

**A SURVEY ON DOGS AND CATS IN THE CHATTOGRAM  
METROPOLITAN AREA BASED ON CASES ATTENDED AT  
SAQTVH, CVASU**



**A production report submitted in partial of the requirements for the  
fulfillment of the degree of Doctor of Veterinary Medicine (DVM)**

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**A production report submitted as per approved styles and contents**

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## List of Abbreviations

Abbreviations	Elaboration
FPL	Feline Panleukopenia
CKD	Chronic Kidney Disease
SAQTVH	Shahedul Alam Quaderi Teaching Veterinary Hospital
CMA	Chattogram Metropolitan Area

# **A Survey on dogs and cats in the Chattogram Metropolitan Area based on cases attended at SAQTVH, CVASU**

## **Abstract**

The purpose of the study is to look into the demography, health condition and disease prevalence among domestic cats and dogs in Bangladesh's Chattogram Metropolitan Area (CMA) based on the patients admitted at S.A. Quaderi Teaching Veterinary Hospital of Chattogram Veterinary and Animal Sciences University. A total of 60 cases of dog and cat was observed for this study where cat was more in number (91.7%) than dog (8.3%). The investigation concentrated on the prevalence of certain diseases as well as species, breed, sex, age, vaccination, and deworming status of pets (dog and cat). Among cats, local breed was more common (58.2%), in the contrary, cross breed dog were more prevalent (80%). Young age group were more admitted (69.1% in cat and 80% in dog) due to their low immunity. Low rate of vaccination (25.5% in cat and 0% in dog) and deworming (30.9% in cat and 40% in dog) have been noted alarmingly. Feline Panleukopenia (20%) and digestive disorders (60%) were the most prevalent health issue in cat and dog respectively. The study emphasizes the value of routine vaccination and deworming to ensure the welfare of pets and reduce any possible health hazards to owners. In the Chattogram Metropolitan Area, addressing these issues might result in healthier pet populations and better public health. To improve pet owners' knowledge and increase awareness more study is required.

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**Keywords:** Dog, Cat, Disease prevalence, Survey

## Introduction

Animals that are homely and tamed, kept to provide company, pleasure to owners are called pet. Attractiveness, intelligence, loyalty, playful behavior are the attributes of a pet for which they are well known. Around the world, people frequently keep pets including dogs, cats, rabbits, guinea pigs, fancy rats, hamsters, and tortoises in addition to avian pets like parakeets and parrots and aquatic pets like tropical fish and frogs. Asia may not have a very high rate of pet ownership, but Bangladesh has a large compassion for animals. Most families consider their dogs and cats as part of the family and maintain them as pets. Having a pet is really useful to one's life. Keeping a pet has an impact on the owner's overall health and well-being as well as the animal under consideration. The unconditionally loving ones in our lives are our pets.

Having a pet has several benefits for your physical, social, emotional, and psychological health. Pets make their owners feel less anxious, stressed, and depressed, which lowers blood pressure and prevents heart diseases. The presence of a pet is linked to considerable cardiovascular advantages in both those with normal and high blood pressure (Allen, 2003).

However, there are certain health risks associated with pet ownership despite this advantage. The health of humans and animals is eternally linked. Animals may infect people directly or indirectly with viruses, bacteria, parasites, fungi and rickettsia (Plaut *et al.*, 1996; Tan, 1997; Chomel, 2014). Cat scratch, salmonellosis, campylobacteriosis, leptospirosis, and giardiasis are examples of bacterial illnesses (Thompson *et al.*, 1993; Bolin, 1996; Bugg *et al.*, 1999) viral infections that can infect pets and spread to people include rabies, panleukopenia, infectious canine hepatitis, etc. (Decaro *et al.*, 2007; Scott, 1980; van Vuuren *et al.*, 2000). The parasitic and fungal illnesses that humans may acquire from their pets include leishmaniasis, toxoplasmosis, ringworm, sarcoptic mange, etc. (Plaut *et al.*, 1996; Beugnet and Marie, 2009; Ettinger and Feldman, 2009). The most prevalent health risks are allergic reaction and companion animal bites. There is a risk of zoonotic disease transmission since humans and animals share the same environment (Parvez *et al.*, 2014).

The purpose of this study is to conduct a survey on dogs and cats admitted to S.A. Quaderi Teaching Veterinary Hospital in the Chattogram Metropolitan Area of Bangladesh. This study will be helpful for further study to determine the prevalence of common clinical problems, evaluate species, breed, and sex distribution, and assess vaccination and



deworming practices. In addition, these findings will also be helpful for the pet food and pet medicine industries to develop their marketing strategies. Also, pet parents will find a guideline to be aware of disease prevention measures (vaccination, deworming, and hygienic management) for their pet.

**Objectives:**

1. To know the present status of dog and cat as a pet in Chattogram Metropolitan area.
2. To know the disease prevention measures taken by pet parents.

## **Materials and Methods**

### ***Study area and study Period***

The study was conducted on the patients registered at the pet animal unit of S.A. Quaderi Teaching Veterinary Hospital (SAQTVH). Different types of pets, like dogs, cats, rabbits, and birds, including parrots, parakeets, pigeons, peacocks, etc., were common in SAQTVH. But for this study, only dog and cat data have been taken. The study period was February 2023.

### ***Data Collection***

Data was collected from the patients brought to SAQTVH in February 2023. All the information about the owner, including name, contact number, address, education, etc., and the patient's data including age, sex, breed, duration of illness, feeding habit, vaccination, deworming history, etc., were recorded in the patient register sheet. Then a general physical examination was conducted according to the owner's complaint and disease history. The necessary laboratory tests were done to confirm the diagnosis. A total of 100 animals' data were collected during this study period. Due to a lack of information, 40 animals' data has been deducted and 60 animals' data has been confirmed for this study.



