8559</b>	<b>116.9974</b>

(Goodness of fit test ((Chi Square ( $\chi^2$ ) = 48037.9, df = 2141, P = 0.0000, RMSEA = 0.1184 (95% CI, p = 0.000), SRMR = 0.1061, GFI = 0.7996) \*=statistically significant)

#### **4.7 Visitors Satisfaction with individual zoo attributes and services**

This is presented on Table 4.33.

##### **4.7.1 Visitors' satisfaction with individual zoo attributes and services (UI Zoo)**

Visitors in UI Zoo were mostly satisfied with the various attributes of the garden: peaceful and restful atmosphere (1.87); accessibility (2.01); security and safety (2.01); viewing platform (2.03); and displayed animal information on cage (2.04).

##### **4.7.2 Visitors' satisfaction with individual zoo attributes and services (OAU Garden)**

Majority of the visitors in the garden were largely satisfied with the various attributes of the garden such as entry fee (1.71); cleanliness (1.83); size of animal enclosure (2.12); security and safety (2.18); and peaceful and restful atmosphere (2.19).

##### **4.7.3 Visitors' satisfaction with individual zoo attributes and services (FUNAAB Zoo)**

Majority of the visitors in the garden were largely satisfied with: peaceful and restful atmosphere (1.50); entry fee (1.55); cleanliness (1.63); price of food and drinks (1.69); and vegetation (1.80).

##### **4.7.4 Visitors' satisfaction with individual zoo attributes and services (FUTA Park)**

Majority of the visitors in the garden were largely satisfied with entry fee (1.66); cleanliness (1.70); vegetation (1.94); landscape (1.78); footpaths/trails (1.78); and tour guidance (1.82).

Overall, visitors were largely satisfied with the zoos attributes and services (Figure 4.16).

**Table 4.33: Visitors' satisfaction attributes and services in federal institutional-based zoos in South-West, Nigeria**

<i>Factors</i>	UI Zoo			OAU Garden			FUNAAB Zoo			FUTA Park		
	Mean	SD	Order*	Mean	SD	Order*	Mean	SD	Order*	Mean	SD	Order*
Entry fee	2.18	1.06	10	1.71	0.81	1	1.55	0.69	2	1.66	0.75	1
Number of animals	2.36	1.01	19	3.06	1.08	22	2.15	0.76	19	2.19	0.92	16
Variety of animals	2.29	0.96	16	3.35	1.38	23	2.20	0.80	22	2.13	0.97	15
Size of animal enclosure	2.28	0.97	14	2.12	0.54	3	2.08	0.73	17	1.92	0.95	9
Displayed animal information on enclosure	2.04	0.84	6	2.72	0.81	19	1.83	0.91	7	1.66	0.72	1
Viewing platform	2.03	0.86	4	2.70	0.76	18	1.89	0.49	11	-	-	-
Private places for the animals to move away from visitors	2.07	0.83	8	2.55	0.76	14	2.18	0.80	21	2.00	1.41	13
Vegetation	2.18	0.74	10	2.23	0.65	8	1.80	0.50	5	1.94	1.03	10
Landscape	2.10	0.74	9	2.98	1.02	21	1.81	0.54	6	1.78	0.92	4
Footpaths/Trails	2.03	0.75	4	2.22	0.66	6	1.93	0.59	13	1.79	0.95	5
Staff friendliness/receptivity	2.34	1.10	18	2.31	0.74	11	2.20	0.86	22	1.90	1.04	8
Restaurants / Food outlets	2.45	1.01	22	2.30	0.63	10	2.31	0.83	24	-	-	-
Quality of food and drinks	2.47	0.96	23	2.33	0.62	12	2.05	0.69	16	-	-	-
Variety of food and drinks	2.41	0.90	20	2.90	0.91	20	2.09	0.67	18	-	-	-
Price of food and drinks	2.43	0.90	21	2.29	0.64	9	1.69	0.75	4	-	-	-

Tour guidance	2.53	1.26	24	2.33	0.66	12	1.85	0.59	9	1.82	1.09	6
Peaceful and restful environment	1.87	0.85	1	2.19	0.56	5	1.50	0.58	1	1.94	0.82	10
Security and safety	2.01	0.83	2	2.18	0.58	4	1.86	0.57	10	2.09	1.26	14
Cleanliness	2.05	0.86	7	1.83	0.76	2	1.63	0.71	3	1.70	0.73	3
Accessibility	2.01	0.81	2	2.22	0.56	6	1.84	0.56	8	1.86	0.97	7
Toilet	2.26	1.03	13	-	-		2.17	0.81	20	-	-	-
Car Park	2.28	0.89	14	2.63	0.61	17	1.96	0.67	15	2.37	1.32	18
Overall value for money	2.22	0.94	12	2.59	0.64	15	1.92	0.66	12	2.36	1.05	17
Others	2.33	0.89	17	2.60	0.63	16	1.94	0.65	14	1.98	1.04	12

(St.D = Standard deviation, \*Rank order by ascending mean in total sample)

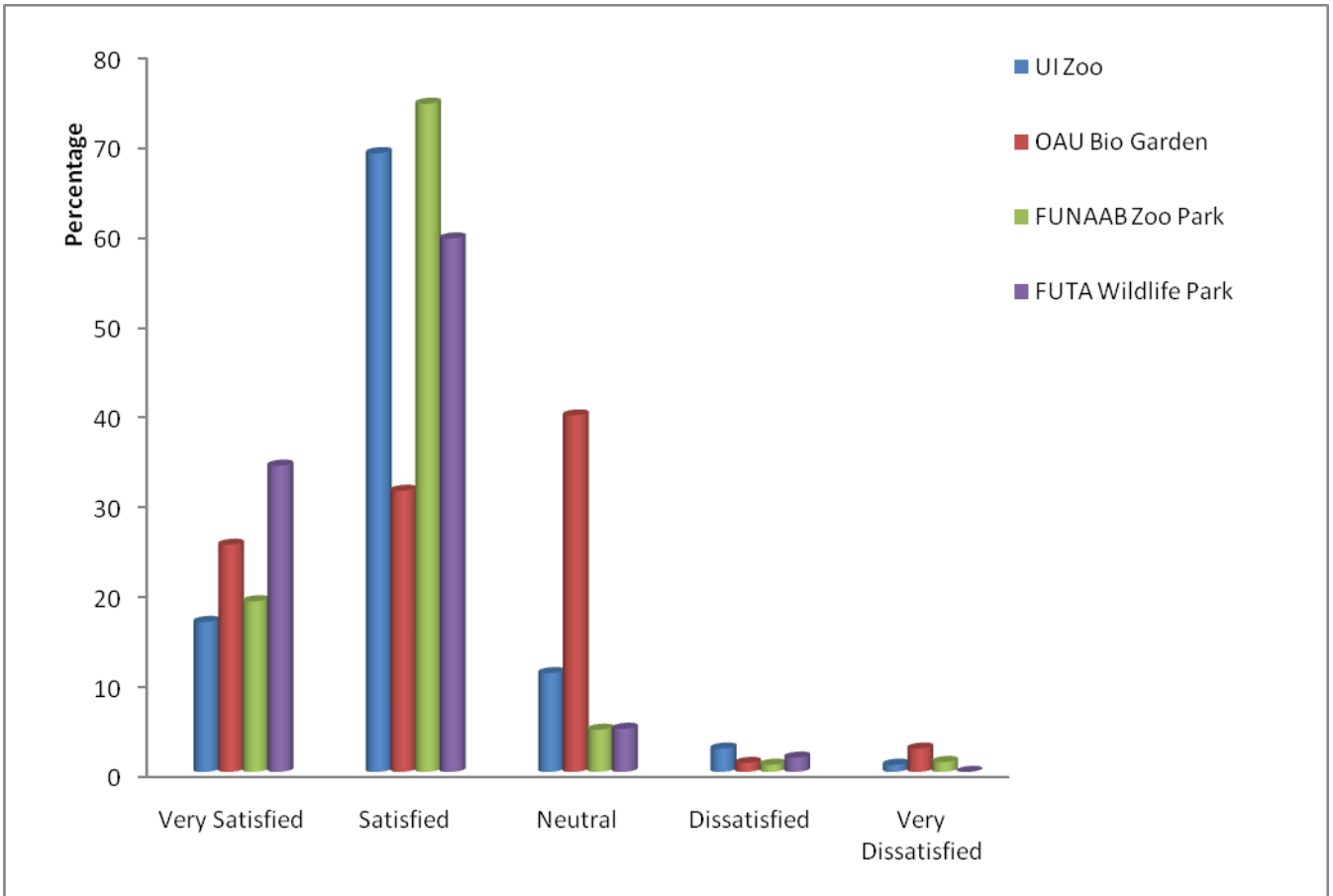


Fig 4.16: Overall visitors' satisfaction across federal institutional-based zoos in South-West, Nigeria

#### 4.7.5 Test of hypothesis 9

**Hypothesis 9 (H<sub>0</sub>9): There is no significant difference in overall visitors' satisfaction across the study zoos**

The results of the Analysis of Variance (ANOVA) in testing the overall visitors' satisfaction across the zoos revealed that significant differences exist at  $P < 0.05$  (Table 4.34). Therefore H<sub>0</sub>9 is rejected.

#### 4.7.6 Test of hypothesis 10

**Hypothesis 10 (H<sub>0</sub>10): Visitors overall satisfaction is not significantly influenced by their socio-economic characteristics (Table 4.35)**

- UI Zoo

The Chi Square test of relationship revealed a significant association with respect to sex, age, occupational status and monthly income at p values of 0.012, 0.001, 0.000 and 0.001 respectively. There was no significant association with respect to marital status, religion, education and nationality at p values of 0.153, 0.399, 0.277 and 0.134 respectively. Therefore H<sub>0</sub>10 is accepted with respect to the latter group ( $p > 0.05$ ) and rejected for the earlier ( $p < 0.05$ ).

- OAU Garden

The Chi Square test of relationship revealed a significant association between visitors overall satisfaction and socio-economic characteristics at p values of 0.045, 0.000, 0.001, 0.000, 0.000, 0.000, 0.000 and 0.000 for sex, marital status, age, religion, education,

occupational status, nationality and monthly income respectively. Ho10 is therefore rejected ( $p < 0.05$ ).

- FUNAAB Zoo

The Chi Square test of relationship revealed a significant association with respect to sex, age, religion, education, occupational status and monthly income at p values of 0.035, 0.000, 0.000, 0.000, 0.000 and 0.000 respectively. There was no significant association with respect to marital status and nationality at p values of 0.420 and 0.667 respectively. Therefore Ho10 is accepted with respect to the latter group ( $p > 0.05$ ) and rejected for the earlier ( $p < 0.05$ ).

- FUTA Park

The Chi Square test of relationship revealed a significant association with respect to sex, age, religion, education, occupational status and monthly income at p values of 0.000, 0.000, 0.000, 0.000 and 0.001 respectively. There was no significant association with respect to marital status and nationality at p values of 0.243 and 0.071 respectively. Therefore Ho10 is accepted with respect to the latter group ( $p > 0.05$ ) and rejected for the earlier ( $p < 0.05$ ).

- Total

The Chi Square test of relationship revealed a significant association between visitors overall satisfaction across the zoos and socio-economic characteristics at p values of 0.000, 0.046, 0.000, 0.000, 0.000, 0.000, 0.000 and 0.000 for sex, marital status, age, religion, education, occupational status, nationality and monthly income respectively. Ho10 is therefore rejected ( $p < 0.05$ ).

**Table 4.34: Test of significant difference in overall visitors' satisfaction across federal institutional-based zoos in South-West, Nigeria**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.629	3	16.876	32.654	0.000*
Within Groups	786.613	1522	0.517		
Total	837.242	1525			

(\* = statistically significant)



**Table 4.35: Test of relationship between socio-economic characteristics and overall visitors' satisfaction in federal institutional-based zoos in South-West, Nigeria**

Socio-demographic	UI Zoo		OAU Garden		FUNAAB Zoo		FUTA Park		Total	
	$\chi^2$	P value	$\chi^2$	P value	$\chi^2$	P value	$\chi^2$	P value	$\chi^2$	P value
Sex	12.928	0.012*	9.759	0.045*	10.362	0.035*	39.356	0.000*	40.991	0.000*
Marital status	6.685	0.153	30.045	0.000*	3.897	0.420	4.179	0.243	9.713	0.046*
Age	40.431	0.001*	35.529	0.001*	48.466	0.000*	20.084	0.003*	55.688	0.000*
Religion	8.361	0.399	93.970	0.000*	131.359	0.000*	26.708	0.000*	79.131	0.000*
Education	14.379	0.277	134.021	0.000*	65.463	0.000*	30.316	0.000*	179.752	0.000*
Occupational status	43.597	0.000*	149.103	0.000*	35.871	0.000*	35.182	0.000*	209.503	0.000*
Nationality	7.036	0.134	81.419	0.000*	2.373	0.667	7.021	0.071	160.570	0.000*
Monthly income	50.852	0.001*	54.458	0.000*	115.684	0.000*	22.133	0.001*	59.456	0.000*

(\* = statistically significant)

#### **4.8 Animals which attract visitors to federal institutional-based zoos in South-West, Nigeria**

- **UI Zoo**

Majority of visitors were attracted by the lions as indicated by 47.8% of the respondents (Fig 4.17). This was followed by those that came to see the primates (baboons, drill monkeys, chimpanzees, mona monkey, etc) at 17%. Others include all the zoo animals (8.1%), crocodile (7.8%), snakes (7.1%), giraffe (5.6%), pea fowl (4.3%), hyena (4.1%), ostrich (3.5%), jackals (3.3%), horse (2.8%) and donkey (1%).

- **OAU Garden**

Majority of visitors to OAU Bio Garden came to see all the animals as indicated by 78.3% (Fig 4.18). This was followed by those who were attracted by the lions (21.7%) and primates (10.5%). Others include hyena (5%), python (3.7%) and ostrich (2.1%).

- **FUNAAB Zoo**

Most visitors were attracted to the park by all the animals as indicated by 74.9% of the respondents (Fig 4.19). This was followed by those who indicated primates (28.5%). Others include ostrich (7.1%), crocodile (4%), donkey (3.2%), jackal (2.9%) and African grey parrot (1.6%).

- **FUTA Park**

The bulk of the respondents indicated primates (32.3%), ostrich (24.5%), crocodile (22.8%), all the animals (17.7%) and pea fowl (15.9%). Others include goose (12.6%), ducks (11.6%) and tortoise (3.2%) (Fig 4.20).

