

## Ownership and Health Care Status of Pets in Osun State, Nigeria

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### ABSTRACT

Demographic survey of pets' ownership and the health status of pets within Osogbo metropolis, Osun State was conducted between April and October, 2020. This was done by preparing a structured demographic survey questionnaire which was randomly administered, retrieved and analyzed using descriptive statistics. Majority of pets owners in the study area fall within 21 - 30 years, representing 43.7% of respondents. Three types of breeds - exotic, crossed and local- were identified. A significant number of respondents indicated pets were kept for sustenance and livelihood probably due to the fact that certain category of pets was crossbred with exotic species for preferred traits. Goat owners represent 52.9% of the surveyed population. Most pets' owners (67.4%) did not register their pets with State's Animal Husbandry and Veterinary Services Department. Only 35.4% of pet owners admitted that their pets were ectoparasite infested. About 65.7% of respondents vaccinated their pets, 59.9% treated their pets against helminthic infections while 43.0% admit to regular veterinary clinical check-up. Findings from this survey suggests the likelihood for pets to be registered with relevant authority is low but pet owners are more likely to treat and vaccinate their pets.

**Keywords:** Pet ownership, Health status, Ectoparasites, Helminthic infections

### INTRODUCTION

Keeping and ownership of animal pets have been in existence for many years. Recently pets' ownership is being advocated to bring about series of benefits to their owners with respect to socio-economic, security and health rewards (Müllersdorf *et al.*, 2010; CDC, 2019; Mueller *et al.*, 2021). Human-Animal Interactions is a mutual and dynamic relationship between humans and animals whose effects have physical, psychological health and socio-economic well-being of both pet owners and their pets (Esposito *et al.*, 2011; Matchock, 2015; Kanat-Maymon *et al.*, 2016; Bao and Schreer, 2016). Pets are animals kept for different purposes either as companions or security. Different individuals have different opinions and reasons for keeping pets. In countries like Britain and USA, most pet owners have affection for various categories of pets including dogs, birds, cats, rabbits among others, and maintain them as companions. In the past, people kept pets such as dogs and cats in certain regions of Nigeria however, this practice is fast disappearing.

In Nigeria, pets play important roles among geriatric population of many communities in supporting their well-being, companionship and sustenance. Interactions with animals affect several aspects of human development such as emotional, behavioral, cognitive, educational and social status of man (Wood *et al.*, 2007). Their interaction with human has made them a key component of the human ecology. Repositories on aspects of domestic pet demographics are available in many countries. Studies have linked household demographics with pets' level of ownership, health status, documented evidence of psychological health, socio-cultural and economic importance of pets and factors influencing pet ownership.

There is however, paucity of such repositories on the demographics of domestic pets in Osogbo with respect to level of ownership of pets and their health status. The aim of this study therefore, was to conduct a survey on pet ownership, health status of pets and to identify possible factors influencing pet ownership in Osogbo, Osun State, Nigeria.

### MATERIALS AND METHODS

#### Study Area

Osogbo the capital of Osun State lies on coordinates 7°46' North 4°34' East with an area of 47 kmsq<sup>-1</sup>. Osogbo is a commercial, industrial and socio-cultural centre. It is made up of two Local Government Area councils which are Osogbo and Olorunda Local Government Areas. According to 2006 national population census, Osogbo has a population of 156,694 and shares boundaries with Ikirun, Ilesa, Ede, Egbedore and Iragbiji. (<https://en.wikipedia.org/wiki/Osogbo>; Akpootu *et al.*, 2019)

#### Study Design and Survey Methods

This survey was conducted between April to September, 2021 in Osogbo and Olorunda Local Government Areas of the State. The study was designed to evaluate pet ownership, pet population, types of pets and their ecology. A purposeful cluster of 35 streets each were selected in Osogbo and Olorunda Local Government Areas from which a total of seven hundred households were selected.

#### Questionnaire Survey of Pets

From each selected household, a structured questionnaire was administered to the head of the household or any family representative. Interview was conducted using the questionnaire to retrieve information including demographic

characteristics, pet ownership, number and type of pets, sex, age, breed, and source of pets, housing types and vaccination status. Participants were duly informed of the specific purpose of the survey and were assured of the confidentiality of the information obtained.

