

**FACTORS AFFECTING JOB SATISFACTION OF RANGERS IN YANKARI GAME RESERVE, BAUCHI, NIGERIA**

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**ABSTRACT**

*The study was conducted to identify the various factors affecting the job satisfaction level of rangers in Yankari Game Reserve, Bauchi, Nigeria. Data were collected using structured questionnaire comprising four facets: personal characteristics of the rangers, job satisfaction, motivation, and work environment. Data were analysed by using descriptive statistics such as frequencies and percentages and inferential statistics such as Chi-Square and Pearson's Product Moment Correlation (PPMC). The result showed that 77.5% of the rangers fell within the age range of 40 and below, 93.8% were male, and 86.2% were married. The study further revealed that 87.5% of the rangers were very dissatisfied with their job. In addition, 92.5% of them agreed that they were poorly motivated and they were not satisfied with the various facets of work environment. Chi-Square test results indicated that there were no significant relationships between the gender, marital status, religion and education of the rangers and their job satisfaction ( $P > 0.05$ ). However, PPMC results showed that there were significant relationships between their age, number of wife(ves), family size, monthly income and work experience and their job satisfaction ( $P < 0.05$ ). The study concluded that apart from personal characteristics, work motivation and work environment play significant roles in job satisfaction of rangers.*

**Key words:** job satisfaction, rangers, Yankari Game Reserve, Nigeria

**INTRODUCTION**

Management of people at work is an integral part of the management process. To understand the critical importance of people in the organization is to recognize that the human element and the organization are synonymous (Tella *et al.*, 2007). A well-managed organization usually sees an average worker as the root source of quality and productivity gains. Such organization does not look at capital investments but to employees, as the fundamental source of improvement. An effective organization according to Tella *et al* (2007) is effective to the degree to which it achieves its goals.

Rangers constitute an important segment of National Parks and Game Reserves conservation efforts. One of the current and most important threats to the existence and development of protected areas is illegal hunting of game animal or poaching. It follows then that the greatest challenge facing protected areas management would be to severely curtail, if not eliminate, the activities of poachers. This invariably places a heavy

responsibility on the protection and law enforcement (Kanji Lake National Park, 1989). The onus of responsibility of protection and law enforcement of the protected areas rests on the park rangers.

A ranger is a person charged with protecting and preserving parkland, forest (then called a forest ranger), game reserves, wilderness areas and other natural resources (Wikipedia, 2007). Rangers perform a number of important functions in the protection of wild lands. In isolated areas many miles from inhabited regions, rangers may be the only official presence if not the only person around. Apart from security and law enforcement functions of rangers, they also provide information and public education. The rangers also encourage citizen involvement in keeping the protected areas safe (Wikipedia, 2007). In terms of security, rangers check to see that gates are locked, that close roads are not in use, that unauthorized persons keep out of closed or sensitive areas, and that authorized visitors follow protected areas regulation. Many of these regulations seek to protect sensitive areas from ecological damage while at the same time protecting the visiting public from possible hazards of the natural environment (Wikipedia, 2007).

Park rangers provide practical information such as driving direction, train timetable, weather forecasts, and trip planning resources. Other rangers provide more educational type of information to visitors. These include (but are not limited to) guided tour about the park's history or ecology, slide shows and historical re-enactments (Wikipedia, 2007). Rangers are expected to be experts in not only the geography of the areas they patrol, but also the animal and plant life, natural and cultural resources. The duties of park rangers also extend to conservation and research efforts not connected to visitor use (Park Ranger, Info, 2007). They may study wildlife behaviour, plants, water quality pollution and visitors' use of parkland. In addition, rangers may be involved with such projects as park planning, record keeping, facility construction and maintenance, trail building and landscaping.