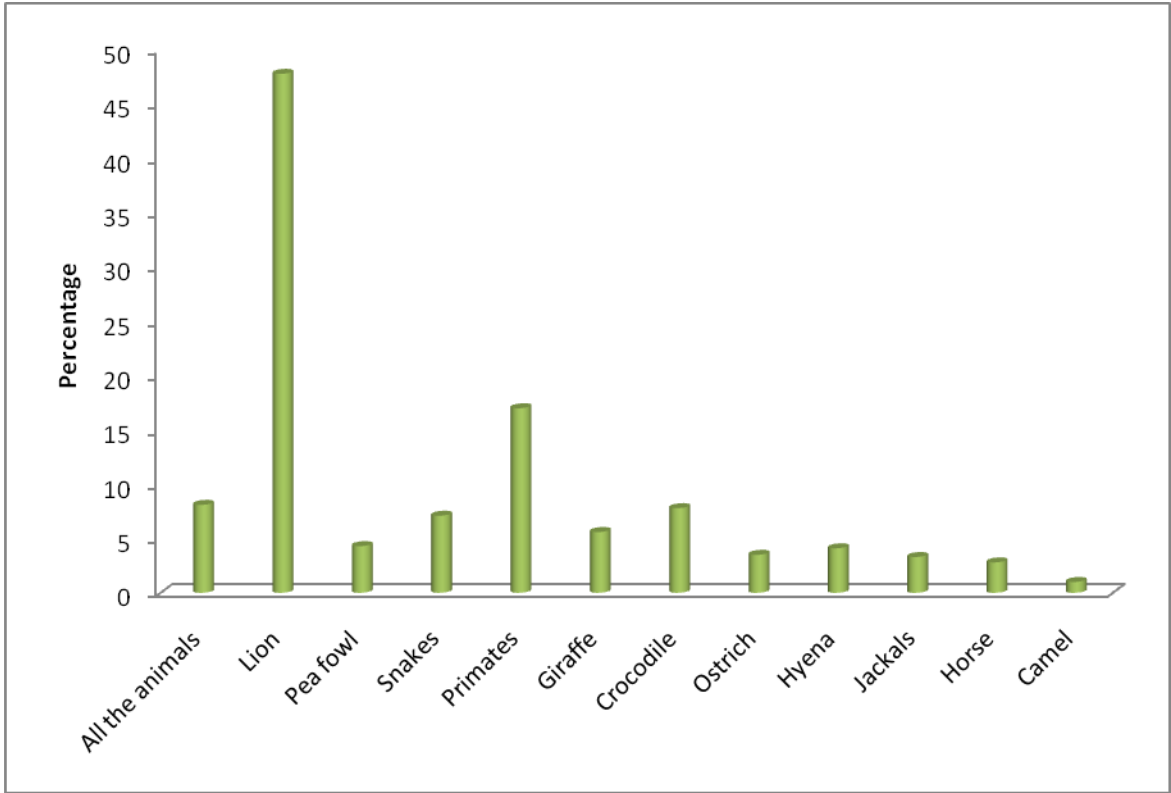


Fig 4.17: Animals which attract visitors to UI Zoo

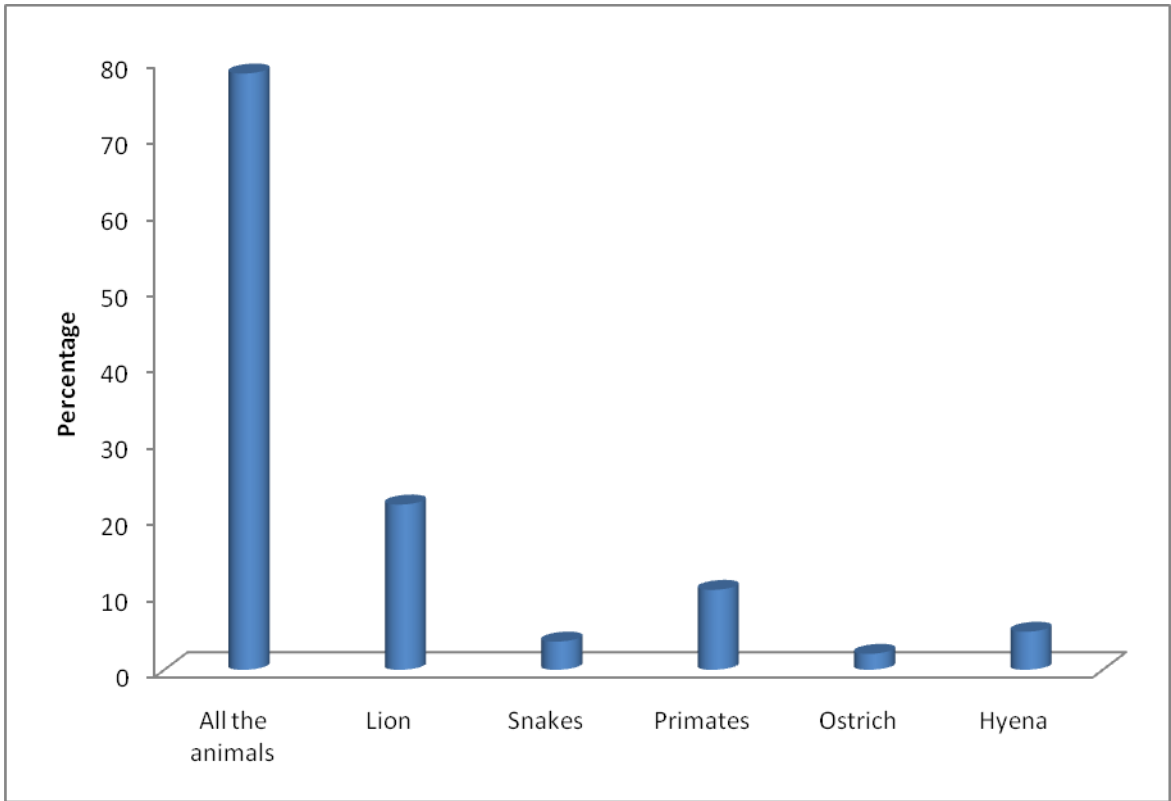


Fig 4.18: Animals which attract visitors to OAU Garden

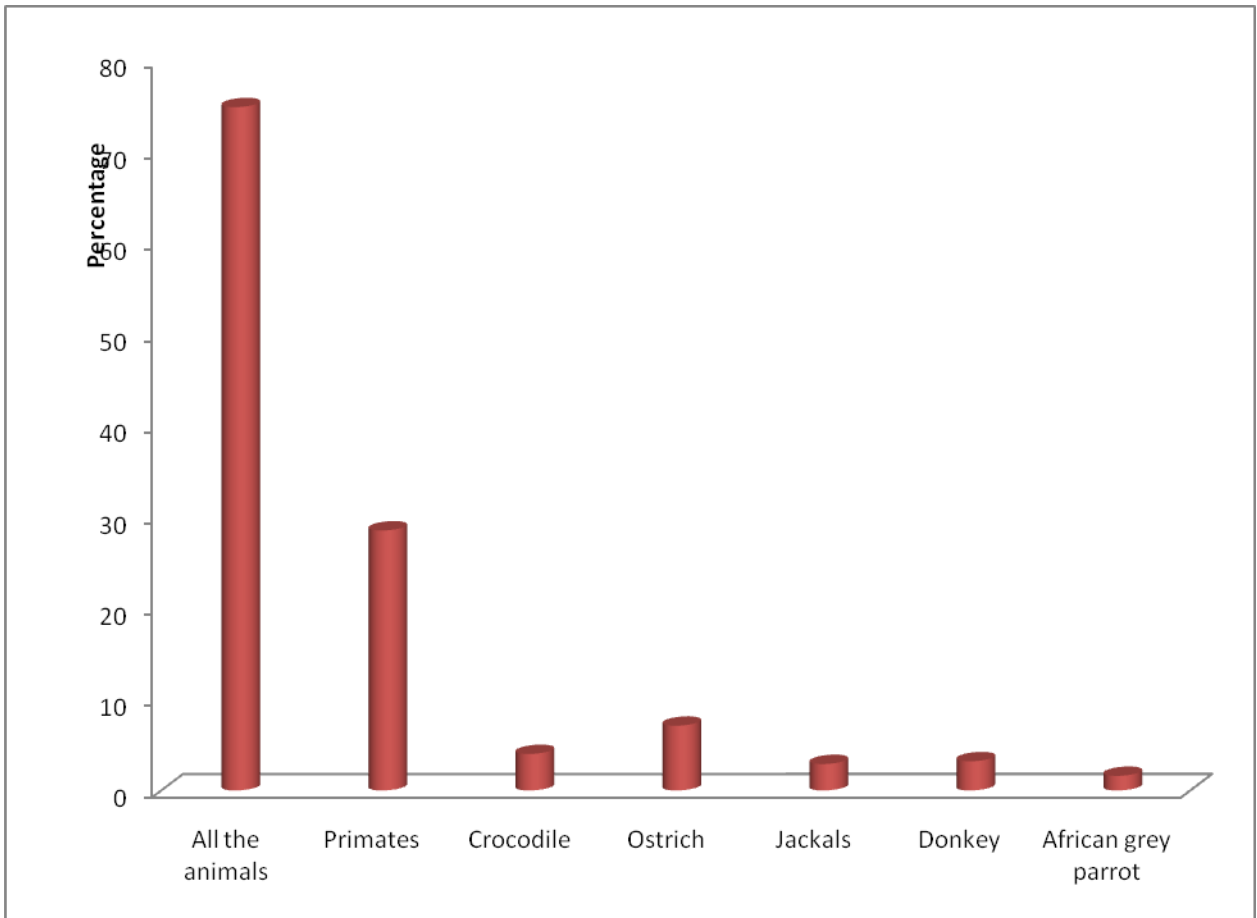


Fig 4.19: Animals which attract visitors to FUNAAB Zoo

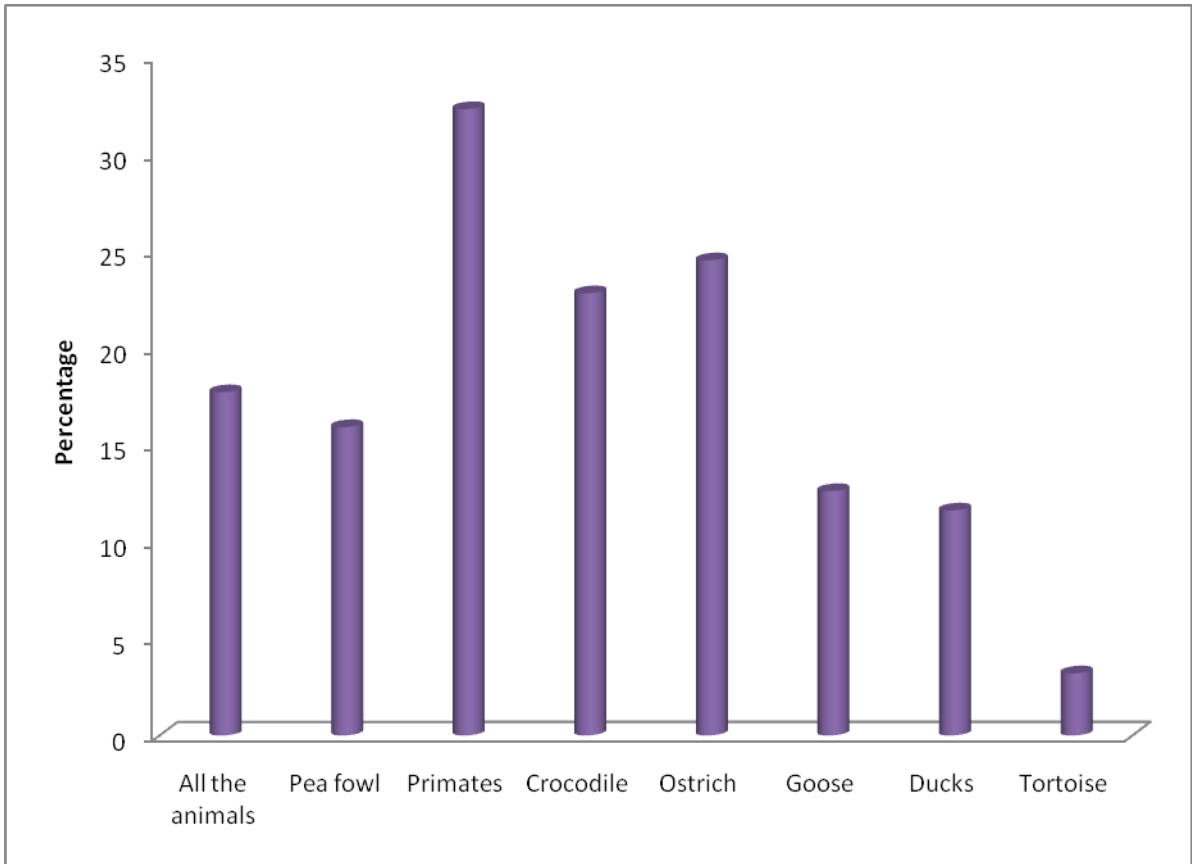


Fig 4.20: Animals which attract visitors to FUTA Park

#### **4.9 Preferred animal species that was not available in federal institutional-based zoos in South-West, Nigeria**

This is outlined on Table 4.36.

Most respondents (52.7%) in UI Zoo indicated elephant as the most preferred species that was not available. This was followed by those who indicated tiger (10.6%), zebra (8.1%), gorilla (6.3%), aquatic species (2.5%), rhinoceros (2.3%), leopard (1.3%) and eagle (0.5%). Also, majority of OAU Garden respondents (91.4%) indicated elephants and zebra (57.7%). Others include gorilla (56.9%), hippopotamus (44.6%), rhinoceros (41.3%), cheetah (38.6%), tiger (35.8%), giraffe (28.2%), aquatic species (24%), eagle (8.4%) and domestic animals (7.6%).

The bulk of the respondents in FUNAAB Zoo also indicated lion as the most preferred species (92.3%). This was followed by those who indicated elephant (58.6%), hippopotamus (50.1%), giraffe (40.4%), gorilla (34.8%), cheetah (33.8%), zebra (33.2%) and tiger (33%). Others include rhinoceros (22.4%), eagle (19.5%), aquatic species (19%), domestic animals (15.3%), hyena (14.5%), buffalo (14.2%), leopard (10.6%), honey badger (8.4%), chimpanzee (8.4%) and camel (1.3%).

In the same vein, most respondents in FUTA Park indicated lion (79.3%), elephant (55.9%) and snakes (47.3%) as the most preferred unavailable species. Others include tiger (40.1%), zebra (29.3%), cheetah (24.7%), hippopotamus (22%), rhinoceros (19.6%), gorilla (18.8%), giraffe (15.1%), hyena (13.4%), eland (13.4%).

**Table 4.36: Visitors preferred animal species that was not available in federal institutional-based zoos in South-West, Nigeria**

Animal	U. I. Zoo		OAU Garden		FUNAAB Zoo		FUTA Park	
	F	%	F	%	F	%	F	%
Elephant	208	52.7	350	91.4	222	58.6	208	55.9
Rhinoceros	9	2.3	158	41.3	85	22.4	73	19.6
Gorilla	25	6.3	218	56.9	132	34.8	70	18.8
Zebra	32	8.1	221	57.7	126	33.2	109	29.3
Tiger	42	10.6	137	35.8	125	33.0	149	40.1
Aquatic spp	10	2.5	92	24.0	72	19.0	-	-
Eagle	2	0.5	32	8.4	74	19.5	-	-
Leopard	5	1.3	-	-	-	-	-	-
Hippopotamus	-	-	171	44.6	190	50.1	82	22.0
Cheetah	-	-	148	38.6	128	33.8	92	24.7
Domestic animals	-	-	29	7.6	58	15.3	-	-
Giraffe	-	-	108	28.2	153	40.4	56	15.1
Lion	-	-	-	-	350	92.3	295	79.3
Hyena	-	-	-	-	55	14.5	50	13.4
Buffalo	-	-	-	-	54	14.2	-	-
Leopard	-	-	-	-	40	10.6	-	-
Honey badger	-	-	-	-	32	8.4	-	-
Chimpanzee	-	-	-	-	32	8.4	-	-
Camel	-	-	-	-	5	1.3	-	-
Eland	-	-	-	-	-	-	50	13.4
Snakes	-	-	-	-	-	-	176	47.3



#### **4.10 Visitors willingness to pay more if preferred species were provided in federal institutional-based zoos in South-West, Nigeria**

Most respondents across the study zoos were willing to pay more if preferred species were provided (Fig 4.21). In UI Zoo, 56.2% of the respondents said 'yes', 18.2% indicated otherwise while 25.6% had not made up their mind. Likewise, in FUNAAB Zoo, 80.2% said 'yes' while 19.8% indicated otherwise. In FUTA Park, 90.9% were willing to pay more, 7.6% said otherwise while 1.6% had not made up their mind.

Most respondents in OAU Garden (61.1%) were not willing to pay more if preferred species were provided. 38.4% were willing while 0.5% had not made up their mind.

##### **4.10.1 Amount visitors are willing to pay in federal institutional-based zoos in South-West, Nigeria**

This is presented on Table 4.37. Most visitors in UI Zoo were willing to pay between ₦1000 -₦1499 as indicated by 48.6%. This was followed by those who quantified it at ₦500-₦999 (39.3%), ₦2000-₦2499 (5.1%),  $\geq$ ₦2500 (4.2%) and ₦1500-₦1999 (2.8%). Respondents in OAU Garden were willing to pay between ₦500-₦999 at 81.6%, followed by ₦1000-₦1499 (15%) and ₦1500-₦1999 (3.4%). No respondent wanted to pay above ₦2000.

Also, most respondents in FUNAAB Zoo were willing to pay between ₦500 -₦999 (53.8%), ₦1000-₦1499 (41.6%), ₦1500-₦1999 (2%) and ₦2000-₦2499 (2.6%). No respondent wanted to pay above ₦2500. Likewise, the bulk of respondents in FUTA Park was willing to pay ₦500-₦999 (46.3%); followed by ₦1000-₦1499 (23.4%),  $\geq$ ₦2500 (23.1%) and the least ₦1500-₦1999 (4.7%).

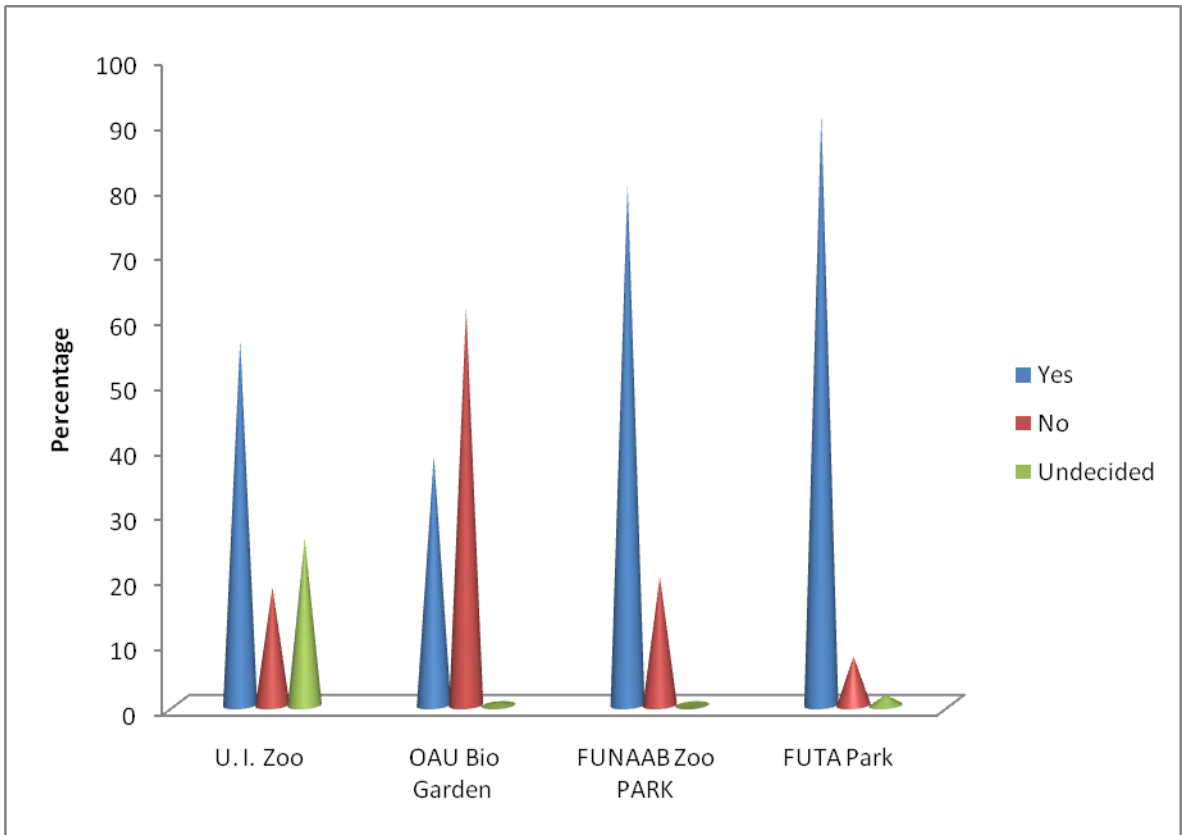


Fig 4.21: Visitors response to willingness to pay more if preferred species were provided in federal institutional-based zoos in South-West, Nigeria

**Table 4.37: Amount visitors are willing to pay if preferred species are provided in federal institutional-based zoos in South-West, Nigeria**

Amount (₦)	U. I. Zoo		OAU Garden		FUNAAB Zoo		FUTA Park	
	F	%	F	%	F	%	F	%
<b>500 – 999</b>	84	39.3	120	81.6	164	53.8	165	46.3
<b>1000 – 1499</b>	104	48.6	22	15.0	127	41.6	79	23.4
<b>1500 – 1999</b>	6	2.8	5	3.4	6	2.0	16	4.7
<b>2000 – 2499</b>	11	5.1	-	-	8	2.6	0	0.0
<b>≥2500</b>	9	4.2	-	-	0	0.0	78	23.1

#### **4.11 Improvement visitors want to see on subsequent visits to federal institutional-based zoos in South-West, Nigeria (Table 4.38)**

- **UI Zoo**

Most respondents on subsequent would like to see more animals in the zoo as indicated by 43.5%. Others include tour guidance (16.2%), aesthetic improvements (12.9%), improved reception/hospitality (12.4%), wider parking space (12.4%), improved cleanliness (11.9%), improved animal welfare (11.9%), better animal enclosures (11.1%), better recreational facilities (10.1%), horse rides (9.4%), provision of mate for lone animals (6.1%), use of animal space outside the cage (5.3%), separation of sick/injured animals (5.3%) restaurants/food outlets (4.8%), provision of signages for direction (4.3%), restore dad/ escape species back to the zoo (4.1%), provision of adequate water for animals (3.8%), no improvement at all (3.5%), reduction of entry fees (3.5%), displayed animal data (3.5%), provision of security personnel (3.5%), zoo souvenirs (3.3%), increased entry and camera charges (3.3%), guided feeling of animals by visitors (3.3%), discount on charges for families/groups (2.8%) and funfair (2.3%).

- **OAU Garden**

The bulk of the visitors (95.8%) to the garden indicated ‘more animals’ as the improvement they would like to see on subsequent visit. This was followed by the provision of signages for direction (76.5%), provision of tour guidance (60.6%), better recreational facilities (53.8%), improved animal welfare (44.9%), aesthetic improvement (38.1%), displayed animal data (37.3%), and provision of mate for lone animals (36.8%). Others include funfair (22.7%), improved cleanliness (21.7%), improved

reception/hospitality (21.1%), restore dead/ escape species back to the zoo (20.6%), better animal enclosures (19.6%), reduction of entry fees (17.8%), provision of security personnel (13.8%), discount on charges for families/groups (10.4%), horse rides (9.4%), zoo souvenirs (9.4%), better restaurants/food outlets (8.4%), guided feeling of animals by visitors (8.1%), wider parking space (7.6%), increased entry and camera charges (5.5%), separation of sick/injured animals (3.1%), and provision of adequate water for animals (1%).

- **FUNAAB Zoo**

Majority of the respondents on subsequent would like to see more animals in the park as indicated by 68.9%. Others include aesthetic improvements (44.9%), better recreational facilities (42.2%), well managed trails/paths (37.2%), better restaurants/food outlets (30.3%), provision of mate for lone animals (30.1%), improved reception/hospitality (29.3%), better animal enclosures (28%), improved animal welfare (27.7%), horse rides (23.7%), reduction of entry fees (23.2%), restore dead/ escape species back to the zoo (20.3%), improved cleanliness (11.9%), guided feeling of animals by visitors (9.8%), discount on charges for families/groups (7.7%), tour guidance (5.3%), provision of signages for direction (4.3%), displayed animal data (4.2%), funfair (4%), provision of security personnel (3.5%), zoo souvenirs (3.3%), provision of adequate water for animals (2.9%), provision of accommodation facilities (1.8%), construction of conveniences (1.6%), wider parking space (1.6%), use of animal space outside the cage (1.1%), separation of sick/injured animals (1.1%), and no improvement at all (0.5%).

- **FUTA Park**

Almost all the respondents on subsequent would like to see more animals in the par as indicated by 98.4%. Others include aesthetic improvements (36%), provision of restaurants/food outlets (32.5%), construction of conveniences (32.5%), provision of mate for lone animals (27.7%), better recreational facilities (26.3%), better animal enclosures (13.2%), improved cleanliness (10.8%), improved animal welfare (7.8%), improved reception/hospitality (3.8%), provision of security personnel (1.6%), separation of sick/injured animals (1.1%), and funfair (0.8%).