**Statistical Analysis**

Data obtained were analyzed using descriptive statistics. The SPSS statistical software (IBM SPSS Statistics for Windows, Version 20.0, 2011) was used for Chi-square analysis of data to determine the percentage of pet keepers who provided health care services for their pets. Level of significance was set at 5%.

**Table 1:** Demographics of respondents to survey on ownership and health status of pets

Demographic variables	Frequency	Percentage (%)
<b>Sex:</b>		
Male	452	64.6
Female	248	35.4
<b>Marital status:</b>		
Single	405	57.9
Married	256	36.6
Widowed	23	3.3
Divorced	11	1.6
Others	5	0.7
<b>Occupation:</b>		
Farmer	33	4.7
Student	305	43.6
Housewife	39	5.6
Government employee	103	14.7
Others	220	31.4
<b>Level of Education:</b>		
Illiterate	44	6.3
Read and write only	36	5.1
Primary education	8	1.1
Secondary education	117	16.7
Tertiary education	495	70.7
<b>Age Range:</b>		
11 – 20	175	25.0
21 – 30	243	43.7
31 – 40	146	20.9
41 – 50	28	4.0
51 – 60	49	7.0
61-70	44	6.3
70 above	15	2.1

Survey conducted between April to September, 2021. Respondents are residents of Osogbo and Olorunda Local Government Areas, Osun State.

**RESULTS**

**Respondent Demographics**

Table 1 presents results on the demographics of study survey respondents. Results indicate majority of respondents fall within 21-34 age bracket (34.7%) and closely followed by those between 11-20 years (25.0%). Out of 700 respondents, 64.6% were males, 57.9% of respondents were single while 36.6% were married, 3.3% widowed and 1.6% were divorced. The results further revealed 43.6% of the respondents were self-employed students. Respondents with tertiary education constituted 70.7% suggesting the population to be sufficiently literate.

**Number of Pets, Family and Housing Type**

Results presented in Table 2 shows that 30.7% of respondents lived in self-contained rooms, 15.6% occupied three-bedroom flats while 22.1% lived in duplex buildings. The type of families who kept pets for several reasons varied from nuclear family (54.7%), single parent family (23.0%) and joint family (19.7%). Furthermore, number of pets kept by each respondent fall between 1 - 2 (37.1%), 3-4 (9.4%) and above 4 was 1.6%.

**Table 2:** Number of pets kept by respondents, family and housing type

Variables	Frequency	Percentage (%)
<b>Types of households</b>		
Single contained Room	215	30.7
Self-contained Room & Parlor	97	13.9
Two Bedroom flat	124	17.7
Three Bedroom Flat	109	15.6
Duplex Building	155	22.1
<b>Type of Family</b>		
Nuclear Family	383	54.7
Single parent Family	161	23.0
Joint Family	138	19.7
Others	18	2.6
<b>Number of Pets</b>		
1 – 2	260	37.1
3 – 4	66	9.4
Above 4	11	1.6

**Pet Breeds and Sources**

As shown in Table 3, 76.3% of respondents admitted that the age of their pets was above one year while 47.7% of the pets were females. Pet owners preferably kept goats which accounted for 52.9% of responses, while dogs accounted 27.1% of pets kept. Other pets kept by

respondents included goldfish (7.9%); Cats (6.4%), birds (1.9%) and Horses (1.1%). The identified pets were mostly crossbreeds (42.7%), while exotic breeds were 26.1%. Interestingly, 25% of the pet owners imported their pets as compared to respondents whose pets are local breeds (21.4%).

**Table 3:** Type of Breed and Source of Pets

Variables	Frequency	Percentage (%)
<b>Type</b>		
Dogs	190	27.1
Cats	45	6.4
Birds	13	1.9
Horses	8	1.1
Rabbit /Hare	14	2.0
Golden fishes	55	7.9
Monkey	5	0.7
Goats	370	52.9
<b>Breed</b>		
Exotic	183	26.1
Local	218	31.1
Cross	299	42.7
<b>Sex</b>		
Male	366	52.3
Female	334	47.7
<b>Age</b>		
0 –6 months	62	8.8
7 12 months	104	14.9
> 12 months	534	76.3
<b>Source</b>		
From pet stores	245	35.0
From local breeders	150	21.4
Imported	175	25.0
Receive as gift	130	18.6