In view of the functions being performed by rangers; and for them to carry out these responsibilities effectively and efficiently, it is highly imperative for them to be satisfied with their job. Ewen (1967) and Wiess *et al.* (1967) defined job satisfaction as an individual's attitude toward his or her job. A relationship between job satisfaction and job performance has been documented (White, 2008). Actually, in human relations theory, job satisfaction functions as a variable mediating between social relations (with supervisor, co-workers, management) on the one hand, performance and productivity on the other hand. This can be called the "satisfaction-causes-performance" hypothesis: that job performance depends on the worker's being satisfied; and conversely, that job performance will suffer if the worker is dissatisfied (Dawis, 2004). This study is aimed at identifying the various factors affecting the job satisfaction level of rangers with a view of making recommendations to enhance their satisfaction level in order to improve their performances in the protection of fauna and flora resources as well as the archaeological and historical values of the Game Reserve.

## **METHODOLOGY**

### **The Study Area**

This study was carried out at Yankari Game Reserve, Bauchi, Bauchi State, Nigeria. Yankari Game Reserve started as a game reserve in 1956. It was upgraded to the status of a National Park in 1991 and in 2006 after its management was taken over by Bauchi State Government, it returned to the status of Game Reserve. Most of the park lies in

rolling hilly country point on the Gaji River at its exit from the park to sloping gently towards the centre and South. The only watershed in the park is that of the Gaji River and its tributaries, principally the Yashi and the Yuli. The park experiences an average annual rainfall of between 900mm and 1000mm falling from May through September. Temperatures are moderate between 18<sup>0</sup>C and 35<sup>0</sup>C. The dry season begins in early October. The Harmattan period lasts from November through February during which night temperatures can be as low as 12<sup>0</sup>C. The hottest period is March and April, and daytime temperatures average between 30<sup>0</sup>C and 42<sup>0</sup>C.

The vegetation of Yankari Game Reserve is predominantly Sudan savanna (Keay, 1959), and variants of this vegetation type can be found. These include *Azelia* woodland, *Combretaceous* tree and shrub savanna, *Detarium* savanna woodland, evergreen swamp and riparian forest. The riparian forest occurs in the flood plains of the Gaji and Yashi rivers and displays a mixture of high forest species, transitional woodland species with Guinea savanna trees, and climbers. The average height of the trees ranges between 20 and 30 metres. Common species include *Ziziphus mucronata*, *Khaya senegalensis*, *Vitex doniana*, *Anogeissus leocarpus*, *Hollarrhena floribunda*, *Daniellia oliveri*, *Burkea africana*, *Diospyros mespiliformis*; *Lannea acida*, *Tamarindus indica*, *Terminalia avicenniodes*, *Borassus aethiopum*, *Adansonia digitata*, *Acacia tangles*, *Ceiba pentandra* and *Kigelia africana*. A number of conspicuous climbers (e.g. *Ladophia ivoriensis*, *Cissus* species and woody climbers) also occur in the forest. In the *Azelia* savanna vegetation type, the vegetation has an open canopy; trees form the upper canopy, which is about 15m high, whilst shrubs and grasses form the lower stratum. Besides *Azelia africana*, common species include *Combretum molle*, *Burkea africana*, *Terminalia* species, *Detarium microcarpum*, *Gardenia aqualla* and *Prosopis africana*. In some areas of the park, *Combretum* species dominate the woodland with a few associated species of these same species, including *Crossopteryx febrifuga*. Towards the North and South-east of the park, *Detarium* savanna woodlands dominate. This is a tree/shrubs open savanna, and the common species include *Detarium microcarpum*, *Ximenia americana*, *Combretum* species and *Crossopteryx febrifuga*. Swamp forests are in areas that are seasonally flooded. Common species found in this type of forest include *Raphia spp*, *Uapaca Heudeloti*, *Pandanus diorsiflora*, *Alchornea cordifolia*, *Garcinia oralifolia* and *Oxyanthus tubiflorius*.