**Table 4.38: Improvement visitors want to see on subsequent visits (Multiple Responses) to federal institutional-based zoos in South-West, Nigeria**

<b>Response</b>	<b>UI Zoo</b>		<b>OAU Garden</b>		<b>FUNAAB Zoo</b>		<b>FUTA PARK</b>	
	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>
Tour guidance	64	16.2	232	60.6	20	5.3	-	-
Improved reception/hospitality	49	12.4	81	21.1	111	29.3	14	3.8
More animals	172	43.5	367	95.8	261	68.9	366	98.4
Use of animal space outside cage	21	5.3	-	-	4	1.1	-	-
Zoo souvenirs	13	3.3	36	9.4	88	23.2	-	-
None	14	3.5	-	-	2	0.5	-	-
Mate for lone animals	24	6.1	141	36.8	114	30.1	103	27.7
Restore dead/escape species	16	4.1	79	20.6	77	20.3	-	-
Restaurants/food outlets	18	4.8	32	8.4	115	30.3	121	32.5
Aesthetic improvements	51	12.9	146	38.1	170	44.9	134	36.0
Separate sick/injured animals	21	5.3	12	3.1	4	1.1	-	-
Provision of adequate water for animals	15	3.8	4	1.0	11	2.9	-	-
Increase entry and camera charges	13	3.3	21	5.5	-	-	-	-

Guided feeding of animals by visitors	13	3.3	31	8.1	37	9.8	-	-
Provision of signages for direction	17	4.3	293	76.5	-	-	-	-
Reduction of entry fee	14	3.5	68	17.8	-	-	-	-
Improved cleanliness	47	11.9	83	21.7	-	-	40	10.8
Discount on charges for families/group	11	2.8	40	10.4	29	7.7	-	-
Displayed animal data	14	3.5	143	37.3	16	4.2	-	-
Provision of security personnel	14	3.5	53	13.8	-	-	6	1.6
Better animal enclosures	44	11.1	75	19.6	106	28.0	49	13.2
Improved animal welfare	47	11.9	172	44.9	105	27.7	29	7.8
Horse rides	37	9.4	36	9.4	90	23.7	-	-
Wider parking space	49	12.4	29	7.6	6	1.6	-	-
Funfair	9	2.3	87	22.7	15	4.0	3	0.8
Better recreational facilities	40	10.1	206	53.8	160	42.2	98	26.3
Well managed trails/paths	-	-	-	-	141	37.2	-	-
Accommodation facilities	-	-	-	-	7	1.8	-	-
Conveniences	-	-	-	-	6	1.6	121	32.5



## CHAPTER FIVE

### DISCUSSION

#### **5.1.1 Wild animal species in the zoological gardens – Diversity, Number, Sex, Age, Enclosure size, Cage enrichment, Food and Feeding regime**

A total of seventy one species of animals (329 individuals) belonging to 40 families, 21 orders, and 3 classes (Aves, Reptiles and Mammals), were presented and displayed in the four zoological gardens. The most represented class is the Mammalia with thirty-two species, followed by Aves (24 species), Reptilia (13) and Gastropoda (1). Only one (*Panthera leo*) of the popular Big Five is represented in two of the zoos (UI Zoo and OAU Garden). This was also the star animal that attracted visitors to the zoo as indicated by majority of the visitors. This is consistent with the findings of Adefalu *et al.* (2014) and Alarape *et al.* (2015) which documented lion as the most preferred animal in UI Zoo and Makurdi Zoo respectively.

Across the zoos, *Balaerica pavonia* (Crowned crane), *Sthruccio camelus* (ostrich), *Cercopithecus mona* (Mona monkey), *Papio anubis* (olive baboon) and *Chentrochelys sulcata* (African spurred tortoise) were represented. Three out of the four zoological gardens have *Psittacus erithacus* (African grey parrot), *Anas platyrhynchos* (Mallard duck), *Chen caerulescens* (White geese),

*Numida meleagris* (Guinea fowl), *Cercocebus torquatus* (collared mangabey), *Osteolaemus tetraspis* (dwarf crocodile), *Crocodylus niloticus* (nile crocodile) and *Python sebae* (African rock python). These species were mostly birds, primates and reptiles. This may be because of the local abundance of these species, ease of acquisition and maintenance. Also, majority (67%) of the animals belong to the Least Concern conservation status of IUCN, followed 23% that are threatened (Endangered (6%), Critically Endangered (4%) and Vulnerable (13%)). 2% are Near Threatened, 7% domesticated and 1% not evaluated. This finding is consistent with Consortium of Charitable Zoos (CCZ) (2007) in their analysis of the IUCN status of thirteen UK Zoos revealed that 62% of the animal species were Least Concern while 24.7% were threatened. This puts the conservation roles that zoos include as one of the core objectives into debate.

#### **5.1.1.1 Wild animal species in the UI Zoo – Diversity, Number, Sex, Age, Enclosure size, Cage enrichment, Food and Feeding regime**

The famous Zoo is home to sixty four species of animals in captivity. They were largely classified into six sections namely aviary (small birds (14 species), large birds (7 species)), herpetarium (13 species), primates (8 species), herbivores section (12 species), carnivore section (6 species) and children section (5 species). This is consistent with the studies of Omonona and Ayodele (2011) and Adetola *et al.* (2016a) which documented the six sections of animals' classification in the zoo. Most species of animals had at least one member of its group. Twenty one species however had no mate especially birds and snakes. In total, there were 198 individuals in the zoo. The sex of the herps and birds were largely undefined in the zoo. Juvenile record was also very low. This means breeding efforts in the zoo has either being low or unyielding.

Animals' enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds (with the exception of the larger birds such as the ostrich) and herpes, and larger for the herbivores and carnivores. Cage enrichment varies for all the animals; for example there were inner rooms for all the almost all the animals; hanging bars and tyres for the primates, hollow boxes and branches for the birds, etc. This is in line with modern zoo objectives of improving animal welfare standards via enclosure enrichment and natural attributes so as to reduce their physiological as well as behavioural challenges such as stereotype and nutrient deficiency (Anderson *et al.*, 2008; Carr and Cohen, 2011; EAZA, 2014)

Birds were largely fed with grains once daily with the exception of the carnivorous birds that were fed with flesh once in 2 or 3 days. Some such as the ostrich and emu were also given compounded feed. Primates were fed twice daily; primarily with fruits in the morning and supplemented with cooked beans, cooked yam with oil in the afternoon. The carnivores were fed with raw meat (cow, goat, pig) thrice weekly. It was supplemented with dog feed for the civets. The herbivores were largely fed with grasses once/twice daily. The herpes especially the snakes were fed with live chicks and white rats once in 2 or 3 weeks. The turtles were fed with the intestine of slaughtered animals and or soft meat. The various food given to the animals were with respect to the food the animals consume in their natural habitat. This is in accordance with Omonona and Ayodele (2011) on the food and feeding regime of UI Zoo animals.

#### **5.1.1.2 Wild animal species in the FUNAAB Zoo– Diversity, Number, Sex, Age, Enclosure size, Cage enrichment, Food and Feeding regime**

The Zoo Park houses twenty six species of animals in captivity. They were largely classified into five sections namely aviary (7 species), primates (5 species), herbivores (3 species), herpes (9

species) and carnivores (2 species). Most species of animals had at least one member of its group. Ten species however had no mate. In total, there were 76 individuals in the zoo. The sexes of the birds were largely undefined in the zoo. There were juvenile records. It was observed that the animals especially the primates and the ostrich have been breeding in captivity. The Park can be said to be propagating the zoo objective of breeding, a characteristics of a modern zoo. This is in line with Bowkett (2009) which documented captive breeding as one of the role of a modern zoo.

Animals' enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds (with the exception of the larger birds such as the ostrich) and herpes, and larger for the primates, herbivores and carnivores. Cage enrichment varied for all the animals; for example there were inner rooms for all the primates and carnivores; hanging bars for the primates, etc. This is in line with Carr and Cohen (2011) which noted that cage enrichment is vital in improving animal welfare in captivity.

Birds were largely fed with grains once daily with the exception of the carnivorous birds that were fed with flesh once in 2 days. Some such as the ostrich was also given compounded feed. Primates were fed with fruits in the morning and supplemented with cooked beans and corn mixture with oil in the afternoon. The carnivores were largely fed with raw meat (cow) twice weekly. The civets were also given banana. The jackals were fed cooked beans too. The herbivores were fed with grasses once/twice daily. It was supplemented with cooked beans for the porcupine. The herpes especially the snakes were fed with live rabbits and giant rat once in 2 or 3 weeks. The crocodiles were fed with cow meat. The soft turtles were fed with the intestine of slaughtered animals and or soft meat twice/thrice weekly. The tortoises were fed with cooked beans and fruits on a daily basis. Just like in UI Zoo, the various food given to the animals were

with respect to the food the animals consume in their natural habitat. This agrees with the findings of Omonona and Ayodele (2011) and EAZA (2014).

### **5.1.1.3 Wild animal species in the OAU Garden – Diversity, Number, Sex, Age, Enclosure size, Cage enrichment, Food and Feeding regime**

The Garden houses thirteen species of animals in captivity. They were largely classified into four sections namely aviary (5 species), primates (2 species), herpes (4 species) and carnivores (2 species). Most species of animals (10 of 13) had no mate. In total, there were 26 individuals in the zoo. The sexes of the birds and herpes were largely undefined in the zoo. The zoo generally lacks juvenile animals. It can be said that breeding is directly or indirectly not an objective in the zoo, as majority of the animals did not have mates. As emphasised by the Convention on Biological Diversity, captive breeding is vital as far as conservation is concerned (Baker, 2007). The conservation role zoos is least practiced in the Garden.

Animals' enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds and larger for the herpes primates and carnivores. Animal enclosures were relatively larger than that of the other study zoos. Cage enrichment varied for all the animals; for example there were inner rooms for all the primates and carnivores, hollow boxes for the birds, dry and wet areas for the crocodile, etc. This is in line with the research of Carr and Cohen (2011).

Birds were largely fed with grains twice daily. The ostrich was also given compounded feed. Primates were fed with fruits and supplemented with cooked beans and corn mixture with oil twice daily. The carnivores are fed with raw meat, with special bony parts preference for the hyena twice weekly. The snake was fed with live rabbits once in 3 weeks. The crocodile was fed

with cow meat. The turtles were fed with the intestine of slaughtered animals and or diced meat once in two days. The tortoises were fed with cooked beans and fruits on a daily basis. Just like in the other zoos, the various food given to the animals were with respect to the food the animals consume in their natural habitat. This is in accordance with the findings of Omonona and Ayodele (2011).

#### **5.1.1.4 Wild animal species in the FUTA Park – Diversity, Number, Sex, Age, Enclosure size, Cage enrichment, Food and Feeding regime**

A total of thirteen species of animals were displayed in the Park. They were largely classified into four sections namely aves (6 species), primates (4 species), herpes (2 species) and herbivore (1 species). There was no carnivore in the park. Most species of animals (10 of 13) had no mate. In total, there were 29 individuals in the zoo. The sexes of the animals were largely defined in the zoo. The zoo generally lacked juvenile animals. This was also reported in OAU Biological Garden. Animal breeding, a significant part of wildlife conservation (Bowkett, 2009) is neglected as a modern day zoo in the Park. Animals' enclosure sizes were with respect to the type and requirements of the animals. It was smaller for the birds and larger for the primates, and herbivores. Cage enrichment varied for all the animals; for example there were inner rooms for some of the primates e.g. baboon. This is in line with the research work of EAZA (2014).

Birds were largely fed with corn and cooked beans once daily. The ostriches and pea fowl was also given compounded feed. Primates were fed with fruits and supplemented with cooked beans and yam with oil twice daily. The tortoise was fed with cooked beans and fruits on a daily basis. The crocodiles were fed with cow flesh once weekly/biweekly. The herbivore was fed with

grains once daily. It is however enclosed in a naturalistic environment with access to plants. The food and feeding regime is similar to that of the other study zoos.

## **5.1.2 Socio-economic and travel characteristics of visitors**

### **5.1.2.1 Socio-economic characteristics**

The descriptive analysis revealed that the sex percentage of respondents across the zoological gardens were almost equivalent with 52.3% being male while 47.7% were female. This approximate equivalence was also documented by Adetola *et al.* (2016) who reported 51.5% and 48.5% for male and female respondents in UI Zoo. The exception to the male dominant visitation among the individual study zoos is the FUNNAB Zoo, where 62% of visitors were female. This is in line with Saayman and Slabbert (2004) and Kutska (2009) which documented more female presence in their studies. The findings give voice to the fact that while males may be more eager to travel than female (Arul *et al.*, 2013; Alarape *et al.*, 2015), the female folks are not left out, and in some cases, may even outweigh their male counterpart. The zoological gardens appear to attract visitors who are single to the tune of 86.7%, while the married folks accounted for only 13.3%. This is in line with Yager *et al.* (2015) and Adetola *et al.* (2016a) who documented high percentage of unmarried respondents in their studies in UI Zoo and Makurdi Zoo respectively. Single people have a higher liberty and lower economic burdens; hence can travel more than the married people (Arowosafe and Adebayo, 2014).

Across the zoos, visitors were largely youths within the age range of 18 -27 years (77.3%). The percentages were observed to decline with higher age groups. In a study conducted by Couch (2013) in Detroit and Potter Park Zoos in Michigan, United States of America, most visitors were between 20 and 39 years of age, and a decline with increasing age was also reported.

Similarly, this trend was reported by Alarape *et al.* (2015) and Yager *et al.* (2015) in Markurdi Zoo, Knezevic *et al.* (2016) in Zagreb Zoo, Croatia, and Adetola *et al.* (2016a) in UI Zoo. Adefalu *et al.* (2014) described zoo visitors as youths, who are strong, full of energy, dynamic and lovers of adventure.

With respect to the religion of the visitors, they were largely Christians (79.5%). Other religion accounted for were Islam (18.4%) and Traditional religion (2.1%). This corroborates Adetola *et al.* (2016a) which documented similar percentage representation of the three religious groups in UI Zoo. Visitors to the zoos were well educated as their highest educational attainment reflects tertiary education (79%). This was also reported in the research work of Couch (2013). In the same vein, 71.9% of these visitors were students. This may be attributed to the fact that the zoos are located in the universities, hence, a natural attraction to the inhabitants within the university environment. This corroborates Adetola and Oluleye (2014) findings in OAU Biological Garden and UI Zoo as well as Adetola *et al.* (2016a) about UI Zoo visitors. Ritchie (2003) noted that persons with higher educational level may have better awareness of tourism's importance. Hence, they are enthusiastic in engaging in touristic activities.

Domestic tourism seems to be the order of the day in these zoos as the bulk of visitors to these zoos were Nigerians, accounting for 95.2%. This trend of domestic tourism was also reported by Alarape *et al.* (2015) and Yager *et al.* (2015) in Markurdi Zoo, Knezevic *et al.* (2016) in Zagreb Zoo, Croatia, Adetola *et al.* (2016a) in UI Zoo, and Ajayi *et al.* (2017) in Ogba Zoo. This finding affirms the report of STEAM (2009), UNWTO (2013), Mbanefo (2014) and SANParks (2016), that tourism market is mostly constituted by local visitors. The analysis of the monthly income of the visitors revealed that majority earned less than ₦50000 monthly (75.3%). All in all, the socio-economic report of this study is largely similar to that of Adefalu *et al.* (2014) in their



survey of the socio-economic characteristics of visitors to UI Zoo, and that of Ajayi and Ayodele (2017) on zoo tourism in Nigeria with Ogba Zoo as a case study, where majority of the respondents were male, youth, Christians, Nigerians, educated and earn less than ₦50000 monthly.

#### **5.1.2.2 Travel details of visitors**

Visitors to UI Zoo were mostly repeat visitors accounting for 58.5% while those on first time visits had a 41.5% representation. In contrast, visitors to the other zoos were mainly first time visitors: 82.8%, 55.4% and 64.5% for OAU Garden, FUNAAB Zoo and FUTA Park respectively. This is not an unusual outcome, as variations in the frequency of visits have been reported for various zoos across the globe. Repeat visitation was reported in the findings of Yager *et al.* (2015) in Markurdi Zoo, Adetola *et al.* (2016a) in UI Zoo; Knezevic *et al.* (2016) in Zagreb Zoo and Ajayi and Ayodele (2017) in Ogba zoo,. This repeat visitation may depict a high level of visitors' satisfaction and loyalty to UI Zoo. On the other hand, a high first time visitation, though not as prominent as repeat visitation was reported by Couch (2013). Despite the prevalence of first time visitation in the three zoos, they are mostly likely able to invoke repeat visits as respondents are willing to recommend the zoos to others as well as visit in the future (Table 4.46).

UI Zoo naturally attracts visitors from its immediate environment as 41.8% were local travelers, visiting from the university community and the host city (Ibadan). It also appeals to intrastate travelers, from other towns in the host state such as Oyo and Ogbomoso (21.8%) as well as interstate travelers from neighbouring states such as Lagos, Osun (25.1%). This trend was also reported in OAU Garden and FUTA Park, the bulk of the respondents (67.6% and 50.3%) were

local travellers, 24% and 38.4% (intrastate travellers), 8.4% and 9.7% (interstate travelers). In FUNAAB Zoo however, majority of the respondents were interstate travelers (39.8%); and keenly followed by the local travelers (39.1%); intrastate travelers (20.3%). International visit only accounted for as low as 1.9% across the zoos. The importance of domestic tourism in contributing the largest percentage of visitors as well as a ready market for the tourism industry is further emphasized by the result of this research.

The visitors to the zoos were largely day visitors and excursionist. This corroborates the findings of Ryan and Saward (2004) which noted that visiting zoos is a popular family-oriented leisure activity, usually involving a one-day visit. In total, 61.3% of the respondents across all the zoos stayed less than 3 hours while 38.7% stayed longer. TTR (2016) referred to the earlier group as leisure day visitors and the latter as same day visitors. An important characteristic of these types of visitors is that they are residents of the local catchment areas. Ridgway *et al.* (2005) noted that the bulk of visitor groups visit zoos that are in the same city where they live.

The predominant media of awareness to the zoos were through family and friends (52.2%) and from school (25.4%). Yager *et al* (2015) reported media of awareness through friends/relatives and parents to the tune of 61% in Markurdi Zoo. This was also reported by Alarape *et al.* (2015) in Makurdi Zoo. This study therefore affirms the importance of word of mouth as a voluntary and unpaid publicity media especially within the tourism industry. A notion supported by John and Philemon (2015). It was observed all through the one year study period that visitors who have been to the zoo before brings along new visitors especially family and friends on subsequent visits. Moreso, McCabe (2000) noted that friends and relatives have been identified as organic image-formation agents, and emphasized that this WOM information is one of the most reliable sources of information for destination selection with a high rate of repeat visitation.

Also, the zoos are default places of excursion for schools across all levels (primary, secondary and tertiary). The fact that they are located in the universities also gives credit to the knowledge of the zoos from school.

In the same vein, the assessment of the travel company of the visitors revealed that they came in the company of family/friends (32.4%), school excursion (25.2%), spouse/partner (12.3%), study/research group (10.3%), tour group (8.2%), alone (7.8%) and the least - company retreat group (1.8%). Most parents were observed to come with their kids, especially during the weekends. This was also documented by Couch (2013) in Detroit and Potter Park Zoos; and by Jordaan and Du Pleiss (2014) in National Zoological Gardens, South Africa. Weekdays attracts school children in their hundreds especially primary and secondary students who are led into the zoos by their teachers. While this affirms the earlier assertion that zoos are default sites for excursion, it also corroborates the report of the Association of Zoos and Aquarium (2018) that zoo visitors mostly come in groups. This was also reported in the research works of Couch (2013), Alarape *et al.* (2015), Knezevic *et al.* (2016), and Ajayi and Ayodele (2017). Visitors across the zoos came mostly in hired vehicles especially the excursionists. This was followed by respondents who came in private cars; this group largely comprised of families, and through public transport – the students mostly.

The great diversity of visitors across the zoos corroborates the assertions of FAO (2008) and UNWTO (2013) that visitors may be different prominently in their travel characteristics including: personal demographics; distance travelled; length of stay; desired level of physical effort and comfort; importance of nature in trip motivation; level of learning desired; amount of spending; and desired activities.

### **5.1.2.3 Preferred Zoo Marketing Strategy**

The most preferred marketing strategy by visitors across all the study zoos is by Radio/Television as indicated by 41.6%. This is followed by social media handles of Facebook, Twitter and Instagram as represented by 24% and through travel websites/blogs (15.3%). Others include e-mail (9.6%), newspaper/magazine (3.9%), billboards (3.8%) and other means (1.9%). Knezevic *et al.* (2016) noted that age is a vital factor to consider with respect to marketing strategies. The test of association in determining how the age of respondents influences the choice of a preferred marketing strategy revealed a significant association. The result of the Cross Tabulation revealed a great diversity in the responses of the visitors. For example respondents of lower ages e.g. 18-27 age group indicated television/ radio as well as social media handles, travel websites and electronic mail as their preferred marketing strategies, as the age increases, the preference for the social media handles decreases. This was also documented in the research works of Connell (2004) and Knezevic *et al.* (2016).

### **5.1.3 Zoo Visitors' attitudes towards the environment and antecedents**

The New Ecology Paradigm (NEP) which represents the commonest scale for assessing concerns towards the environment is widely approved for measurement of attitudes towards the environment (Dunlap, 2008; Kostova *et al.*, 2011; Ogunbode, 2013; Filby, 2015). The NEP features four factors that depicts anthropocentric beliefs, they are '*Humans have the right to modify the natural environment to suit their needs*', '*Mankind was created to rule over the rest of nature*', '*Plants and animals exist primarily to be used by humans*' and '*Humans need not adapt to the natural environment because they can remake it to suit their needs*'. It is otherwise called the Dominant Social Paradigm. Agreement to these factors therefore portrays human dominance.