**Pet Registry and Vaccination**

Table 5 shows that respondents (67.4%) are less likely to register their pets with the State Animal Husbandry and Veterinary Services Department. However, 65.7% of respondents had their pets vaccinated while 59.9% of pet owners adopted anti-helminthic control measures against ectoparasite infestation. Even though 43% of respondents claimed to access regular veterinary check-up for their pets, chi-square analysis suggests the percentage of pet keepers who provided preventive health care services for their pets is significant ( $p = 0.00001$ )

**DISCUSSION**

To the best of our knowledge, this study is the first demographic survey on ownership and health care status of Pets in Osun State, Nigeria. The study revealed that there were more single male pet owners. Respondents with level of tertiary educational status between the age of 21-30

**Care and Role of Pets**

Analysis of data obtained suggest a significant number of respondents (52.3%) kept pets for sustenance and livelihood. Those who kept pets as companions were 11% while 29.6% kept pets for purpose of security. Moreover, majority of the pets were confined (54.4%) and 45.3% were directly responsible for the feeding of their pets. Feeding was fairly adequate as 35.4% admitted to feeding their pets 3 times daily while 26.6% gave meals 2 times daily (Table 4).

**Table 4:** Respondent handling, use, and care for pets

Variables	Frequency	Percentage (%)
<b>Reason for Ownership</b>		
Security	209	29.6
Business	47	6.7
As pet (Companion)	78	11.1
Sustenance & Livelihood	366	52.3
<b>Housing</b>		
Free range	319	45.6
Confinement (caging)	381	54.4
<b>Feeding</b>		
Household members	317	45.3
Neighbors	138	19.7
Foraging	110	15.7
Neighbors/Household members	135	19.3
<b>Rate of feeding per day</b>		
Once	123	17.6
Twice	186	26.6
Thrice	248	35.4
More than three times	143	20.4

years are major owners of pets within Osogbo metropolis who kept pets for personal security or for sustenance and livelihood as observed in related studies (Aiyedun and Olugasa, 2012; Otolorin *et al.*, 2014; Ogbu *et al.*, 2020). Goats dominated the population of pets kept in Osogbo followed by fishes, dogs and cats, respectively. As observed in this study, the unwillingness to register pets with relevant State authorities excludes such pets from effective monitoring while posing health risks to residents. The low registration rate might be attributed to ignorance of existing policies on pets as well as the health implications. Nonetheless, the survey shows pet owners took care of their pets by vaccination and control of helminthic infestations but there is need to achieve 100% anthelmintic control in the study area to prevent zoonotic disease transmission. Despite the relatively high vaccination coverage (65.7%) in the study area, the World Health Organization (WHO, 2004) recommended 70–80%

as minimal standards required for pet vaccination coverage. The observed trend in this study is relatively similar to the low antirabies vaccination coverage (49.9%) of dogs in Lagos (Otolorin *et al.*, 2014) and 64.9% in Jos South, Plateau State (Ogbu *et al.*, 2020), indicating there is need for more public enlightenment in vaccination and general health care for pets

**Table 5:** Respondent Attitude Toward Registration and Care for Pet

Variables	Frequency	Percentage (%)
<b>Registration<sup>1</sup></b>		
Yes	228	32.6
No	472	67.4
<b>Infestation by Ectoparasites</b>		
Yes	248	35.4
No	452	64.6
<b>Vaccination of Pets</b>		
Yes	460	65.7
No	240	34.3
<b>Anthelmintic Control</b>		
Yes	419	59.9
No	281	40.1
<b>Veterinary Clinical check-up regularly</b>		
Yes	301	43.0
No	399	57.0

<sup>1</sup>Registration of pets with Osun State Animal Husbandry Services Department

**CONCLUSION**

Most of the pet owners in Osogbo and Olorunda local government areas are of youthful age and kept male goats as pets basically for sustenance and livelihood. Fewer pets were registered with the State but the study showed low incidences of ectoparasite infestations and general likelihood for pet owners to vaccinate their pets. The study also revealed the reluctance for pet owners to visit veterinary clinics to check the health status of their pets. It is important to advocate for pet registration and monitoring in order to forestall eventualities of zoonotic diseases among residents.

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