Yankari Game Reserve has a rich variety and number of wild animals including more than 50 species of mammals. These include anubis baboon (*Papio anubis*), patas monkey (*Erythrocebus patas*), tantalus monkey (*Cercopithecus aethiops*), warthog (*Phacochoerus aethiopicus*), hippopotamus (*Hippopotamus amphibius*), lion (*Panthera leo*), leopard (*Panthera pardus*), caracal (*Lynx caracal*), spotted hyena (*Crocuta crocuta*), striped hyena (*Hyaena hyaena*), serval (*Leptailurus serval*), genet (*Genetta tigrina*), side striped jackal (*Canis adustus*), elephant (*Loxodonta africana*), buffalo (*Syncerus caffer*), roan (*Hippotragus equinus*), bubal hartebeest (*Alcelaphus buselaphus buselaphus*), water buck (*Kobus defassa*), Grimm's duiker (*Sylvicapra grimmia*), oribi (*Ourebia ourebia*) and red flanked duiker (*Cephalophus rufilatus*). Seven species of large mammals have become locally extinct since the area was first created as a game reserve. These are the African hunting dog (*Lycaon pictus*), cheetah (*Acinonyx jubatus*), giraffe (*Giraffa camelopardalis*), western kob (*Kobus kob*), korrigum (*Damaliscus lunatus*), red fronted gazelle (*Gazella rufifrons*) and Bohor reedbuck (*Redunca redunca*). There have been little studies of fishes, amphibians, reptiles and insects. Nevertheless, 26 species of fish,

seven (7) species of amphibians, and 17 species of reptiles have so far been identified. The African rock python (*Python sebae*), Nile crocodile (*Crocodylus niloticus*) and the Nile monitor (*Veranus niloticus*) are quite common. More than 350 species of birds have been recorded in the park. Of these, 130 are residents, 50 are palearctic migrants and the rest are intra-African migrants that move locally within Nigeria. Up to six black storks (*Ciconia nigra*) have been recorded wintering and it is the only site where the saddle-billed stork (*Ephippiorhynchus senegalensis*) is regularly seen. Thirty three (33) of the 42 species of the Sudan-Guinea Savanna biome have been recorded in Yankari National Park (Birdlife, 2001).

### **Data collection procedure/sampling**

Data were collected using three instruments administered on all the rangers (80 rangers) in the employment of Yankari Game Reserve, Bauchi. Overall job satisfaction was measured with Job in General (JIG) Scale of 1-4 thus: 1-very dissatisfied, 2-dissatisfied, 3-satisfied and 4-very satisfied as highlighted by Ironson *et al.* (1989). As reported by Ironson *et al.* (1989), The Job in General Scale has a good internal consistency reliability from 0.91 to 0.95. Work motivation was measured with 8 items covering overall motivation, salary, allowance, incentive, bonus, promotion, training and communication. In addition, work environment was measured with 8 items made up of health, equipment, fueling, injuries, death from attack, mysterious death, releases of poachers and maltreatment from head rangers. For these two instruments, pilot tests were done with 20 rangers on Certificate training at Federal College of Wildlife Management, New Bussa, Niger State. Reliability of the summated values from the data obtained from the pilot tests was verified using Cronbach's reliability measure. The Cronbach's reliability alpha coefficient for work motivation and work environment items were 0.68 and 0.71 respectively. Data obtained for this study were analysed with Statistical Program for the Social Science (SPSS) version 10.0 for Windows. Descriptive statistics including frequencies and percentages and inferential statistics such as Chi-Square and Pearson's Product Moment Correlation (PPMC) to determine significant relationships between independent and dependent variables were used.

### **RESULTS AND DISCUSSION**

Table 1 shows that majority of the rangers (77.5%) are between the age range of 40 years and below. This means that they are still in their active age and this makes them to be able to perform various difficult tasks like patrol. Large percentage of the rangers (93.8%) are male indicating that the job of park or game reserve protection is dominated by male, who are more energetic and would be able to face the challenges of park protection. In addition, 86.2% of them are married having one to four wives. This indicates that rangers' occupation can be dependent upon catering for their family needs. Furthermore, 46.3% and 36.3% of the rangers had between 1-5 and 6-10 numbers of people in their households. This shows that majority of the rangers had a large family. It was also found out that 87.5% of the rangers are Muslims; this is because Islamic religion adherents populate Bauchi State where the Game Reserve is located. Also, 68.8% of them had secondary education; which is the basic qualification for employment as a ranger, although repentant hunters with lower qualifications are often employed because of their experience as poachers which can enhance anti-poaching activities. Majority (67.5%) had between ₦6000 and ₦10000 as monthly income; this is an indication that rangers' are

poorly paid considering the hazards they encounter daily in their job. In terms of work experience, 61.2% of the rangers had 10 years and below as their work experience. This also revealed that there are more experienced rangers in the Game Reserve and this experience will enable them to perform their job very well.