Other factors reflect ecocentrism (Dunlap *et al.*, 2000), and agreement with them favours the environment. For these two groups, it is reflected in low mean values in this study.

The influential factors of visitors environmental attitude was classified under three scales: Deontological Status (DES), Law obedience (LOB) and Political action (PAC). It is assumed that the higher the percentage of visitors agreement to the factors under the scales, the higher their environmental attitude. The visitors were therefore divided into three groups with respect to their mean scores associated with attitudes: Pro-ecological ( $\leq 1.7$ ), Mid-ecological (1.8– 3.4), Anti-ecological (3.5 - 5). This was adapted from Thompson (2013).

#### **5.1.3.1 UI Zoo Visitors' environmental attitudes and the antecedents**

Visitors showed the highest level of agreement with the HON factors, which was followed by LOG factors and lastly by the EC factors. The highest ranking factors showing high percentage agreement and reflected in low mean scores were the HON factors; *'Mankind was created to rule over the rest of nature'*, *'Humans must live in harmony with nature in order to survive'* and *'Humans have the right to modify the natural environment to suit their needs'*. Those with the least percentage agreement were the EC factors; *'We are approaching the limit of the number of people the earth can support'*, *'Humans need not adapt to the natural environment because they can remake it to suit their needs'* and *'Mankind is severely abusing the environment'*. It can therefore be said that visitors to UI Zoo largely exhibit more of anthropocentrism than ecocentrism which favours the dominance of man and the use to which its resources can be used above care of the environment and sustainability. This is in line with the findings of Touhino (2002).

On the antecedents of environmental attitude, UI Zoo visitors can be said to pro-ecological (for DES and LOB) and mid-ecological (for PAC). This finding is highly unlikely as the first two scales are within the control of the respondents (that is personal influence) while the third scale involves external bodies. However, the test of association between the visitors' environmental attitude and their antecedents revealed a non-statistically significant association. This finding is at variance with Sparks and Merenski (2000), Barr (2007), and Dolnicar *et al.* (2008), which documented a significant correlation between both variables.

#### **5.1.3.2 OAU Garden visitors' environmental attitudes and the antecedents**

Visitors showed the highest level of agreement with the HON factors, which was followed by LOG factors and lastly by the EC factors. The highest level of agreement were with the HON factors '*Humans have the right to modify the natural environment to suit their needs*', '*Mankind was created to rule over the rest of nature*' and '*Plants and animals exist primarily to be used by humans*'. The EC factors with the least level of agreement among respondents '*Humans need not adapt to the natural environment because they can remake it to suit their needs*', '*We are approaching the limit of the number of people the earth can support*', and '*When humans interfere with nature it often produces disastrous consequences*'. Just like UI Zoo visitors, visitors to OAU Biological Garden exhibits anthropocentric beliefs than ecocentrism.

The analysis of the antecedent factors portrays OAU Biological garden visitors as mid-ecological (for DES and LOB) and anti-ecological (for PAC). There was also a significant relationship between the environmental attitude of the visitors and their antecedents. In other words, the environmental attitudes of the visitors can be predicted by the one or more of the three categories. An increase in any of these, translates to a more developed environmental attitude.

This finding corroborates the assertions of Barr (2007), Dolnicar *et al.* (2008), Kilbourne and Pickett (2008) and Leonidou *et al.* (2014).

#### **5.1.3.3 FUNAAB Zoo visitors' attitudes towards the environment and antecedents**

Visitors showed the highest level of agreement with the HON factors, which was followed by LOG factors and lastly by the EC factors. The highest level of agreement were with the HON factors; *'Humans have the right to modify the natural environment to suit their needs'*, *'Mankind was created to rule over the rest of nature'* and *'Plants and animals exist primarily to be used by humans'*. Those with the least agreement percentages were EC factors; *'we are approaching the limit of the number of people the earth can support'*, *'Mankind is severely abusing the environment'* and *'When humans interfere with nature it often produces disastrous consequences'*. Just like with the other zoos, it can be said that visitors to FUNAAB Zoo Park largely exhibit more of anthropocentrism than ecocentrism. With respect to the antecedents, FUNAAB Zoo Park visitors can be described as mid-ecological. Moreso, a significant relationship was established between visitors' environmental attitude and the antecedents. This finding is in tandem with Leonidou *et al.* (2014).

#### **5.1.3.4 FUTA Park visitors' environmental attitudes and the antecedents**

Visitors showed the highest level of agreement with the HON factors, which was followed by LOG factors and lastly by the EC factors. The highest levels of agreement were with the HON factors; *'Humans have the right to modify the natural environment to suit their needs'*, *'Mankind was created to rule over the rest of nature'* and *'Plants and animals exist primarily to be used by*

*humans*'. The lowest were '*Mankind is severely abusing the environment*', '*We are approaching the limit of the number of people the earth can support*' and '*When humans interfere with nature it often produces disastrous consequences*'. The results are also similar to that of the other zoos. FUTA Wildlife Park visitors to a large extent exhibit more of anthropocentrism than ecocentrism.

The visitors can be described as pro – ecological (for DES and LOB) and mid-ecological (for PAC) based on the antecedents of environmental attitude. Also, there was a significant relationship between visitors' environmental attitude and their antecedent factors. This finding agrees with the works of Dolnicar *et al.* (2008) and Kilbourne and Pickett (2008),

#### **5.1.3.5 Combined findings on environmental attitudes across the zoos**

Visitors showed the highest level of agreement with the HON factors, which was followed by LOG factors and lastly by the EC factors. Across the scale, the factors with the highest percentage agreement and by implication, low mean scores were '*Humans have the right to modify the natural environment to suit their needs*', '*Mankind was created to rule over the rest of nature*' and '*Humans must live in harmony with nature in order to survive*'. The first two factors are measures of Dominant Social Paradigm which favours anthropocentrism. The last factor, even though favours ecocentrism, attaches a selfish line of survival for human. This may be a reason why the factor was among the top three for visitors across the zoos

The factors with the lowest percentage agreement were on the EC scale had the least level of agreement among respondents, and by implication, high percentage disagreement and high mean scores. They include '*We are approaching the limit of the number of people the earth can support*', '*Mankind is severely abusing the environment*' and '*Humans need not adapt to the*



*natural environment because they can remake it to suit their needs*'. This reinforces visitors' anthropocentric beliefs and human dominance over the rest of nature and anti-ecological views. It also shows that most visitors do not see increase in human population, abuse of the environment (such as habitat degradation and pollution), and adaptation for survival as issues of concern since man can create their own world as it suits them. Thompson (2013) noted that while ecotourists may have high level of environmental awareness, their attitudes and behaviour may not necessarily be environmentally friendly. Likewise, this research also reflects the assertion of Touhino (2002) which stated that environmental attitudes can be said to be a cultural or social capital rather than as a real concern for nature, that is, there is more or less an intentional or unintentional disregard for the environment. For example, everyone wants to build their own house or own their own car.

Visitors across the zoos had mid – ecological perspective, with respect to antecedents of environmental attitude. This finding is in line with the research work of Santos *et al.* (2016). The test of association between visitors' environmental attitude and the antecedents was also significant. In other words, environmental attitudes are likely more developed in case of visitors who are more deontological, law obedient and politically active. An increase in one or more of the three statuses of a visitor, the better developed the environmental attitude. This finding corroborates with the works of Dolnicar *et al.* (2008) and Leonidou *et al.* (2014). Moreso, visitors' environmental attitude across the zoos revealed that a significant difference exists.

#### **5.1.4 Zoo Image and Motivation**

#### 5.1.4.1 Zoo Image

Destination image was described as a person's overall beliefs, ideas and impressions of a particular destination (Kotler and Gertner, 2004). With respect to zoos, it can be said that zoo image is the totality of beliefs, ideas and impression an individual (in this case the visitors) has about the zoo. Visitors to the study zoos largely see a zoo as '*a place to see wild animals*' at percentage agreement. This is followed by the recreational perspective of zoos by visitors as majority indicated that it is '*a place that provides a fun day out for the public*'. The core goal of scientific research ranked third among the visitors as indicated that zoos '*supports scientific research*'. The educational perspective ranked in the fourth position. The fifth highest image visitors have of zoos is that it is '*a source of generating income*'. While the first impression of visitors refers generally to a basic characteristic of the zoo (a place to see animals), the second image of visitors was that of recreation and entertainment. This is in line with Knezevic *et al.* (2016) which opined that visitors' image of zoos is that of entertainment than education, conservation and research.

Visitors also see the zoo as '*important places for conserving wildlife*' at 82.9%, '*a place that offers opportunity to interact with wild animals*' and '*training ground for staff/conservationists*'. Other factors include '*Zoos organize animal conservation campaigns*', '*Zoos treat sick and injured animals*', '*Zoos breed animals actively*', and '*A place where people see wild animals without having to destroy their natural environment*'. The high percentage agreements give voice to the fact that visitors are aware of the wildlife conservation roles of zoos (through animal breeding, conservation campaigns and protection of the *in situ* environment) and the close human-animal interactions they offer.

The factors of least percentage agreement were ‘*Zoos reintroduce wild animals into the wild*’ and ‘*Zoos are venues for social functions such as birthday/ wedding party and conference*’. This means that the visitors least acknowledged the re-introduction agendas of zoos. This may be because despite reintroduction being an agenda for zoos, it is hardly practiced. The exception may be the animal sanctuary/rescue centres who are committed into restoration programs than the conventional zoos. Visitors also largely disagreed with the idea that zoos are venues for social events. It is one thing to state the purpose of establishment of a destination; it is another thing for people to perceive it as that. In the case of the study zoos, the core purposes of establishment especially for a contemporary zoo: education, research, conservation, recreation, income generation (Ballantyne *et al.*, 2008; Meliou, 2010; Omonona and Kayode, 2011; Yager *et al.*, 2015; Knezevic *et al.*, 2016) corresponds with how visitors perceive it. In essence, visitors across the zoos have a good impression of the basic concept of zoos and their practices.

#### **5.1.4.2 Visitors’ Push and Pull Motivation to the study zoos**

Seventeen push motivational and eighteen pull motivational factors were assessed on a 5 point Likert scale. High percentage agreement was reflected in low mean scores. The five highest and least factors each were discussed.

##### **5.1.4.2.1 Visitors Motivation to UI Zoo**

###### **5.1.4.2.1.1 Push Motivation to UI Zoo**

Visitors to UI Zoo foremost push motivational factor were ‘*to experience and appreciate nature*’ and ‘*increase of knowledge*’ (1.43). This agrees with the findings of Ballantyne *et al.* (2008),

Sakagami and Ohta (2010), Adams and Salome (2014), and Lee (2015). Olimpia (2007) observed that more visitors in recent times opt for intellectually active holidays. These factors have been described by different researchers in various terms such as learning and investigation (Huang and Xiao, 2000), knowledge and intellectual motivators (Correia *et al.*, 2007), novelty (Saayman *et al.*, 2009), and enriching and learning experiences (Vuuren and Slabbert, 2011). This trend for visitation for educational, experience and appreciation trips have been documented in nature based tourism destinations such as Kruger National Park (Merwe and Saayman, 2008) as a third factor, South African Resort (Vuuren and Slabbert, 2011) as a fifth factor, and Markurdi Zoo (Yager *et al.*, 2015) as a first factor.

One of the major objectives of zoos is to teach visitors about displayed animals behaviours and habitats and the facility itself (Morgan, 1999). Omonona and Kayode (2011) described zoos as educationally planned oriented life animal displays, presented to the visitor in the most aesthetically pleasing, interesting and naturalistic context. Likewise, Mason (1999) posited that the most important part of the educational provision of a zoo is the chance offered to children and adults to observe real animals. Of recent, Yager *et al.* (2015) and Lee (2015) noted that a reason among many for establishing zoos is basically for introduction of wild animals to man (Yager *et al.*, 2015). Alarape *et al.* (2015) reported that majority of visitors to Markurdi Zoo came to learn. This objective was can be said to be fulfilled by visitors to the zoo as visitors seek to fulfill the intrinsic demand for an educational experience and appreciation of nature.

The third push motivational factor that drives people to visit UI Zoo is '*to be part of recreational activities*'. This is closely related to the fifth factor of attraction '*being entertained and having fun*'. The activities individuals partake in for enjoyment purposes at leisure is referred to as recreation (Hornby, 2009). Jordaan and Du Pleiss (2014) documented that zoos are considered

ideal places for recreation. Likewise, Sielker and Fraiser (2009) and Car and Cohen (2011) asserted that going to zoos to enjoy and relax is a primary objective. Falk *et al.* (2008) described visitors who are motivated by entertainment as explorers. This finding is in consonance with the study of Adefalu *et al.* (2014) which identified it as a primary factor (leisure) for UI Zoo, Yager *et al.* (2015) as a second factor for visitors' purpose of visit in Markurdi Zoo, and Ajayi *et al.* (2017) which documented recreation as a first factor in Ogba Zoo and Nature Park;

Another crucial push motivational factor identified by the visitors was '*spending time with family/friends*'. This finding is not unlikely as most visitors (40.3%) to the zoo come in the company of their family/friends. This even covers the spouse/partner group of 17%. In the studies of Anderson *et al.* (2008), Yilmaz *et al.* (2010) and Couch (2013), it was noted that the primary reason why people visit zoos is the social aspect. It gives credit to the fact that educational, recreational, experience and appreciation trips can be done better and enjoyed in the company of loved ones. This agrees with Sickler and Fraser (2009) which posited that visitors are interested in inter-personal engagements in zoos. Jordan and du Pleiss (2014) observed that children may motivate their parents to visit the zoo. Two types of social aspects of zoo visit has been identified namely intrinsic and altruistic social orientatations where the earlier focuses on engaging in an activity for personal benefit while the latter was for the needs of others (Hornby, 2009). Both types were documented in UI Zoo.

The least push motivational factors to UI Zoo were '*to increase social status*', '*rediscovery self*', '*to challenge abilities*', '*to visit a place my friends/family have not been to*' (2.49) and '*rediscovering past good times*'. In other words, these factors come at the bottom of the various push motivational factor of visitors to the zoo.

#### 5.1.4.2.1.2 Pull motivation to UI Zoo

Pull motivational factors are external attributes that drives an individual to visit a place. In UI Zoo, the first factor was the '*fame/reputation of the zoo*'. This was also reported by CZBG (2013) in Cincinnati Zoo, Ohio. The diversity of animal species in the zoo, especially the possession of one of the big Five (*Panthera leo*) may be a contributory reason. For example, the big Five have been known to pull tourists from all over the world to South Africa National Parks such as the Kruger National Park (Merwe and Saayman, 2008; SANParks, 2018). Also, the fact that most visitors heard about the zoo through Word of Mouth from family and friends may be a contributory factor to this. Another factor may also be the online presence of the zoo through their website, in which visitors who might have heard about the zoo may access to further stimulate their zoo image and hitherto motivate them to the zoo. From another view, UI Zoo has been existent since 1948 and has managed to maintain large stock of animals; her fame/reputation therefore has a 70 years badge on it.

The '*diversity of animal species in the zoo*' is the second pull motivational factor. This was a primary factor documented in the case of Zagreb Zoo (Knezevic *et al.*, 2016). UI Zoo currently prides itself in possessing 65 species of animals, the highest in the southwest region of Nigeria. Zoos have been known to offer visitors the view of several animals at a visit that may be impossible to see in the wild. In a comparative study conducted by Ajayi (2015) in Okomu National Park and Ogba Zoo and Nature Park, more visitors were recorded who visit the latter because of the number of animals and the ease of sighting, while visitors to the earlier complained of difficulty in sighting animals. A zoo that has lots of animals to offer naturally will attract more visitors.

Another crucial factor (third) considered is the '*time and distance of travel*'. Visitors to UI Zoo are largely local, intrastate and interstate travelers. All these visitors are however same day visitors. A default issue that will then be considered is the time and distance factor. This is in line with Mahika (2011), Morrison (2013) and Adefalu *et al.* (2016). The fourth pull motivational factor is '*recommendation by family/friends*'. This group of visitors is a product of the referrers' loyalties to the zoo. This is born out of satisfaction of the referrers on previous visits, and an utmost dedication of recommending the zoo to others, and in many cases, even accompanying them to partake in such experience. This finding also affirms the relationship between satisfaction and loyalty. This is in consonance with the findings of Yoon and Uysal (2005) and Thaothampitak and Weerakit (2014) which noted that visitors' loyalty to a destination is birth from satisfying experience in such destination.

The factors that occupy the fifth pull motivational factors to UI Zoo were '*unique eco-environment of the zoo*' and '*preferred animal species*'. The fact that most visitors indicated an experience and appreciation of nature as their foremost push motivational factor can be linked to these two pull motivational factor. What best way to satisfy a crucial push need of an experience and appreciation of nature than in an environment that offers a peculiar combination of unique eco-environment and preferred animal species. Most visitors acknowledge that the lions and primates were the key animals that attracted them to the zoo. This is similar to the report of Adefalu *et al.* (2016) and Knezevic *et al.* (2016) in UI Zoo and Zagreb Zoo respectively. For lots of visitors, according to Ryan and Saward (2004), zoos involve being educated on animals as well as interaction with nature.

The least factors that pulled the visitors were ‘*unique souvenirs*’, ‘*environmental management initiative of the zoo*’, ‘*quality of the zoos marketing strategies*’, ‘*availability of visitor guidance/reception centres*’, ‘*hospitality/friendliness/receptiveness*’ and ‘*tidiness/cleanliness*’. These findings are not unusual. For example, the Zoo does not have any Souvenir shop within or around the premises, thus, visitors motivation for the purchase of a souvenir is almost impossible. Also, with respect to the environmental management initiative of the zoo, the zoo is not certified under any ISO standards and possesses no ecolabel, neither is waste segregation and recycling done. Moreso, UI visitors exhibits anthropocentric beliefs rather than being ecocentric with respect to their environmental attitude. It is therefore unlikely that visitors will be pulled because of this factor. In the same vein, the availability of visitors’ guidance/reception centres is a non-committant pull factor. Likewise, the ‘*hospitality/friendliness/receptiveness*’ and ‘*tidiness/cleanliness*’ of zoo staff and the environment respectively hardly pull visitors to UI Zoo.

Essentially, UI Zoo visitors are motivated to visit to satisfy their intrinsic demand for travel (push motivation) above the extrinsic appeal of the destination (pull motivation). This is evident in the mean scores associated to the factors, as the earlier had lower mean scores (translating to higher percentage agreement) than the latter.

#### **5.1.4.2.2 Visitors Motivation to OAU Garden**

##### **5.1.4.2.2.1 Push motivation to OAU Garden**

The utmost push motivational factors of visitors to OAU Biological Garden are ‘*to be part of recreational activities*’ and ‘*being entertained and having fun*’. Ajayi and Ayodele (2017)



documented this as a primary factor that motivates visitors to Ogba Zoo and Nature Park. It also corroborates the findings of Adefalu *et al.* (2014) and Yager *et al.* (2015) in OAU Garden and Makurdi Zoo respectively. These types of visitors are the explorers (Falk *et al.*, 2008). The major goal of zoo keeping is recreation (Omonona and Kayode, 2011) serving as places of relaxation and entertainment and provides opportunity for people to satisfy their natural curiosity of seeing different species of animals especially from different areas of the world. A view supported by Sickler and Fraiser (2009) Car and Cohen (2011) and Jordaan and Du Pleiss (2014). This finding also affirms that of Jordan and du Pleiss (2014) that recreation most times overtakes the educational purpose of visit to zoos.

The '*experience and appreciate nature*' factor ranked as the third factor in visitors push motivation to the garden. This is in tandem with Merwe and Saayman (2008) which also identified this as a third factor of motivation for visitors to Kruger National Park. This factor is widely recognized and documented as a viable push factor that drives the desires of people to explore nature based destinations (Correia *et al.*, 2007; Ballantyne *et al.*, 2008; Saayman *et al.*, 2009; and Vuuren and Slabbert, 2011). The fourth push factor is exploratory in nature; '*going places I have not been*'. This is also reflected in the fact that the bulk of visitors to this garden were first time visitors. Exploration of new destinations was termed 'novelty' by Merwe and Saayman (2014) and constituted the fifth motivation factor to Kruger National Park. Likewise, this factor was documented in the study of Lee *et al.* (2004).

The social orientation of visitors to zoos was also exhibited by OAU Biological Garden visitors as the fifth push motivational factor was '*to spend time with family/friends*'. This finding is consistent with that of Anderson *et al.* (2008), Yilmaz *et al.* (2010) and Couch (2013). As

obtained in UI Zoo, this is also hardly an unlikely outcome as 50.9% were in the company of family and friends (children inclusive) and 12% were with their spouse/partner. Jordan and du Pleiss (2014) noted that visitors have high propensity of been subjective to social motivation, for example parents who are been urged to go on zoo visits by their kids. Parents have been reported to take extreme joy in seeing their children enjoy themselves (recreation) as well as learn (education) (Sickler and Fraser, 2009). This wraps up two different factors into another one. A view supported by Turley (2001). The two types of social aspects of zoo visit namely intrinsic and altruistic social orientations (Hornby, 2009) were also reported in the garden.

The least push motivational factors were '*rediscovering myself*', '*to enjoy good weather*', '*to increase my social status*', '*rediscovering past good times*' and '*to challenge my abilities*'. These values are reflective of very high percentage disagreement amongst the visitors. A journey for self discovery is apparently far from that which brings people to the garden. The enjoyment of good weather is also highly unlikely, as most of the visitors were from the south west region of the country and share similar weather conditions. The increase of social status also comes low on the list, as the visit to a zoo hardly adds feather to the cap of an average Nigerian. Also, rediscovery past good times is highly unlikely as few visitors were on repeat trips to the garden. The garden also offers no challenging activities to the public, so visitors would naturally not come for this purpose.

#### **5.1.4.2.2.2 Pull motivation to OAU Garden**

The pull motivational factors to OAU Biological Garden were similar to that of the UI Zoo. The foremost factor was also the '*fame/reputation of the garden*'. Just like in UI Zoo, the possession of one of the big Five (*Panthera leo*) may be a contributory reason, as obtained in Kruger

National Park (Merwe and Saayman, 2008; SANParks, 2018). Also, the fact that most visitors heard about the zoo through Word of Mouth from family and friends may be another contributory factor to this. The garden however does not have an online presence neither is any marketing strategy employed. OAU Biological Garden has been existent since 1968; her fame/reputation therefore has a 50 years badge on it, despite the loss of animal stock that used to bring glory to the garden. The visitors however described the garden as ‘basking in its old glory’.

The second and third factors ‘*diversity of animal species in the zoo*’ and ‘*time and distance of travel*’ is also similar to that of UI Zoo. OAU Biological Garden has thirteen wild animal species to its credit. The fact that visitors are pulled to destinations because of diversity of animal species is in consonance with the findings of Knezevic *et al.* (2016). Visitors to the garden were mostly local travellers and intrastate travellers who must travel and return same day. A vital issue of consideration is the time and distance factor. This is in line with the findings of Mahika (2011), Morrison (2013) and Adefalu *et al.* (2016). The third factor is also keenly followed by the fourth ‘*availability and adequateness of transit system*’ as both are closely related. This is however not an unusual outcome as most visitors came by public transport and in hired vehicles. Hence, consideration of these factors is only natural.

The fifth destination attribute that pulled visitors to OAU Biological Garden was ‘*affordability*’. Mahika (2011) noted that price is a invariable factor irrespective of the tourism sector individuals look at. The least factors that pulled the visitors to the garden were *environmental management initiative of the zoo*, ‘*quality of the zoos marketing strategies*’, ‘*availability of visitor guidance/reception centres*’, ‘*unique souvenirs*’, and ‘*hospitality/friendliness/receptiveness*’. What obtains here is similar to that of UI Zoo. The garden also has no environmental

management initiative, marketing strategy, visitor guidance/reception centre nor souvenirs. Likewise, the hospitality/friendliness/receptiveness of the staff did not constitute key pull factors for the visitors.

All in all, visitors to OAU Garden are motivated to visit to satisfy their intrinsic demand for travel (push motivation) above the extrinsic appeal of the destination (pull motivation). This is evident in the mean scores associated to the factors, as the earlier has lower mean scores (translating to higher percentage agreement) than the latter.

#### **5.1.4.2.3 Visitors Motivation to FUNAAB Zoo**

##### **5.1.4.2.3.1 Push motivation to FUNAAB Zoo**

Visitors to FUNAAB Zoo Park foremost push motivational factor were '*to experience and appreciate nature*' and '*increase of knowledge*'. These were also the foremost factors recorded in UI Zoo. It demonstrates the urge to visitors to have an experience of nature, appreciate it as well as be educated about it. This objective is one of the core roles of zoos (Knezevic *et al.*, 2016; Omonona and Kayode, 2011). The finding is consistent with those of Merwe and Saayman (2008), Saayman *et al.* (2009), Vuuren and Slabbert (2011) and Yager *et al.* (2015). The exploratory motive '*going places I have not been*' constitute the third push motivational factor of visitors to the garden. This is evident in the fact that majority of visitors to this park were first time visitors. This was also recorded as a fourth factor in OAU Biological Garden. This finding is in line with that of Merwe and Saayman (2014).

Visitors to the Park also identified the '*being entertained and having fun*' and '*to break away from routine of everyday life, pressure and surrounding*' as the fourth and fifth push motivation

al factors. The zoo has been identified as a place for enjoyment and having fun (Hornby, 2009; Jordan and Du Pleiss, 2014) and an avenue to relax and escape from the hustles and bustles of the usual environment to a calming setting (Tomas *et al.*, 2003). Hornby (2009) noted that there is a direct association between a person and a circumstance (this may be a desire to get away from an everyday routine). This people use the opportunities they get (such as weekends and vacations) in getting harmony from environmental settings (Pals *et al.*, 2009), which provides opportunities to interact with fauna (Sickler and Fraser, 2009) such as zoos. Kim *et al.* (2006) and Sawanson and Horridge (2006) likewise documented escape from routine as a vital and most common motivating factor.

The least factors that drives visitors intrinsic motivation were '*rediscovering past good times*', '*to enjoy good weather*', '*to challenge my abilities*', '*to increase my social status*' and '*to spend time with family/friends*'. This was similar to the results obtained in UI Zoo and OAU Biological Garden. Visitors are least driven to go the park to rediscover past good times (most were first timers), enjoy good weather (most visitors were from the local catchment area, hence weather is similar), and challenge their abilities (the park offers no challenging activity). However, the social orientation of spending time with family and friends, when compared with the other zoos was lower.

#### **5.1.4.2.3.2 Pull motivation to FUNAAB Zoo**

The principal destination attributes (pull motivation) that brings visitors to FUNAAB Zoo were '*time and distance of travel*', '*affordability*', and '*availability and adequateness of transit system*'. Visitors to the park were mostly interstate travelers; and keenly followed by the local travelers and intrastate traveler, who must travel and return same day. Moreso, most respondents

came in hired vehicles followed by those who came in private cars and public transport. A vital issue of consideration is therefore the time and distance as well as the availability and adequateness of travel system. This is in line with the research works of Adefalu *et al.* (2016a). Also, the consideration of affordability of trip is natural. A notion supported by Mahika (2011).

The visitors also identified '*unique eco-environment of the park*' as the fourth pull motivational factor. This was also documented in UI Zoo as a fifth factor. Visitors also considered '*personal safety*' as a key pull motivating factor. Nobody wants to visit a tourism destination where the security of lives and properties is threatened. The finding is therefore not unusual. The least factors that pulled the visitors were '*environmental management initiative of the zoo*', '*availability of visitor guidance/reception centres*', '*past experience*', '*unique souvenirs*', and '*quality of the zoos marketing strategies*'. This is also similar to what pulls visitors in the least in UI and OAU Biological Garden. The park, like the others is under no environmental management initiative. Even though they have a visitor guidance/reception centre, people were not motivated to visit because of that. Likewise, past experience would not be as viable as majority were first time visitors. The only unique souvenir sold in the park is the customized tie and dye (adire); this did not also constitute a strong pull factor. The park employed no marketing strategy whatsoever.

In essence, visitors to FUNAAB Zoo were motivated to visit to satisfy their intrinsic demand for travel (push motivation) above the extrinsic appeal of the destination (pull motivation). This is evident in the mean scores associated to the factors, as the earlier has lower mean scores (translating to higher percentage agreement) than the latter.

#### **5.1.4.2.4 Visitors' motivation to FUTA Park**

#### 5.1.4.2.4.1 Push motivation to FUTA Park

The utmost push motivational factor in FUTA Wildlife Park is ‘*to experience and appreciate nature*’. This was also the foremost factor in UI Zoo and FUNAAB Zoo and a third factor in OAU Garden. This agrees with the findings of Merwe and Saayman (2008) and Ballantyne *et al.* (2008). This factor is widely recognized and documented as a viable push factor that drives the desires of people to explore nature (plants and animals) whether in *in-situ* (such as National Parks) or *ex situ* (such as zoos) environments. The second factor is ‘*to be part of recreational activities*’. This, just as obtained in the other zoos, is a core push motivational factor for visitors. This is in consonance with the research works of Coghan (2007), Kuuder *et al.* (2013), Jordan and Du Pleiss (2014), and Ajayi *et al.* (2017), where recreation was identified as a key motive for zoo visit.

Visitors also sought for relaxation in the park. This factor was also documented in Yoon and Uyssal (2005), Swanson and Horridge (2006), Anderson *et al.* (2008), Yilmaz *et al.* (2010), and Jordan and du Pleiss (2014). The intellectual or educational perspective was also not left out in the Park as ‘*increase of knowledge*’ was the fourth factor. This corroborates the reports of Bansal and Eiselt (2004), Yoon and Uysal (2005), Correia *et al.* (2007), Omonona and Kayode (2011) and Lee (2015) which documented education as a core reason for zoo visit. Visitors fifth motivational factor was ‘*to spend time with family/friends*’. This most likely applied to the visitors who were in the company of family and friends. This finding is consistent with Hornby (2009), Couch (2013) and Jordan and du Pleiss (2014), which documented social motive as an important reason for zoo visit.

The push factors that least motivated visitors to the park were '*rediscovering past good times*', '*to increase social status*', '*rediscovery self*', '*to enjoy good weather*' and '*being entertained and having fun*'. This is similar to that which obtains in the other zoos. For example, majority of the visitors were first time visitors, hence rediscovery past good times is highly unlikely.

#### **5.1.4.2.4.2 Pull motivation to FUTA Park**

Visitors to FUTA Park indicated '*fame/reputation of the park*' as the principal. This is similar to that which obtains in UI Zoo and OAU Garden. It is consistent with the report of CZBG (2013). Unlike the other zoos, this park does not possess any of the big Five. It is also a relatively new establishment of just 11 years. The park does not have an online presence neither is any marketing strategy employed. The park is also not very popular in the university community as it was observed during the field survey that students and staff hardly visit the park except those on research works. The fame/reputation of the zoo may then be argued from two points of view, namely medium of awareness in which the highest was through Word of Mouth from family and friends and the advertisement of the park in times past on the university radio (In-Depth Interview with Zoo staff). This formed image may likely be the driving factor to the park.

The second factor is '*diversity of animal species in the zoo*'. This was also reported in UI Zoo and in line with the findings of Knezevic *et al.* (2016). The park has thirteen species of animals to its credit. The other factors identified were '*affordability*', '*time and distance of travel*', and '*availability and adequateness of transit system*' as the third, fourth and fifth pull motivating factors. The consideration of affordability of trip is natural as noted by Mahika (2011). Visitors to the park were mostly local travelers, and followed by the intrastate travelers who must travel and return same day. Moreso, most respondents came in hired vehicles followed by those who



came in private cars. A vital issue of consideration is therefore the time and distance as well as the availability and adequateness of travel system. This is in line with the findings of Mahika (2011), Morrison (2013) and Adefalu *et al.* (2016).

The least factors that pulled the visitors were '*tidiness/cleanliness*', '*environmental management initiative of the zoo*', '*recommendation by family/friends*', '*hospitality/friendliness/receptiveness*' and; '*availability of visitor guidance/reception centres*'. In other words, the tidiness/cleanliness of the park and hospitality/friendliness/receptiveness of park staff are the least likely attributes of the park to pull the visitors to visit. The park was also not part of any environmental management initiative; neither did it possess a visitor's guidance/reception centre. This is similar to what obtains in the other zoos.

In summary, visitors to FUTA Park were motivated to visit to satisfy their intrinsic demand for travel (push motivation) above the extrinsic appeal of the destination (pull motivation). This is evident in the mean scores associated to the factors, as the earlier has lower mean scores (translating to higher percentage agreement) than the latter.

#### **5.1.4.2.5 Combined findings on visitors motivation to the zoos**

The findings across the zoos affirm the pull and push factors conceptual framework. This study reconfirms that tourists' travel behavior is driven by intrinsic and extrinsic factors. In other words, visitors decide to travel because they want to fulfill their intrinsic desires, and at the same time, their decisions on where to go are based on destination attributes. This is in line with Mohammad and Som (2010) and Adeleke (2015) findings. The motivating factors documented for these zoos are similar to what obtains across various nature-based tourism destinations. The

results however revealed that visitors across the study zoos are motivated to visit to satisfy their intrinsic demand for travel (push motivation) above the extrinsic appeal of the destination (pull motivation). This is evident in the mean scores associated to the factors, as the earlier has lower mean scores (translating to higher percentage agreement) than the latter.

The foremost pull factors when a combined analysis was run were '*to experience and appreciate nature*', '*to be part of recreational activities*', '*to increase my knowledge*', '*being entertained and having fun*' and '*going places I have not been*'. These factors have been widely recognized as push motivational factors or purpose of zoo visit in several researches such as Omonona and Kayode (2011), CBDG (2013), Jordan and du Pleiss (2014), Yager *et al.* (2015), Alarape *et al.* (2015), Adefalu *et al.* (2016), and Ajayi *et al.* (2017). They have generally been acknowledged by other researches outside zoo studies such as Jonsson and Devonish (2008), Lien (2010), Muhammad and Som (2010), Vuuren and Slabbert (2014), Merwe and Saayman (2014) and Adeleke (2015). The least push factors were '*rediscovering past good times*', '*to increase social status*', '*rediscovery self*', '*to enjoy good weather*' and '*to challenge my abilities*'. It is important to state that these factors have been known to constitute push motivation generally, across the study zoos; they had the highest percentage disagreement.

Knezevic *et al.* (2016) opined that visitors are heterogenous whose motivation varies from education through leisure to relaxation and interpersonal connections. Various researches showed that kids made a great number of visitors in zoos (Wagoner and Jensen, 2010; Jordan and du Pleiss, 2014). Others referred to it as avenue to relax and enjoy (Car and Cohen, 2011). Visitors either go to zoos according to Jordaan and du Plessis (2014) for personal reasons or to facilitate inter-personal relationships.

The principal destination attributes that pull visitors across the zoos were '*fame/reputation of the zoo*', '*time and distance of travel*', '*availability and adequateness of transit system*' , '*affordability*' and '*personal safety*'. These factors have been reported in general motivation studies such as Bansal and Eiselt (2004), Jang and Wu (2006), Correia *et al.* (2007) and Mahika (2011). The least factors that pulled the visitors were '*environmental management initiative of the zoo*', '*availability of visitor guidance/reception centres*', '*quality of the zoos marketing strategies*', '*unique souvenirs*', and '*hospitality/friendliness/receptiveness*'. Aside UI Zoo which has a website, none of the others possess any marketing strategy. Being pulled through this means is therefore very unlikely.

This findings also affirms Stanciu and Ticgindelean (2011) which noted that visitors are possibly influenced by a range of motivating factor during travel in which majority of travels has to do with finding a middle ground between many motivating factors; hence one motivation either becomes more prevailing or a holiday is bought that facilitates partial fulfillment of all. Also, the four types of zoo visitors with respect to motivation outlined by Sickler and Fraser (2009) were also reported across the study zoos

1. Type A finds inter-personal connections with family most enjoyable.
2. Type B attention is on their kid's education.
3. Type C enjoys the sight of nature and a deep feeling for it.
4. Type D attention is more of inter-personal connections with friends

Two of the four types of nature based tourists identified by Vespestad and Lindberg (2010) were also identified

1. Nature based tourism experiences as *entertainment* where nature becomes a setting for an activity or experience that has entertainment value.
2. *Social* nature based experiences that provide meaning and identity to group members such as families, friends, tour groups, etc.

Also, the reasons for the establishment of zoos are well fulfilled with respect to the push and pull motivational factors. The factor '*experience and appreciate nature*' was recorded in all the study zoos. The factors that were common to three of the four zoos were '*increase of knowledge*', '*being entertained and having fun*', '*spending time with family and friends*' and '*to be part of recreational activities*'. The exploratory factor '*going places I have not been to*' was reported in two of the four zoos. Differences were also observed. For example, recreational goal does not come in the first five push factors to FUNNAB Zoo unlike in others, rather, the breaking away from everyday routine featured. Relaxation purpose also featured as a one of the top five only in FUTA Park. Also, personal safety of visitors ranked among the first five factors only in FUNAAB Park, and fame/reputation of the park was not featured. These findings were further strengthened in that that a significant difference exists with respect to motivation across the zoos. The observed variations across the zoos as well as with similar studies are a pointer to the fact that different places and tourist sites communicate various travel motivations. A notion supported by Merwe and Saayman (2008).

#### **5.1.4.3 How socio-economic factors influence visitors' push and pull motivation**

##### **a. Sex**

No significant association existed for the factor '*being entertained and having fun*' and '*experience and appreciate nature*'. This means that both male and female visitors identified

with these factors the same way. Irrespective of their sex, they were driven to fulfil their entertainment as well as their nature experience goals. This was also reported in Jonnson and Devonish (2008). There were significant associations for the other factors (increase of knowledge, being part of recreational activities, and going to places not yet visited). This means that there was a difference in the choice of male and female visitors with respect to the push factors. This is in line with Andreau *et al.* (2005) which showed that there were different travel motivations amongs males and females. It was claimed on overall that females have stronger motivations to travel than male, with stronger relaxation and escape-based motives. This is evident in the crosstab result where majority of the female strongly agreed to the exploratory factor of going to new places. Andreau *et al.* (2005) also noted that male visitors prefer more recreation and activity in a destination than the female. The result of the crosstab also revealed this where majority of the male visitors agreed while the highest percentage disagreement was from the female zoo visitors.

The test of association between visitors sex and the pull motivational factors revealed that a significant difference exists in how male and female respond to the various destination attributes, namely fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety.

#### **b. Marital status**

No significant association existed for the push factor '*experience and appreciate nature*'. This means that whether single nor married, visitors came to have an experience and appreciation of nature. This is an expected result as the core attractions of the zoos are their natural resources, especially the zoo animals. There were significant associations for the other factors; recreation, entertainment and fun, exploring new places and increase of knowledge. There were significant

associations between visitors' marital status and the factors 'fame/reputation of the zoo', 'affordability' and 'personal safety'. Other factors which include time and distance of travel and availability and adequateness of transit system, had no significant association. It can be said that visitors whether married or unmarried consider the transportation indices the same way. These factors are key factors that can mar a visitor's experience if not properly considered. A notion supported by Mahika (2011).

**c. Age**

No significant association exists for the factor 'being part of recreational activities' \. This means that visitors across the age groups (young and old) were driven to fulfil their recreational needs in the zoos. This finding conforms to that of Andreu *et al.* (2005) which found that age had no significant influence on travel motivations. There were significant associations for the other factors that is, nature experience and appreciation, entertainment and fun, exploring new places and increase of knowledge. The survey carried out by Jonsson and Devonish (2008) supports previous findings (though not in zoos), that older people tend to years for mental stimulation, thus visit places to enhance their knowledge and awareness, relax and discover different destinations while younger people prefer activities that require physical strength. The result of the crosstab revealed that younger groups sought to explore new places. This is at variance with the findings of Jonnson and Devonish (2008). In another light, almost all the respondents in the older group sought to increase their knowledge as well as experience and appreciate nature; highest percentage disagreement was recorded among the younger groups. This is in line with the findings of Jonnson and Devonish (2008).

Also, there were significant associations between visitors age and all the pull motivational factors that is fame/reputation of the zoo, time and distance of travel, availability and

adequateness of transit system, affordability and personal safety tested. This translates to the fact that visitors across age groups consider, for example, personal safety, differently.

#### **d. Education**

There were significant associations between educational level and all the push motivational factors tested; nature experience and appreciation, recreation, entertainment and fun, exploring new places and increase of knowledge. Also, there were significant associations between respondents' educational level and all the pull motivational factors; fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety. This means that the educational level of visitors plays significant roles in the intrinsic and extrinsic factors that motivate a zoo visit.

#### **e. Nationality**

No significant association exists for the factor 'experience and appreciate nature'. This means that, irrespective of the nationality of the zoos visitors, they were driven to have an experience and appreciation of nature. This is hardly an unlikely output as the central aim of the zoos lie in the natural resources (especially wild animals) that they exhibit. They are the core attractions to the zoos. There were significant associations for the other factors: recreation, entertainment and fun, exploring new places and increase of knowledge. Also, there were significant associations between respondents' nationality and all the pull motivational factors (fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety). This means that Nigerians and non Nigerians perceive these factors differently.