Table 1: Personal characteristics of rangers in Yankari Game Reserve, Bauchi (n=80)

Variables	Frequency	Percentage
<b>Age (years)</b>		
Below 30	27	33.8
31-40	35	43.7
41-50	16	20.0
Above 50	2	2.5
<b>Gender</b>		
Male	75	93.8
Female	5	6.2
<b>Marital status</b>		
Single	11	13.8
Married	69	86.2
<b>Number of wife(ves)</b>		
1	35	43.8
2	28	35.0
3	13	16.2
4	4	5.0
<b>Family size</b>		
1-5	37	46.3
6-10	29	36.3
11-15	7	8.7
16-20	7	8.7
<b>Religion</b>		
Islam	70	87.5
Christianity	9	11.3
Traditional	1	1.2
<b>Education</b>		
Primary	22	27.5
Secondary	55	68.8
OND/NCE	2	2.5
HND/BSC	1	1.2
<b>Monthly income (₦)</b>		
6000-10000	54	67.5
10100-15000	10	12.5
15100-20000	13	16.3
20100-25000	2	2.5
25100-30000	1	1.2
<b>Work experience (In years)</b>		
1-5	23	28.7
6-10	26	32.5
11-15	13	16.3

16-20	11	13.8
21-25	6	7.5
Above 25	1	1.2

The study further indicted that large majority of the rangers (87.5%) are very dissatisfied with their job while 12.5% were satisfied (Table 2). This disagrees with the findings of White (2008). White (2008) found that 44.83% and 37.93% of the employees of Virginia Association of Soil and Water Conservation Districts were satisfied and very satisfied with their job. This is an indication that working conditions in Virginia, United States may be better than working conditions in Bauchi, Nigeria.

Table 2: Yankari Game Reserve rangers overall job satisfaction frequency

Overall job satisfaction	Level of satisfaction		
	Very dissatisfied	Dissatisfied	Satisfied
Frequency	70	0	10
Percentage	87.5	0	12.5

The study further revealed that majority of the rangers (92.5%) agreed that they are poorly motivated. In terms of motivational components, 97.5% and 94.9% of them agreed that their salary is too poor and that the allowance being given is too poor in comparison with hazard of their job. According to 91.1% and 97.5% of the rangers, there is no incentive for performance and their promotion is infrequent and not as when due. Also, 92.4% agreed that they are not allowed to go for further training (ND, NCE, HND and BSC) while 98.7% agreed that there is low level of communication between the rangers and the management of the Game Reserve (Table 3). These results are indication that the rangers are not being treated well and as such not adequately motivated to perform the daunting tasks of protecting the resources of the reserve. Good salary and other motivational incentives are known to spur increased performance in workers.

Table 3: Opinion of rangers in Yankari Game Reserve on their work motivation (n=80)

Statement	Agree	Disagree
1. I am poorly motivated	74(92.5)	6(7.5)
2. My salary is too poor	78(97.5)	2(2.5)
3. Allowance given is too poor relative to the hazards of the job	76(95.0)	4(5.0)
4. No incentive for performance	73(91.3)	7(8.7)
5. No bonus at the end of the year	78(97.5)	2(2.5)
6. Promotion is infrequent and not as at when due	77(96.3)	3(3.7)
7. I am not allowed to go for further training (ND, NCE, HND, or BSC)	76(95.0)	4(5.0)
8. There is low level of communication between management and rangers	78(97.5)	2(2.5)