#### **f. Monthly income**

There were significant associations between income and all the push and pull motivational factors tested. It can be said that across the various income groups recorded among the zoos

visitors, they perceive the push and pull factors differently. An important pull factor to reference is affordability. The results of the crosstab revealed that majority of the visitors at the lower income levels especially those below ₦50000 considered affordability while this decreases as the income increased.

#### **5.1.4.4 Does the image visitors have of zoos influence their motivation?**

The perceived image of the destination is the general impression of the destination (Kotler and Gertner, 2004). Tourism destination image, a person's psychological reflection of understanding, thoughts, and general opinion of a specific destination (Sadeh *et al.*, 2012), is often established as having effect on travel behaviour with respect to expectations and perceived value (Xia *et al.*, 2009). This has been known to play vital roles in the decision making process of a visitor. Pine and Gilmore (2008) and Banyai (2010) noted that a lot of persons consider the realness of destination image when deciding where to go on holidays or expend their wealth. The impression of the zoo as '*a place to see wild animals*', '*a place that offers opportunity to interact with animals*' and '*a place where people see wild animals without destroying their natural habitat*' was correlated with the intrinsic factor (push motivational factors) '*to experience and appreciate nature*' and it revealed that a significant association exists. In other words, visitors overall impression of the visitors as a place to see and interact with wild animals without destroying their natural habitat informs the choice of the zoos as places to experience and appreciate nature. This was also reported in Carr and Cohen (2011).

With respect to the zoo image educational function of the zoo especially on conservation issues, and the push factor that concerns increase of knowledge (learning), no significant association exists. This may be that visitors learning objective in the zoo may just be on animals' behaviour



and habitat and not necessarily on conservation. Also, the image of visitors about the zoo as ‘*a place that provides a fun day out for the public*’ was correlated with the factors ‘*to spend time with family/friends*’, ‘*to be part of recreational activities*’ and ‘*being entertained and having fun*’ revealed a significant association. It can in other words be said that visitors image of the zoo as a place of fun for the public informs their social visit of spending time with loved ones, engaging in recreational activities as well as being entertained. This finding is line with Knezevic *et al.* (2016) which noted that zoos project the image of a place of entertainment to visitors.

All in all, the findings corroborate Pine and Gilmore (2008) and Banyai (2010) which posited that people tend to go to places based on how they perceive their image. There is an association between visitors’ image of zoos and their motivation. It also gives voice to the fact that destination image has influence on tourists behaviour, as observed by Rodriquez and Bosque (2007). It is also consistent with Phillips and Jang (2007) which noted that motivation is an intrervening variable in the association between image and intention to visit. Also, the zoos project the image of a place where one can experience and appreciate nature as well as a somewhere that offers recreation and entertainment rather than a place of learning. This is in line with the findings of Joordan and du Pleiss (2014). Zoos are endorsed as avenue for people for learning about nature and conservation as well as destinations that enhances inter-personal connections, entertainment or out-of-doors activities (Yilmaz *et al.*, 2010).

## **5.1.5 Place attachment of visitors’ to the study zoos**

### **5.1.5.1 Place attachment of visitors’ to UI Zoo**

Visitors to UI Zoo displayed high level of place satisfaction and loyalty. It was reflected in high percentage agreement of the various factors that makes up the scale such as '*this zoo is a pleasant place*'; '*I will recommend this zoo to others*'; '*I believe I did the right thing when I chose to visit the zoo*'; '*I will visit this zoo again*'; and '*the overall sight and impression of the zoo inspired me*'. The second scale of high percentage agreement was place dependence. This value tended towards the neutral score of 3. Place dependence describes the bond individuals develop with the physical features of a place. The higher an individuals level of dependence on a place, the lesser their willingness to change to another place (Scannell and Gifford, 2010). This suggests that people assess places against alternatives (Yuksel *et al.*, 2010). It can be inferred that visitors to the zoo are indifferent to the physical characteristics of the zoo. This was documented for the other scales; place identity, place affect and place social bonding.

Budruk *et al* (2009) argued that places present an individual the opportunity to both communicate and assert his/her identity. The visitors are also indifferent to this. It can be said that visitors to UI Zoo displays detachment as far as place attachment is concerned; they are just indifferent especially with respect to place identity, place dependence, place affect and place social bonding. They however identify strongly with the satisfaction the zoo offers and are ready to be destination ambassadors through loyalty.

Repeat visitors have been known to demonstrate high level of place attachment than first timers (Griffin *et al.*, 2004; Alegre and Juaneda, 2006). Despite majority of the zoo visitors being repeat visitors, the level of place attachment was mild. The result comparing visitors that were on first, second, and third and more visits across the sub scales of place attachment, where a significant difference was found to exist in their perceptions for place identity, place dependence, place affect and place social bonding, while no significant difference exists for place satisfaction and

loyalty. In other words, first time visitors and repeat visitors perceive the earlier scales differently, while they perceive the latter scale the same way. In other words, their satisfaction and loyalty is uncontested irrespective of whether they are first time visitors or repeat visitors.

#### **5.1.5.2 Place attachment of visitors' to OAU Garden**

Visitors to OAU Garden, just like that of UI Zoo, displayed a high degree of place satisfaction and loyalty. This is also evident in the high percentage agreement with factors that make up the scale. A major contrast is the very high percentage disagreement recorded for the other scales; namely place identity, place dependence, place affect and places social bonding. This result is highly unlikely as the largest percentage of the visitors were first timers. This corroborates Griffin *et al.* (2004) and Alegre and Juaneda (2006) which opined that first timers hardly demonstrate place attachment. It can be said that visitors to the garden are not attached to the garden; however, they are satisfied with the experience the place provides and are willing to visit again as well as recommend the garden to potential visitors.

The result comparing visitors that were on first, second and thrice and above visits across the sub scales of place attachment, where a significant difference was found to exist in their perceptions for place identity, place dependence, place affect and place social bonding, while no significant difference exists for place satisfaction and loyalty. In other words, first time visitors and repeat visitors perceive the earlier scales differently, while they perceive the latter scale the same way. Simply put, their satisfaction and loyalty is uncontested irrespective of whether they are first time visitors or repeat visitors.

#### **5.1.5.3 Place attachment of visitors' to FUNAAB Zoo**

Visitors to FUNAAB Zoo just like visitors to UI Zoo and OAU Garden, demonstrated a high degree of place satisfaction and loyalty. The second scale of high percentage agreement was place identity. The value however tended towards indifference. This was also documented for the other scales; place dependence, place affect and place social bonding. It can be inferred that visitors to FUNAAB Zoo Park displays detachment as far as place attachment is concerned; they are indifferent especially with respect to place identity, place dependence, place affect and place social bonding. They however identify strongly with the satisfaction the zoo offers and are ready to be destination ambassadors through loyalty. This was also the case of UI Zoo visitors. Visitors to the park were also largely first time visitors, hence attachment was not likely.

The result comparing visitors that were on first, second and thrice and above visits across the sub scales of place attachment, where a significant difference was found to exist in their perceptions for place identity, place affect, place social bonding, and place satisfaction and loyalty, while no significant difference exists for place dependence. In other words, first time visitors and repeat visitors perceive the earlier scales differently, while they perceive the latter scale the same way. Simply put, their place dependence is uncontested irrespective of whether they are first time visitors or repeat visitors.

#### **5.1.5.4 Place attachment of visitors' to FUTA Park**

Visitors to FUTA Park just like visitors to UI Zoo, OAU Garden and FUNAAB Zoo, demonstrated a high level of place satisfaction and loyalty. They were however indifferent to place dependence, place identity, place affect and place social bonding. It can be inferred that visitors to FUTA Park displays detachment as far as place attachment is concerned; they are indifferent especially with respect to place identity, place dependence, place affect and place

social bonding. They however identify strongly with the satisfaction the zoo offers and are ready to be destination ambassadors through loyalty. This was also the case of UI Zoo and OAU Garden Visitors.

Visitors to the park too were largely first timers. Place attachment for first time visitor was unlikely when compared to repeat visitors (Griffin *et al.*, 2004; Alegre and Junaneda, 2006). This is evident in the result comparing visitors that were on first, second and thrice and above visits across the sub scales of place attachment, where a significant difference was found to exist in their perceptions.

#### **5.1.5.5 Combined findings on place attachment of visitors' to the study zoos**

The combined analysis of the place attachment of visitors across all the study zoos revealed that visitors demonstrated a high level of place satisfaction and loyalty. In other words, visitors were satisfied with the experience the zoo provides, as they generally see the zoos as pleasant places which impressed them. They also had a deep feeling of accomplishment with respect to their choice of the zoos. This finding is in consonance with Smith *et al.* (2010) which noted that future recreational behaviours at a destination can be predicted by place attachment. Visitor satisfaction is perceived as a key to the success of destinations in today's competitive market (Bosque and Martin, 2008).

Visitors however showed an indifferent attitude to the place attachment scales – place identity, place dependence and place affect. They also demonstrated a disagreement with the place social bonding scale. This result was explained with respect to the findings that majority of the respondents were first time visitors. For example, Griffin *et al.* (2004) noted that visitors who do not know of national parks and have never visited one, will most likely not embark on a first

visitation and would also not be in any way attached. Repeat visits on the other hand are known to strengthen affective bonds (Alegre and Junaneda, 2006). Individuals with higher familiarity with natural environments may show stronger emotional connections than those with lesser experience (Hinds and Sparks, 2008). This is evident in the comparison of visitors that were on first, second and thrice and above visits across the sub scales of place attachment, where a significant difference was found to exist in their perceptions.

The comparison of results across the zoos revealed that all the visitors demonstrated a detached or indifferent feeling as far as place identity, place dependence, place affect and place social bonding is concerned except in OAU Garden where visitors are not attached to the garden. Moreso, there were significant differences in visitors' place attachment across the zoos.

#### **5.1.6 Environmental Attitudes, Motivation and Place Attachment**

Three important hypotheses were measured with respect to this heading. This is based on the premise that environmental attitudes of visitors and their place attachment to the study zoos were mediated by their motivation. Costen and Line (2011) opined that attachment to a nature based tourism destination (in this case, zoos) represents an individual's internalized perceptions of the destination (place identity), and the degree of feeling that visiting that destination will lead to the fulfillment of motivational objectives (place dependence). And as such develops a love for the place (place affect), interacts with other individuals whether family/friends or other visitors (place social bonding) which hitherto breeds satisfaction and loyalty to the destination.

The hypotheses were stated in the null form, and were tested for each of the zoos and also combined for all.

1. Environmental attitudes of visitors do not significantly influence their motivation
2. No significant relationship exists between visitors motivation and place attachment
3. No significant relationship exist between visitors environmental attitude and place attachment

#### **5.1.6.1 Environmental Attitudes, Motivation and Place Attachment in UI Zoo**

The model fit was acceptable with a Goodness of Fit Index (GFI) of 0.716. This is consistent with Line and Costen (2011) in their survey of environmental attitudes, motivation and place attachment in a popular national park in USA, who noted that that the model can be used for future research on nature based tourist behaviour.

1. Environmental attitudes of visitors did not significantly influence their motivation to visit UI Zoo. In other words, their environmental attitudes did not play a role in forming their motivational factors to the zoo. This is at variance with the findings of Formica and Uysal (2002), Luo and Deng (2008) and Costen and Line (2011), which documented a significant association in their studies. Visitors must have visited with respect to their motivating factors (such as to experience and appreciate nature and increase of knowledge) and not based on their environmental attitudes. An important thing to note is that the visitors demonstrated anthropocentrism rather than ecocentrism.
2. There was a significant (positive) relationship between visitors' motivation and place attachment. This means that as visitors' motive of engaging in tourism in zoo increase (the principal ones being experience and appreciate nature and increase of knowledge), so also their level of place attachment. The motivation of the visitors' does influences place

attachment positively. This is consistent with Costen and Line (2011) which reported same positive association in their study.

3. No significant relationship exists between visitors' environmental attitude and place attachment to UI Zoo. This finding is not unlikely, as visitors environmental attitudes were anthropocentric.

#### **5.1.6.2 Environmental Attitudes, Motivation and Place Attachment in OAU Garden**

The model fit was acceptable with a GFI of 0.9410. This is consistent with Line and Costen (2011).

1. Environmental attitudes of visitors did not significantly influence their motivation to visit. In other words, their environmental attitudes did not play any role in forming their motivational factors to the garden. This is at variance with the findings of Formica and Uysal (2002), Luo and Deng (2008) and Costen and Line (2011) which reported significant association. This may be because visitors' utmost push motivational factors were '*to be part of recreational activities*' and '*being entertained and having fun*'. Another important thing to note is that the visitors demonstrated anthropocentrism rather than ecocentrism.
2. There was no significant relationship between visitors' motivation and place attachment to the garden. This disconfirms with the research work of Costen and Line (2011).



3. A significant relationship (positive) exists between visitors environmental attitude and place attachment to the garden. In other words, an increase in visitors' environmental attitudes will lead to an increase in their attachment to the garden.

### **5.1.6.3 Environmental Attitudes, Motivation and Place Attachment in FUNAAB Zoo**

The model fit was acceptable with a GFI of 0.6616.

1. Environmental attitudes of visitors did not significantly influence their motivation to visit FUNAAB Zoo Park. In other words, their environmental attitude did not have any role in the formation of their motivational factors to the park. This is at variance with the research works of Formica and Uysal (2002), Luo and Deng (2008) and Costen and Line (2011). An important thing to note is that the visitors demonstrated anthropocentrism rather than ecocentrism. This was similar to what was obtained for UI Zoo and OAU Biological Garden visitors.
2. There was a significant relationship between visitors' motivation and place attachment to the park. This means that as visitors' motivations to participate in tourism in the park increase (the foremost being to experience and appreciate nature and increase of knowledge), so also their level of place attachment. The motivation of the visitors' does influences place attachment positively. This was also reported by line with Costen and Line (2011). This was also obtained for UI Zoo visitors

3. A significant relationship exists between visitors' environmental attitude and place attachment to the garden. Despite the significance of this relationship, it is an inverse one. An increase in their environmental attitudes translates to a reduction in place attachment to the Park. This may be due to the anthropocentric beliefs of the visitors.

#### **5.1.6.4 Environmental Attitudes, Motivation and Place Attachment in FUTA Park**

The model fit was acceptable with a GFI of 0.7566.

1. Environmental attitudes of visitors significantly influence their motivation to visit FUTA Park. Despite this significance, it was an inverse relationship. An increase in environmental attitudes corresponds to a reduction in motivation. Interestingly, Luo and Deng (2008) practically assessed the association between attitude towards the environment and tourists' motivational factor in nature based tourism in a national park in China, and a positive association was established, but it was not significant.
2. A significant relationship exists between visitors' motivation and place attachment to the park. This was also an inverse association.
3. There was no significant relationship exist between visitors' environmental attitude and place attachment to the garden. Just as observed for UI Zoo Visitors, this finding is not unlikely, as visitors environmental attitudes were anthropocentric.

#### **5.1.6.5 Combined findings on Environmental Attitudes, Motivation and Place Attachment**

The hypotheses were also tested across the zoos as a single entity. The model fit was acceptable with a GFI of 0.7996.

1. Environmental attitudes of visitors do not significantly influence their motivation to visit the zoos. This is at variance with Luo and Deng (2008) and Line and Costen (2011) who document significant associations in a national park in the US and China respectively.
2. No significant relationship exists between visitors' motivation and place attachment to the zoos. This is at variance with the findings of Line and Costen (2011) which reported significant association.
3. There was also no significant relationship exist between visitors' environmental attitude and place attachment to the zoos. Visitors across the zoos demonstrated to alarge extent anthropocentric beliefs.

The variation of this work with previous findings may be the context in which it was carried out (zoos), unlike the studies in the national parks. This study was however able to provide a cross-cultural context for comparison with similar studies in the developed worlds, and a frontal line of what obtains in Nigerian Zoos.

#### **5.1.7 Visitors' satisfaction with individual zoos attributes**

Tourist satisfaction, as defined by Thaothampitak and Weerakit (2010), are tourists after-the-act evaluation of the overall service experience. According to Yoon and Uysal (2005), assessing satisfaction of visitors is a standard measure of destination performance, with vital roles in destination marketing. Measuring satisfaction in tourism has two purposes according to Kuuder *et al.* (2013); namely dentifying the need of tourists and organizational plan of meeting it, and providing organizational platform to interact with tourists on what they want or do not want.

With this in mind, visitors satisfaction was assessed with respect to individual zoo attributes and services offered.

#### **5.1.7.1 Visitors' satisfaction with UI Zoo attributes and services**

Twenty four attributes were assessed. Majority of the visitors in UI Zoo were largely satisfied with the various attributes of the zoo. The rank order put 'peaceful and restful zoo environment', security and safety, accessibility, footpaths/trails, and the viewing platform as the attributes visitors were mostly satisfied. The high percentage satisfaction with the peaceful and restful environment the zoo provides is a point of reflection on visitors utmost push motivation of experiencing and appreciating nature. Visitors also value their security and safety, and were quick to mention their satisfaction within this item in the zoo premises. A notion also supported by John and Philemon (2015). Accessibility of a tourism destination has been identified as a key factor which pulls visitors into such destination (Morrisson, 2013). They were also largely satisfied with the foot path/trails in the zoo (interlocked walkways). This must have aided easy movement within the zoo. Also, visitors were satisfied with the viewing platforms. Viewing platforms generally are meant to enable visibility of the animals, especially for children. Knezevic *et al.* (2016) in Zagreb zoo reported that convenience in observing animals was rated important. Couch (2013) noted that wildlife tourists expect enhanced sighting of animals under confined settings.

The zoo attributes they were least satisfied with were tour guidance, quality of foods and drinks, restaurants/food outlets, price of food and drinks, and variety of food and drinks were the least. Tour guidance in UI Zoo is at an added cost of ₦1000, which most visitors do not request for. Rather, they feel it should be incorporated as part of the entrance fee (₦500). Other attributes, though with associated less satisfaction, were still within the 'satisfied' likert scale item. Overall, visitors were mostly satisfied with all zoo attributes and services. This is also evident in their

willingness to pay subsequent visit to the zoo, as well as recommend it to others to visit, otherwise known as loyalty. This was also reported by Ajayi *et al.* (2017) in Ogba Zoo and Nature Park. This finding gives voice to the fact that visitor satisfaction is conducive to repeat visits, political and societal support (Baker and Crompton, 2000, Tonge *et al.*, 2011), visitor loyalty (Chen and Tsai, 2007), and word-of-mouth endorsements (Okello and Yerian, 2009), a powerful marketing tool to aid promotion and increase levels of visitation (Dharmaratne *et al.*, 2000; Sivalioğlu and Berkoz, 2012) for the destination. Also, Ryan *et al.* (1999) opined that satisfaction's impact is not limited to loyalty alone but also the repute of the destination. This is evident in the strongest pull motivation of UI Zoo being '*fame/reputation of the zoo*'.

In testing the influence of socio-economic characteristics of visitors with the overall level of satisfaction, significant associations with respect to sex, age, occupational status and monthly income was established while there was no significant association with respect to marital status, religion, education and nationality. In other words, visitors' satisfaction differs among male and female, young and old, types of occupation, and the various income groups. This finding is in line with Oroian (2013) which opined that gender has influence on visitors' satisfaction. Also, Valle *et al.* (2006) documented an influence of age on satisfaction. Adetola *et al.* (2016) identified a significant relationship between occupation and satisfaction in Idanre hills. The satisfaction of visitors was consistent irrespective of the marital status, religion, education and nationality. This was also reported by Valle *et al.* (2006) for marital status.

#### **5.1.7.2 Visitors' satisfaction with OAU Garden attributes and services**

Twenty three attributes were assessed. The item ‘conveniences’ was removed given that the garden does not have any. Just as reported for UI Zoo visitors, majority of the visitors in the Garden were largely satisfied with the various attributes. The rank order puts entry fees, cleanliness of the zoo, size of animal enclosures, security and safety, and peaceful and restful environment as the attributes visitors were mostly satisfied with. The entrance fee to the garden was ₦150 for adult and ₦100 for children. A fee considered by many to be affordable, especially with respect to the number of animals (thirteen species) in the captive holdings. Alarape *et al.* (2015) also documented satisfaction with entry fee in Makurdi Zoo. Cleanliness came second on the list. The zoo environments are cleaned on a daily basis and waste bins are situated in strategic places; while animal enclosures are cleaned at least three times weekly (personal observation). Visitors’ satisfaction with the size of enclosure of animals may be because of the larger size of the enclosures as well as their uniqueness, when compared with the other zoos. Visitors also considered their security and safety as a paramount factor, and are satisfied with that which is provided by the garden. This is consistent with the findings of John and Philemon (2015) and Knezevic *et al.* (2016) that security is a vital issue for consideration in the choice of destinations. Their satisfaction with the peaceful and restful environment (their fourth pull motivational factor being ‘*unique eco-environment of the garden*’) may be grounded in the utmost ambience and tranquility in the garden when compared even with the immediate campus environment.

The factors the visitors were least satisfied with were variety of animals, number of animals, landscape, displayed animal information on cage and viewing platform. The low level of satisfaction with the variety and number of the animals in the garden is expected as there were only thirteen species represented, and most animals were not paired. Landscaping is also not upheld in the garden. Also, the low level of satisfaction with the displayed animal information on cages can be because some cages have no animal data on them, and for those that had, the data in most cases were on old and decaying platforms, almost not legible. Some inscriptions were also in the Yoruba language and scary such as ‘*Kiniun le paniyan*’, which translates to ‘lions can kill

humans' close to the lions den (direct observation). Moreso, the viewing platforms at some enclosures were dilapidated, while some were too low to enhance visibility especially for children and short individuals. Visitors low satisfaction with this attributes further strengthens the notion of Couch (2013) and Knezevic *et al.* (2016) that wildlife tourists expects enhanced sighting of animals under confined settings.

Overall, visitors were mostly satisfied with all the garden attributes and services. This is also evident in their willingness to pay subsequent visit to the zoo, as well as recommend it to others to visit, otherwise known as loyalty. This was also reported by Ajayi *et al.* (2017) in Ogba Zoo and Nature Park. This affirms that visitor satisfaction is conducive to repeat visits, political and societal support (Baker and Crompton, 2000, Tonge *et al.*, 2011), visitor loyalty (Chen and Tsai, 2007), and word-of-mouth endorsements (Okello and Yerian, 2009), a powerful marketing tool to aid promotion and increase levels of visitation (Dharmaratne *et al.*, 2000; Sivalioğlu and Berkoz, 2012) for the destination. Also, Ryan *et al.* (1999) noted that satisfaction's impact is not limited to loyalty alone but also the repute of the destination. This is evident in the strongest pull motivation of OAU Garden being '*fame/reputation of the zoo*'.

A significant association between visitors overall satisfaction and all the socio-economic characteristics (sex, marital status, age, religion, education, occupational status, nationality and monthly income) was found. In other words, the overall satisfaction of the visitors was influenced by their various socio-economic characteristics. This was also reported in the research work of Adetola *et al.* (2016) in UI Zoo.

### **5.1.7.3 Visitors' satisfaction with FUNAAB Zoo attributes and services**

Twenty four attributes were assessed. Majority of the visitors in FUNAAB Zoo were largely satisfied with the various attributes of the zoo. The rank order puts peaceful and restful park

environment, entry fees, cleanliness of the zoo, price of food and drinks, and vegetation as the attributes visitors were mostly satisfied. This high level of satisfaction can be explained as follows. Just like visitors to UI Zoo and OAU Garden, visitors value peaceful and restful environments (their fifth pull factor being ‘*unique eco-environment of the park*’), and the park provides this. The entry fee (₦150 - Adult; ₦100 - Children) is also considered affordable. Alarape *et al.* (2015) also documented satisfaction with entry fee in Makurdi Zoo. With respect to cleanliness, the zoo environments are cleaned on a daily basis, and the animal enclosures at least thrice weekly. The price of food and drinks in the garden is similar to what obtains outside; there is no inflation of any kind. The vegetation in the zoo park is similar to that which obtains in a natural environment; the only disturbed areas were the enclosure areas, the track and trails as well as the administrative areas.

The attributes visitors were least satisfied with were restaurants/food outlets, variety of animals, staff friendliness/ receptivity, private places for animals to move away from visitors and the conveniences. Of note is that these attributes were within the satisfied class of the likert scale. Alarape *et al.* (2015) also documented that visitors complained of diversity of animal species in Makurdi Zoo. Overall, visitors were mostly satisfied with all the garden attributes and services. As obtained in UI Zoo and OAU Garden, their satisfaction is also evident in their willingness to pay subsequent visit to the zoo, as well as recommend it to others to visit, otherwise known as loyalty. This was also reported by Ajayi *et al.* (2017) in Ogba Zoo and Nature Park. This affirms that visitor satisfaction is conducive to repeat visits, political and societal support (Baker and Crompton, 2000, Tonge *et al.*, 2011), visitor loyalty (Chen and Tsai, 2007), and word-of-mouth endorsements (Okello and Yerian, 2009), a powerful marketing tool to aid promotion and increase levels of visitation (Dharmaratne *et al.*, 2000; Sivalioğlu and Berkoz, 2012) for the destination.



The overall satisfaction of the visitors was influenced by their socio-economic characteristics especially sex, age, religion, education, occupational status and monthly income. This means that visitors satisfaction differs among male and female, young and old, Christians, Muslims and traditionalists, highly educated and least educated, and amongst various occupational status and monthly income received. This finding is in line with Oroian (2013) which opined that gender has influence on visitors' satisfaction. Also, Adetola *et al.* (2016) identified a significant relationship between occupation and satisfaction in Idanre hills. There was no significant association with respect to marital status and nationality. In other words, visitors overall satisfaction is consistent irrespective of the marital status (single or married) and nationality (Nigerian and Non-Nigerian). This was also reported by Valle *et al.* (2006) for marital status.

#### **5.1.7.4 Visitors' satisfaction with FUTA Park attributes and services**

Eighteen attributes were assessed. Six were exempted as the park does not possess them. Majority of the visitors in FUTA Park were largely satisfied with the various attributes of the zoo. The rank order puts entry fees, displayed animal information on cage, cleanliness, landscape and footpaths/trails as the attributes visitors are mostly satisfied. The result of the direct observation of these attributes and in-depth interview with key staff and some visitors may explain this as follows. The entrance fee (₦150 - Adult; ₦100 - Children) is considered affordable by many. Alarape *et al.* (2015) also documented satisfaction with entry fee in Makurdi Zoo. Visitors' high level of satisfaction with the displayed animal information on cages is hardly unlikely as these were modern information graphics poster design (colourful, attractive and informative). Knezevic *et al.* (2016) reported that information-seeking was a determinant of overall satisfaction. With respect to cleanliness, the zoo environment is cleaned on a daily basis and the enclosures at least four times weekly. A partial landscaping was also done in the park. This is in line with Ballantyne *et al.* (2008) which noted that visitors report admiration of

gardens' scenery and surroundings as an important part of their satisfaction while on visits to zoos. The footpath/trails (mostly concreted path and maintained trails) must have enhanced easy movement within the park.

The attributes with less satisfaction were the car park, overall value for money, number of animals, variety of animals and security and safety. Overall, visitors were mostly satisfied with all the garden attributes and services. As obtained in UI Zoo, OAU Garden and FUNAAB Zoo, their satisfaction is also evident in their willingness to pay subsequent visit to the zoo, as well as recommend it to others to visit, otherwise known as loyalty. This was also reported by Ajayi *et al.* (2007) in Ogba Zoo and Nature Park. This affirms that visitor satisfaction is conducive to repeat visits, political and societal support (Baker and Crompton, 2000, Tonge *et al.*, 2011), visitor loyalty (Chen and Tsai, 2007), and word-of-mouth endorsements (Okello and Yerian, 2009), a powerful marketing tool to aid promotion and increase levels of visitation (Dharmaratne *et al.*, 2000; Sivalioğlu and Berkoz, 2012) for the destination.

Moreso, socio-economic characteristics influenced overall satisfaction with respect to sex, age, religion, education, occupational status and monthly income. This means that visitors satisfaction differs among male and female, young and old, Christians, Muslims and traditionalists, highly educated and least educated, and amongst various occupational status and monthly income received. This finding is in line with Oroian (2013) which opined that gender has influence on visitors' satisfaction. Also, Adetola *et al.* (2016) identified a significant relationship between occupation and satisfaction in Idanre hills. On the other hand, there was no significant association with respect to marital status and nationality. In other words, visitors overall satisfaction is consistent irrespective of the marital status (single or married) and nationality (Nigerian and Non-Nigerian). This is similar to the findings for the FUNAAB Zoo visitors.

#### **5.1.7.5 Combined findings on visitors' satisfaction with zoos attributes and services**

Visitors across the zoos were largely satisfied with the zoos attributes and services. They also demonstrated visitors' loyalty. This was also reported by Ajayi *et al.* (2017) in Ogba Zoo and Nature Park. The test of relationship revealed a significant association between visitors overall satisfaction and all the socio-economic characteristics (sex, marital status, age, religion, education, occupational status, nationality and monthly income). In other words, the overall satisfaction of the visitors was influenced by their various socio-economic characteristics. This is in line with Adetola *et al.* (2016) which reported a significant relationship between socio-economic characteristics of visitors to UI Zoo and their satisfaction.

#### **5.1.8 Other Issues of Concern**

##### **5.1.8.1 Animals which attract visitors to the study zoos**

Majority of visitors were attracted by the lions in UI Zoo. This was followed by those that came to see the primates (baboons, drill monkeys, chimpanzees, mona monkey, etc). In, OAU Garden, majority of visitors came to see all the animals and followed by those who were attracted by the lions and primates. In FUNAAB Zoo, most visitors were attracted to the park by all the animals and was followed by those who indicated primates. In FUTA Park, most visitors indicated primates and ostrich. The indication of lion in the two zoos that had it is consistent with the findings of Adefalu *et al.* (2014) and Alarape *et al.* (2015) which reported lion as the most preferred species in Makurdi Zoo and UI Zoo respectively. The lions alongside the other big Five are major attractions to South African Parks (SANParks, 2018). Across the zoos, visitors

indicated primates as animals of attractions. This is also consistent with Adefalu *et al.* (2014) in their study in UI and OAU Zoos which documented primates as key animals of attraction.

#### **5.1.8.2 Preferred zoo species that was not available**

Majority of visitors in UI Zoo indicated elephant as the most preferred species that was not available. This was followed by those who indicated tiger, zebra, gorilla, aquatic species, rhinoceros, leopard, and eagle. Also, majority of OAU Garden respondents indicated elephants and zebra. Others include gorilla, hippopotamus, rhinoceros, cheetah, tiger, giraffe, aquatic species, eagle and domestic animals. The bulk of the respondents in FUNAAB Zoo also indicated lion as the most preferred species. This was followed by those who indicated elephant, hippopotamus, giraffe, gorilla, cheetah, zebra and tiger. In the same vein, most respondents in FUTA Park indicated lion, elephant and snakes as the most preferred unavailable species. An interesting fact is that visitors to the first two zoos who had lions, indicated elephants as their most preferred unavailable animal; while visitors to the latter zoos who do not have lions, indicated this primarily and followed by elephants. This further strengthens the relevance of the Big Fives. It is also a pointer to visitors need

#### **5.1.8.3 Willingness to pay more if preferred species were provided**

Most visitors across the zoos were willing to pay more if preferred species were provided. The percentages which agreed were 56.2%, 80.2% and 90.9% in UI Zoo, FUNAAB Zoo and FUTA Park. In contrast, most visitors in OAU Garden (61.1%) were not willing to pay more if preferred species were provided while only 38.4% were. The amount they were willing to pay was between ₦500 -~~₦~~1500.

#### **5.1.8.4 Improvement visitors want to see on subsequent visits**

The bulk of visitors across the zoos would like to see more animals on subsequent visits. Others include tour guidance, aesthetic improvements, improved reception/hospitality, wider parking space, improved cleanliness, improved animal welfare, better animal enclosures, better recreational facilities, horse rides, provision of mate for lone animals, use of animal space outside the cage, etc. The specific cases were the provision of better signages, conveniences, visitors centre, administrative buildings and restaurants/food outlets in OAU Garden; and FUTA Park; incorporation of tour guidance fee as part of entry fee in UI Zoo; horse ride services in FUNAAB Zoo. The various suggestions ranging from improvement of animal stock to improved animal welfare and provision of better facilities gives voice to the fact that the visitors have truly participated in the zoo activities as well have a deep sense of appreciation, sensitivity and loyalty. This was also documented of visitors in Ogba Zoo and Nature Park by Ajayi *et al.* (2017).

## **5.2 CONCLUSION**

A total of seventy one species of animals (329 individuals) belonging to 40 families, 21 orders, and 3 classes (Aves, Reptiles and Mammals), were presented and displayed in the four zoological gardens. The species numbers in individual zoo were 64, 26, 13 and 13 in UI Zoo, FUNAAB Zoo, OAU Garden and FUTA Park respectively. Across the zoos, the most represented species were birds and primates. Only one (*Panthera leo*) of the popular Big Five is represented in two of the zoos (UI Zoo and OAU Garden), and was the preferred zoo animal by visitors. Majority of the animals in the zoos belong to the Least Concern conservation status of IUCN. Animals' enclosure sizes were with respect to the type and requirements of the species; smaller for the birds and larger for the herbivores and carnivores. There was at least one form of

cage enrichment for all the animals. The zoo animals were largely fed with consideration to what obtains in their natural habitat and supplemented where necessary.

The socio-economic assessment revealed an almost equivalent sex percentage across the zoological gardens. Also, visitors were mostly single, young and mid adults within the age range of 18 -37 years, Christians, educated and earned less than ₦50000 monthly. Domestic tourism was the order of the day in the zoos as the bulk of visitors was Nigerians. The visitors were largely from the local catchment areas of the zoos (local travellers). The travel characteristics of visitors varied across the zoos; visitors to UI Zoo were mostly repeat visitors while first time visitors had high representation in the other zoos. The predominant media of awareness to the zoos were through family and friends and from school. The zoos visitors largely came in groups such as family/friends (children inclusive), school excursion, spouse/partner, study/research group and tour group. Most excursionists travelled in hired vehicles and families came in private cars.

Visitors across the zoos displayed anthropocentric beliefs and human dominance over the rest of nature and anti-ecological views. Most visitors do not see increase in human population, abuse of the environment, and adaptation for survival as issues of concern since man can create their own world as it suits them. The environmental attitudes can be said to be a cultural or social capital rather than as a genuine concern for nature. Moreso, the measure of the antecedents of environmental attitude revealed that visitors across the zoos had mid – ecological perspective. The foremost image of visitors about a zoo is that of close wildlife experience, recreation and entertainment, education and income generation. The image visitors have of zoos was found to influence their motivation.

Visitors to the zoos decided to travel to fulfill their intrinsic desires, and at the same time, their decisions on where to go are based on destination attributes. The foremost pull factors were for experience and appreciation of nature, recreation, learning/education, entertainment and exploration. The principal destination attributes that pull visitors across the zoos were fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety. Also, visitors' motivations across the zoos differ significantly. Socio-economic characteristics played significant roles in influencing visitors' motivation.

Visitors' showed an indifferent attitude to place identity, place dependence and place affect. They demonstrated a mild disagreement with the place social bonding while a high level of place satisfaction and loyalty was displayed. In other words, visitors were satisfied with the experience the zoos provide, as they generally see the zoos as pleasant places which impressed them and also had a deep feeling of accomplishment with respect to their choice of the zoos. They were however indifferent to the physical characteristics and have alternatives for the activities and experience offered. Place attachment of visitors however varied significantly across the study zoos.

Visitors' environmental attitude did not significantly influence their motivation; and no significant relationship exists between visitors' motivation and place attachment to the zoos. When motivation was removed as the mediating factor, there was still no significant relationship exist between visitors' environmental attitude and place attachment to the zoos. The assessment of visitors overall satisfaction with the various zoos attributes and services revealed a high extent of satisfaction. This was also evident in their willingness to pay subsequent visit to the zoo, as well as recommend it to others to visit (informal brand ambassadors), otherwise known as

visitors' loyalty. Also, overall satisfaction of the visitors was influenced by their various socio-economic characteristics.

Visitors were largely attracted to UI Zoo and OAU Garden by the lions. The primates were key species of animals' in the other zoos FUNAAB Zoo and FUTA Park who had no lions. The preferred unavailable animal species by visitors in the first two zoos, who had lions, was elephants; while visitors to the latter zoos who do not have lions, indicated this primarily and followed by elephants. Majority were also willing to pay more (₦500 -1500) if preferred species were provided. The improvement visitors want to see on subsequent visit ranged from improvement of animal stock to improved animal welfare and provision of better zoo facilities.

### **5.3 RECOMMENDATIONS**

1. The enclosures of animals should be re-constructed where necessary to meet the minimum enclosure standards of animals in captivity. UI Zoo should consider the option of relocating to a larger expanse of land while the other zoos (FUNAAB Zoo, OAU Garden, FUTA Park) should expand the zoo areas to the unused areas to cater appropriately for the enclosure needs of the animals.
2. Animals should be kept in appropriate social groups to facilitate breeding and improved animal welfare.
3. The zoo animals should be fed foods similar to what is obtained in their natural environment and supplementation with cooked food should be absolutely avoided so as to retain their natural inclinations.
4. Given the fact that most visitors demonstrated anthropocentric beliefs above ecocentrism with respect to their environmental attitudes is a pointer to the fact that zoo visitors and



by extension the Nigerian populace still largely believe that environmental resources are inexhaustible, and management is hardly needed. It is recommended that active environmental awareness campaigns be carried out through various avenues – social media, print media, mass media, word of mouth, etc – by environmentalists and other concerned stakeholders.

5. The management of the zoos should employ the various improvements suggested by visitors in better creating an environment that continuously stimulate their drive to visit the zoos and enhance place attachment. A major clamour by visitors across all the zoos was the introduction of more animals to the zoo.
6. Facilities upgrade or an overhaul and the provision of conveniences, restaurants/food outlets, visitor centres and administrative buildings in OAU Garden and FUTA Park should be urgently attended to.
7. The need of promotional materials across the zoos is very important. The only zoo with a functional website is UI Zoo. The assessment of visitors most preferred marketing strategy revealed that most visitors indicated Radio and Television as the foremost and followed by social media handles of Facebook, Twitter and Instagram and travel websites/blogs. It is therefore recommended that the management of the zoos will employ these measures in reaching out to both their potential and existing customer market.

### **CONTRIBUTION TO KNOWLEDGE**

The specific natures of the contribution to knowledge were;

1. Visitors across the zoological gardens portrayed anthropocentric beliefs and human dominance over the rest of nature above ecocentrism.

2. Visitors' image of zoos was that of a place that provides close wildlife experience, recreation and entertainment and education to the public.
3. Visitors were motivated to travel for an experience and appreciation of nature', recreation and entertainment, education, and exploration. They were attracted to the zoos because of fame/reputation of the zoo, time and distance of travel, availability and adequateness of transit system, affordability and personal safety.
4. Visitors displayed an indifferent attitude to place attachment in UI Zoo, FUNAAB Zoo and FUTA Park, that is, they were neither attached nor detached to the zoos. In OAU Garden, visitors were not attached to the zoo. Across the zoos, visitors were largely satisfied with zoos attributes and services.
5. Across the zoos, visitors' motivation was not influenced by their environmental attitudes, and hitherto did not lead to place attachment.
6. A total of 71 species of animals (329 individuals) belonging to 40 families, 21 orders, and 3 classes were displayed in the four zoological gardens

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## APPENDICES

### Visitors Questionnaire

#### SECTION 1: DEMOGRAPHIC CHARACTERISTICS

1. Sex: Male [ ] Female [ ]
2. Marital status: Single [ ] Married [ ] Divorced [ ] Widowed [ ]
3. Age: .....years
4. Religion: Christianity [ ] Islam [ ] Traditional [ ] Others .....

- 5. Highest level of Education: None [ ] Primary [ ] Secondary [ ] Technical [ ] Diploma/Degree [ ] Post Graduate [ ] Professional [ ]
- 6. Occupation: Student [ ] Employed [ ] Self Employed [ ] Unemployed [ ] Retired [ ]
- 7. Nationality: .....
- 8. Monthly income: below #50,000 [ ] #50,000 - #99,999 [ ] #100,000 - #149,999 [ ] #150,000 - #199,999 [ ] #200,000 - #249,999 [ ] #250,000 - #299,999 [ ] above #300,000 [ ]

**SECTION 2: TRAVEL DETAILS**

- 9. How many times have you visited the zoo? Once [ ] Twice [ ] Thrice and above [ ]
- 10. Nature of visit? Local [ ] Intra-state [ ] Interstate [ ] International [ ]
- 11. How long do you intend staying? Less than 3 hours [ ] 3 hours and above [ ]
- 12. How did you get to know of the zoo? Brochure [ ] People (family and friends) [ ] Radio/Television [ ] Internet [ ] Newspaper/Magazine [ ] Others .....
- 13. Preferred Marketing Strategies: Television/Radio [ ] Travel websites /blogs [ ] E-mail [ ] Facebook/Twitter/Instagram [ ] Newspaper/Magazine [ ] Billboards [ ] Others .....
- 14. Travel company: Alone [ ] Spouse/Partner [ ] family/Friends [ ] Tour group [ ] Company retreat [ ] Study/Research group [ ] School Excursion [ ] Others .....
- 15. Means of transport: Private vehicle [ ] Hired Vehicle [ ] Public Car/Bike [ ] Others.....