Percentages are in parentheses

This study reveals the work environment issues that are affecting rangers' satisfaction (Table 4). All the rangers (100%) agreed that there is no provision for their health. 93.8% of them also agreed that equipment for patrol is inadequate and those available are always not in good conditions. For 97.5% of the rangers, fueling for patrol vehicles is always inadequate. In addition, 86.3% and 85.0% agreed that injuries are frequently sustained from poachers and Fulani grazers' attack and death from poachers and Fulani grazers' attack is common. Furthermore, more than half of the rangers (52.5%) agreed that mysterious death occurs frequently while 65.0% also agreed that frequent releases of arrested poachers and grazers constitute dangers to their lives. In addition, 73.8% of the rangers agreed that head rangers are always maltreating them. These results are indication of inclement working environment for rangers and these could lead them to sabotaging the protection and conservation activities of the Reserve. Personal interaction with rangers attending courses at Federal College of Wildlife Management, New Busa has revealed that rangers engaged themselves in some unwholesome activities (such as allowing poachers to enter the park when they could not be arrested, relaxing in the park without carrying out patrol when on patrol duties, collecting bribes from arrested poachers and grazers and releasing them, killing fish and some small game animals and roasting them as food and giving tips to the poachers on the area of the park to operate) so as to improve their economic conditions.

**Table 4: Opinion of Yankari Game Reserve rangers on their working environment (n=80)**

Statement	Agree	
Disagree		
1. No provision for rangers' health	80 (100)	0
2. Equipment for patrol are inadequate and those available are always not in good conditions	75(93.8)	5(6.2)
3. Fueling for patrol vehicles are always inadequate	78(97.5)	2(2.5)
4. Injuries are frequently sustained from poachers and Fulani grazers' attack	69(86.3)	
11(13.7)		
5. Death from poachers and Fulani grazers' attack is common	68(85.0)	
12(15.0)		
6. Mysterious death occurs frequently among rangers	42(52.5)	
38(47.5)		
7. Frequent releases of arrested poachers and grazers constitute Dangers to rangers' lives	52(65.0)	
28(35.0)		
8. Head rangers are always maltreating us	59(73.8)	
21(26.2)		

Percentages are in parentheses

The study showed in Table 5 that there were no significant relationships between the gender, marital status, religion and education of rangers and their job satisfaction ( $P>0.05$ ). These results agree with the work of Banmeke and Ajayi (2005). According to Vila and Garcia-Mora (2005), overall job satisfaction is not significantly affected by education level. However, these results are not in agreement with the findings of Sauser and York (1978) that gender and education play significant role in job satisfaction. On

the other hand, the study revealed that there were significant relationships between monthly income and work experience of rangers and their job satisfaction while there were no significant relationships between age, number of wife(ves) and family size of rangers and their job satisfaction ( $P < 0.05$ ) (Table 6). This is an indication that monthly income and work experience play important roles in job satisfaction of rangers. Herzberg *et al.* (1957) outlined age, tenure, job level and salary as variables that are related to job satisfaction, however, salary is not considered to be an essential indicator (Herzberg *et al.*, 1957; Hoppock, 1935). Banmeke and Ajayi (2005) also found a significant difference in the level of job satisfaction between workers with high and low years of experience. Sauser and York (1978) found significant relationship between age and job satisfaction. In addition, Spector (1997) observed an increase in the level of job satisfaction with age.

Table 5: Chi-Square relationships between personal characteristics of rangers in Yankari Game Reserve and their job satisfaction

Variables	$\chi^2$	Df	P	
Decision				
Gender	0.798	1	0.372	NS
Marital status	0.500	1	0.479	NS
Religion	0.155	2	0.926	NS
Education	6.206	3	0.184	NS

NS: Not Significant;  $P=0.05$

Table 6: Pearson's Product Moment Correlation analysis of the relationship between personal characteristics of rangers in Yankari Game Reserve and their job satisfaction

Variable	r	Decision
Age	0.103	NS
No of wife(ves)	-0.041	NS
Family size	0.182	NS
Monthly income	0.249*	S
Work experience	0.340**	S

NS: Not Significant, S: Significant

\*\*Correlation is significant at the 0.01 level;

\*Correlation is significant at the 0.05 level

## CONCLUSION

Job satisfaction is one of the important elements of job performance. Factors determining job satisfaction are multi-dimensional in nature. Personal factors (such as socio-economic and demographic factors) as well as work motivation and work environment play significant roles in job satisfaction of rangers. Thus, management of the Game Reserve needs to create a conducive working environment by paying living wages to rangers, providing adequate motivation and increasing communication level between it and the rangers to ensure adequate protection and conservation of the resources in the Game Reserve.

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