**Section 3a: Environmental attitude**

*Tick as appropriate. (SA – Strongly Agree A- Agree U- Undecided D- disagree SD – Strongly Disagree)*

<b>Factors</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
<b>Human over nature</b>					
Humans have the right to modify the natural environment to suit their needs.					
Mankind was created to rule over the rest of nature.					
Plants and animals exist primarily to be used by humans					
Humans must live in harmony with nature in order to survive					
<b>Limits of growth</b>					
The balance of nature is very delicate and easily upset.					
To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled.					
The earth is like a spaceship with only limited room and resources					
There are limits to growth beyond which our industrialized society cannot expand					
<b>Ecocrisis</b>					
When humans interfere with nature it often produces disastrous consequences.					
Humans need not adapt to the natural environment because they can remake it to suit their needs.					

Mankind is severely abusing the environment.					
We are approaching the limit of the number of people the earth can support					

### Section 3b: Influential factors of environmental attitude

Tick as appropriate. (SA – Strongly Agree A- Agree U- Undecided D- disagree SD – Strongly Disagree)

<i>Factors</i>	<i>SA</i>	<i>A</i>	<i>U</i>	<i>D</i>	<i>SD</i>
<b><i>Deontological status (DES)</i></b>					
I am interested in conserving natural resources					
I reduce unnecessary waste					
I try to create and provide a better living environment for future generations					
I am concerned about the environment for my future personal convenience					
<b><i>Law obedience (LOB)</i></b>					
I try to avoid committing bribes in my transactions					
I show respect to the laws and especially those for the environment					
I abide by the safety law for the protection of the environment					
I try to avoid companies that use misleading environmental practices					
<b><i>Political action</i></b>					
I often intervene with the media in order to combat environmental degradation					
I support environmental pressure groups in order to combat environmental degradation					
I lobby political representatives to support green issues					
I boycott companies that are not environmentally responsible					

### Section 4: Motivational Factors

#### (a) Zoo Image

<i>Factors</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>
A place to see rare animals			
Offer opportunity to interact with animals			
Provides a fun day out for the public			
Venue for social functions e.g. birthday/ wedding party, conference			
People see wild animals without destroying their natural habitat			
Zoos are important places for conserving wildlife			
Educate the public about conservation issues			
Organise animal conservation campaigns			
Breed animals actively			
Reintroduce animals into the wild			
Support scientific research			

Treat sick and injured animals			
Source of generating income			
Training ground for keepers/staff/conservationists			

**(b) Push motivational factors**

*Tick as appropriate. (SA – Strongly Agree A- Agree U- Undecided D- disagree SD – Strongly Disagree)*

<b>Push factors</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
To experience and appreciate nature (animals and plants)					
To spend time with my family /friends					
To be part of recreational activities					
To break away from routine of everyday life, pressure , surrounding					
To meet and mix new people with the same interests as mine					
To relax					
To enjoy good weather					
To challenge my abilities					
To gain a feeling of belonging					
To increase my knowledge					
Being entertained and having fun					
Rediscovering myself					
Rediscovering past good times					
To increase my social status					
Going places I have not been					
To visit a place my friends/family have not been to					
To visit a destination that would impress my friends and family					

**(c) Pull motivational factors**

*Tick as appropriate. (SA – Strongly Agree A- Agree U- Undecided D- disagree SD – Strongly Disagree)*

<b>Pull factors</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Diversity of animal species in the zoo					
Preferred animal species					
Unique eco-environment of the zoo					
Unique souvenirs					
Personal safety					
Quality of the zoos marketing strategies					
Value for money					
Hospitality/friendliness/receptiveness					
Tidiness/cleanliness of the place					



Fame/reputation of the zoo					
The zoo is family oriented					
Affordability					
Past experience					
Time and distance of travel					
Availability and adequateness of transit system					
Availability of visitor guidance/ reception centres					
Recommendation by family/friends					
Environmental management initiative e.g. Eco labels					

### Section 5: Place attachment

Tick as appropriate. (SA – Strongly Agree A- Agree U- Undecided D- disagree SD – Strongly Disagree)

Factors	SA	A	U	D	SD
<b>Place identity</b>					
I feel this zoo is part of me					
I identify strongly with this zoo					
I have a strong sense of belonging to this zoo					
Visiting this zoo says a lot about who I am					
<b>Place dependence</b>					
For what I like to do, I could not imagine anything better than the settings and facilities provided by this zoo					
For the activities I enjoy the most, the settings and facilities provided by this zoo are the best					
I enjoy visiting this zoo more than any other zoo / nature attractions					
No other place can substitute for the attractions of this zoo					
<b>Place Affect</b>					
I am very attached to this zoo					
I feel a strong sense of belonging to this zoo and its settings/facilities					
This zoo means a lot to me					
I have a special connection to the people who visit here.					
<b>Place Social Bonding</b>					
Many of my friends/family prefer this zoo over many other natural attractions					
If I were to stop visiting this zoo, I would lose contact with a number of friends					
<b>Factors</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
My friends/family would be disappointed if I were to start visiting other settings and facilities					
I prefer to visit this attraction with people who are important to me					
<b>Place Satisfaction and loyalty</b>					
This zoo is a pleasant place.					
I believe I did the right thing when I chose to visit this zoo					
The overall sight and impression of the zoo inspired me					
I will recommend this zoo to others					

I will visit this zoo again					
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**Section 6: Visitors satisfaction with individual zoo attributes**

*Tick as appropriate: VS – Very Satisfied S- Satisfied N- Neutral D- Dissatisfied VD- Very Dissatisfied*

<b>Attributes</b>	<b>VS</b>	<b>S</b>	<b>N</b>	<b>D</b>	<b>VD</b>
Entry fee					
Number of animals					
Variety of animals					
Size of animal enclosure					
Displayed animal information on cage					
Viewing platform					
Private places for the animals to move away form visitors					
Vegetation					
Landscape					
Footpaths/Trails					
Variety of wild animals					
Staff friendliness/receptivity					
Restaurants / Food outlets					
Quality of food and drinks					
Variety of food and drinks					
Price of food and snacks					
Tour guidance					
Peaceful and restful atmosphere					
Security and safety					
Cleanliness					
Accessibility					
Toilet					
Car Park					
Overall value for money					
Others					
<b><i>Taking everything into account, how satisfied are you?</i></b>					

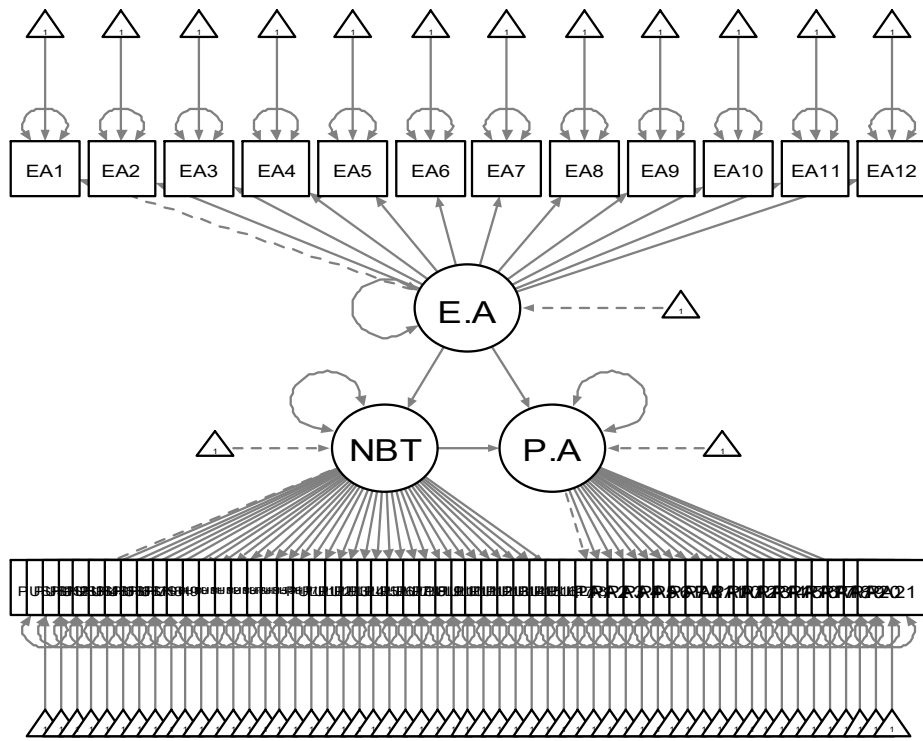
***Issues of concern***

1. What animal or class of animals attract you to the zoo?
2. What are your preferred animal(s) that was not available?
3. In order of importance, list your preferred zoo animal species
4. Are you ready to pay more if preferred animal species are provided? Yes [ ] No [ ]
5. If yes, how much .....
6. What improvements do you want to see on subsequent visits?

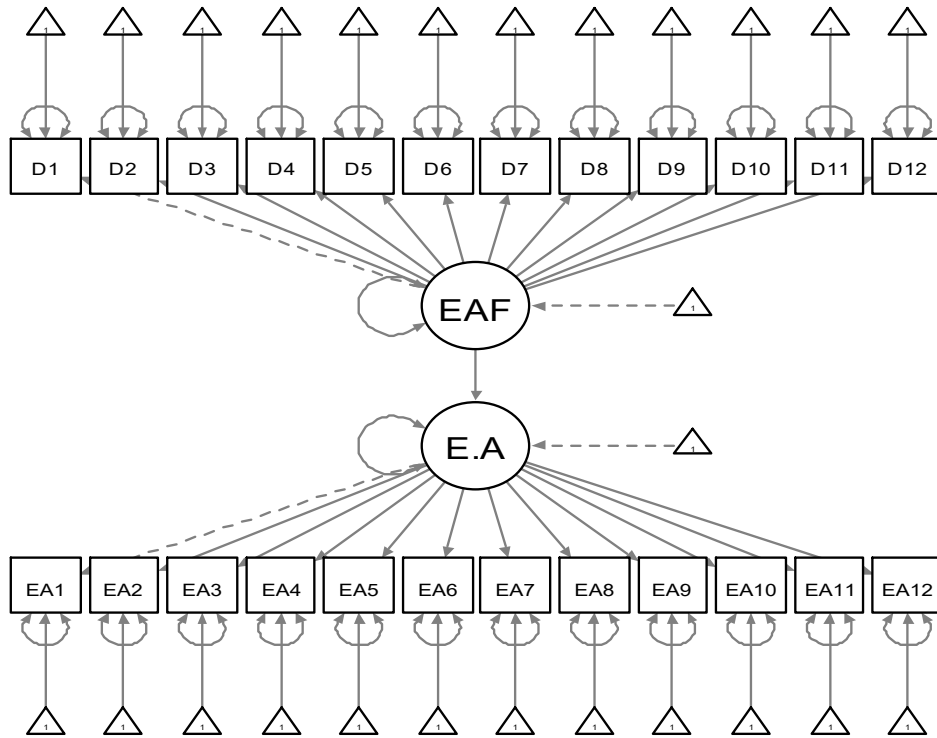
#### **IN - DEPTH INTERVIEW QUESTIONS WITH KEY STAFF**

1. How long have you worked here?
2. When was this zoo established?
3. What is the staff strength of the zoo?
4. How many animals did the zoo start with at inception?
5. What were the sources of these animals?
6. How many animals do the zoo has now?
7. Is the zoo planning on getting more animals?
8. Has there been any death of animals? Give details.
9. What carcass preservation method is employed if any?
10. What are the sources of finance for the zoo?
11. Has any animal been successfully bred in captivity?
12. Has the zoo re-introduced/introduced any animal back to the wild?
13. Does the zoo donate to other zoos? Give details.
14. Are zoo staffs subject to training and re-training programmes?
15. Has any animal escaped from the zoo before?
16. What safety measures are put in place to prevent animal-visitor attacks?
17. Kindly, provide data on visitors' influx.
18. When is the peak season (s) for visitors' activities in the zoo?
19. How does the zoo take care of sick/injured animals?
20. Does the zoo have an open/close season?
21. Was the welfare of the animals considered in the design and or modification of enclosures?
22. What is the source of the food/feed of the animals?

23. Does the zoo put into consideration the feeding ecology of the animals with respect to the food/feed they are fed with?
24. How does the zoo dispose waste generated from the zoo?
25. Is the zoo part of any environmental management initiative?
26. How does the zoo manage the negative impacts of tourism?
27. What are the underlying factors responsible for these actions?
28. Is there a visitor carrying capacity number?
29. Does the zoo has a management plan and or operational plan?
30. To what extent has the original plan of the zoo being actualised?
31. Future plan of the zoo
32. How popular is the tourism of this zoo?
33. Where is the demand for the zoo-tourism coming from?
34. How did you respond to this demand?
35. What are visitors' views of the tourism of this zoo?
36. What are the visitors' demands and expectations regarding the zoo attractions?
37. How do you respond to these demands?
38. What promotional material is used to attract tourists to the zoo?
39. What are the concerns of the university community in regards to the zoo attractions and how do you respond to them?
40. What are the latest tourism plans for the zoo?



SEM Path Analysis for Hypotheses 6, 7 and 8



SEM Path Analysis for Hypothesis 1

Crosstab of Visitors Sex and some push motivational factors to federal institutional-based zoos  
in South-West, Nigeria

Sex	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	Total
TO BE PART OF RECREATIONAL ACTIVITIES						
MALE	468	263	65	1	3	800
FEMALE	456	194	49	12	18	729
Total	924	457	114	13	21	1529
GOING PLACES I HAVE NOT BEEN						
MALE	404	206	93	29	68	800
FEMALE	443	123	70	31	62	729
Total	847	329	163	60	130	1529
TO INCREASE MY KNOWLEDGE						
MALE	394	304	59	36	7	800
FEMALE	444	176	51	48	10	729
Total	838	480	110	84	17	1529

Crosstab of Visitors Age and some push motivational factors to federal institutional-based zoos  
in South-West, Nigeria

Age	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	Total
TO EXPERIENCE AND APPRECIATE NATURE (ANIMALS AND PLANTS)						
18 - 27 YEARS	909	224	28	18	3	1182
28 - 37 YEARS	193	52	0	7	0	252
38 - 47 YEARS	42	21	4	0	0	67
48 - 57 YEARS	17	5	0	0	0	22
ABOVE 58 YEARS	4	0	0	2	0	6
Total	1165	302	32	27	3	1529
TO INCREASE MY KNOWLEDGE						
18 - 27 YEARS	636	362	102	70	12	1182
28 - 37 YEARS	151	88	7	1	5	252
38 - 47 YEARS	36	18	0	13	0	67
48 - 57 YEARS	14	7	1	0	0	22
ABOVE 58 YEARS	1	5	0	0	0	6
Total	838	480	110	84	17	1529
GOING PLACES I HAVE NOT BEEN						
18 - 27 YEARS	661	261	135	50	75	1182
28 - 37 YEARS	146	40	15	5	46	252
38 - 47 YEARS	30	20	10	4	3	67
48 - 57 YEARS	9	7	2	0	4	22
ABOVE 58 YEARS	1	1	1	1	2	6
Total	847	329	163	60	130	1529



Crosstab of Visitors Monthly income and some pull factor - affordability

		AFFORDABILITY					Total
		STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	
MONTHLY INCOME	BELOW #50000	274	604	99	97	77	1151
	#50000-#99999	53	106	23	4	44	230
	#100000-#149999	16	30	0	9	12	67
	#150000-#199999	3	22	0	10	10	45
	#200000-#249999	2	9	1	2	0	14
	#250000-#299999	2	2	0	0	0	4
	ABOVE #300000	7	9	0	0	2	18
Total		357	782	123	122	145	1529

ANOVA result of Number of visit \* Place attachment in UI Zoo

		Sum of	df	Mean	F	Sig.
		Squares		Square		
Place identity	Between Groups	39.887	2	19.944	18.038	0.000*
	Within Groups	433.408	392	1.106		
	Total	473.295	394			
Place dependence	Between Groups	31.495	2	15.748	17.948	0.000*
	Within Groups	343.952	392	0.877		
	Total	375.447	394			
Place affect	Between Groups	32.201	2	16.101	16.234	0.000*
	Within Groups	388.770	392	0.992		
	Total	420.971	394			
Place social bonding	Between Groups	12.308	2	6.154	9.954	0.000*
	Within Groups	242.354	392	0.618		
	Total	254.662	394			
Place satisfaction and loyalty	Between Groups	2.549	2	1.274	2.439	0.089
	Within Groups	204.870	392	0.523		
	Total	207.419	394			

\*=statistically significant at  $p < 0.05$

ANOVA result of Number of visit \* Place attachment in OAU Garden

		Sum of	df	Mean	F	Sig.
		Squares		Square		
Place identity	Between Groups	241.050	2	120.525	319.636	0.000*
	Within Groups	143.286	380	0.377		
	Total	384.336	382			
Place dependence	Between Groups	109.453	2	54.726	149.640	0.000*
	Within Groups	138.974	380	0.366		
	Total	248.426	382			
Place affect	Between Groups	115.133	2	57.567	234.240	0.000*
	Within Groups	93.388	380	0.246		
	Total	208.522	382			
Place social bonding	Between Groups	26.230	2	13.115	55.230	0.000*
	Within Groups	90.234	380	0.237		
	Total	116.463	382			
Place satisfaction and loyalty	Between Groups	1.194	2	0.597	1.010	0.365
	Within Groups	224.581	380	0.591		
	Total	225.775	382			

\*=statistically significant at  $p < 0.05$

ANOVA result of Number of visit \* Place attachment in FUNAAB Zoo

		Sum of Squares	df	Mean Square	F	Sig.
Place identity	Between Groups	20.860	2	10.430	6.191	0.002*
	Within Groups	633.453	376	1.685		
	Total	654.313	378			
Place dependence	Between Groups	7.795	2	3.897	2.708	0.068
	Within Groups	541.154	376	1.439		
	Total	548.948	378			
Place affect	Between Groups	48.376	2	24.188	21.092	0.000*
	Within Groups	431.191	376	1.147		
	Total	479.567	378			
Place social bonding	Between Groups	12.086	2	6.043	8.322	0.000*
	Within Groups	273.055	376	.726		
	Total	285.141	378			
Place satisfaction and loyalty	Between Groups	23.774	2	11.887	37.517	0.000*
	Within Groups	119.133	376	.317		
	Total	142.907	378			

\*=statistically significant at  $p < 0.05$

ANOVA result of Number of visit \* Place attachment in FUTA Park

		Sum of	df	Mean	F	Sig.
		Squares		Square		
Place identity	Between Groups	57.519	2	28.760	24.441	0.000*
	Within Groups	434.196	369	1.177		
	Total	491.716	371			
Place dependence	Between Groups	35.770	2	17.885	15.691	0.000*
	Within Groups	420.600	369	1.140		
	Total	456.370	371			
Place affect	Between Groups	82.340	2	41.170	44.314	0.000*
	Within Groups	342.823	369	0.929		
	Total	425.163	371			
Place social bonding	Between Groups	17.184	2	8.592	23.905	0.000*
	Within Groups	132.627	369	0.359		
	Total	149.811	371			
Place satisfaction and loyalty	Between Groups	12.242	2	6.121	15.926	0.000*
	Within Groups	141.821	369	0.384		
	Total	154.063	371			

\*=statistically significant at  $p < 0.05$

ANOVA result of Number of visit \* Place attachment across the zoos

		Sum of Squares	df	Mean Square	F	Sig.
Place identity	Between Groups	468.662	2	234.331	153.722	0.000*
	Within Groups	2326.203	1526	1.524		
	Total	2794.865	1528			
Place dependence	Between Groups	335.814	2	167.907	113.549	0.000*
	Within Groups	2256.529	1526	1.479		
	Total	2592.343	1528			
Place affect	Between Groups	436.706	2	218.353	177.858	0.000*
	Within Groups	1873.448	1526	1.228		
	Total	2310.154	1528			
Place social bonding	Between Groups	114.783	2	57.391	67.977	0.000*
	Within Groups	1288.362	1526	0.844		
	Total	1403.145	1528			
Place satisfaction and loyalty	Between Groups	30.261	2	15.131	30.500	0.000*
	Within Groups	757.018	1526	0.496		
	Total	787.279	1528			

\*=statistically significant at  $p < 0.05$



Primary school students on excursion to FUTA Park



Corp members on tour to OAU Garden