**Figure 1:** Data collection from pet owner at SAQTVH

### ***Statistical Analysis***

The obtained data was entered in MS Excel 2010. The data was analyzed and the results expressed in percentages (%).

## **Results**

### ***General description***

General description includes species, breed, sex, age of pet attended to SAQTVH which are depicted in Table 1 and are now discussed under following heads:

#### ***Species***

A total of 60 cases of dogs and cats were registered for this study in February 2023. Among those, cats accounted for 91.7% and dogs for 8.3%.

#### ***Breed***

In regards to breed, there were local, cross-breed, and exotic breeds, where the local cat (58.2%), cross-breed (34.5%) and the exotic (7.3%). In the case of dogs, cross-breeds were (80%), local breeds (20%) and exotic (0%) (Table 1).

#### ***Sex***

In terms of sex, female cat was (58.2%) and male were (41.8%). In the case of dog, male was (60%) and females (40%) (Table 1).

#### ***Age***

Among different age groups of cats, cat less than one year age was (69.1%), age groups 1-2 years (21.8%) and less than 2 years was (9.1%). In case of dog, the young age group (< one year) was (80%), 20% dog was more than 2 years of age and there was no dog between 1-2 years of age (Table 1).

**Table 1:** General description of dog and cat admitted to SAQTVH in February 2023.

Explanatory variable	Co-variable	Cat		Dog	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Breed	Local	32	58.2	1	20.0
	Cross	19	34.5	4	80.0
	Exotic	4	7.3	0	0.0
Sex	Male	23	41.8	3	60.0
	Female	32	58.2	2	40.0
Age	<1 year	38	69.1	4	80.0
	1-2 year	12	21.8	0	0.0
	>2 year	5	9.1	1	20.0

### ***Health status***

Vaccination and deworming data were used to assess health status of pets. Relevant data regarding vaccination and deworming is mentioned in Table 2.

### ***Vaccination***

In terms of vaccination, 74.5% cat registered for this study was non-vaccinated and 25.5% was vaccinated only. In case of dog, 100% was non-vaccinated (Table 2).

### ***Deworming***

In case of deworming, 69.1% cat is not dewormed, only 30.9% has received deworming. In dog, 40% is dewormed and 60% is not (Table 2).

**Table 2:** Health status of cat and dog admitted to SAQTVH in February 2023

Explanatory variable	Co-variable	Cat		Dog	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Vaccination	Yes	14	25.5	0	0
	No	41	74.5	5	100
Deworming	Yes	17	30.9	2	40
	No	38	69.1	3	60

### *Diseases*

In terms of cat, prevalence of feline panleukopenia was 20.0%. Common cold patient was 7.3%. Cat with systemic infection was 10.9%. Cat patient with digestive problem was 18.2%. Skin disease problem was 7.3%. 12.7% cat came to vet with pain due to accident. There was 10.9% patient who have parasitic infestation. There was also eye infection problem, local infection, chronic kidney disease, wound, paracetamol poisoning, mineral deficiency disease and fungal infection with prevalence 1.8% (Table 3).

In the case of dogs, digestive disorder patients were 60% and parasitic infestations were 40%. (Table 3).

**Table 3:** Tentative diagnosis of dog cat disease admitted to SAQTVH in February 2023

Diseases	Cat		Dog	
	Frequency	Percentage	Frequency	Percentage
	(n)	(%)	(n)	(%)
Common cold	4	7.3	0	0
Systemic infection	6	10.9	0	0
Wound	1	1.8	0	0
Eye infection	1	1.8	0	0
Local infection	1	1.8	0	0
FPL <sup>1</sup>	11	20.0	0	0
Parasitic infestation	6	10.9	2	40
Digestive disorder	10	18.2	3	60
CKD <sup>2</sup>	1	1.8	0	0
Skin disease	4	7.3	0	0
Paracetamol poisoning	1	1.8	0	0
Mineral deficiency	1	1.8	0	0
Fungal infection	1	1.8	0	0
Accidental pain	7	12.7	0	0

<sup>1</sup>Feline Panleukopenia, <sup>2</sup>Chronic kidney disease

## **Discussion**

Now-a-days pet population at CMA is increasing day by day. Most households have a pet commonly dog, cat, bird like parakeet, parrot and rabbit. In S.A. Quaderi Teaching Veterinary Hospital various types of patients come with various types of problems. Most usual patients are dog and cat. Among them there are varieties of breeds of cat including Persian, Local, Domestic short hair, Cross breed etc. and in case of dog, German Shepherd, Labrador, Spitz, Local, Cross etc. are common. Pet of different age group come to hospital where young are most common. Different clinical conditions are daily handled by the vets of SAQTVH like diarrhea, vomition, accident, alopecia, off fed, seizure, fever etc.

### ***General information***

#### ***Species***

According to this study, cats were the most prevalent species among the patients attended at SAQTVH. Bangladeshi sentiments towards cats are probably influenced by religious, historical, and social customs and beliefs (Bhowmik *et al.*,2020). This might be the reason cats are so prevalent in Chattogram.

#### ***Breed***

In this study, among local, cross and exotic breed of cat local breed was more prevalent than other two. According to Bhowmik *et al.* (2020), local breeds were most prevalent (60.5%) in Dhaka and Chattogram which was almost similar to the findings of this study. Dominance of local breeds due to being more widely available than foreign breeds. People prefer to raise indigenous breeds since they are cheaper to buy than foreign breeds (Bhowmik *et al.*, 2020).

In case of dog, cross breeds were more common than local and exotic breeds which contradicts the findings of Bhowmik *et al.* (2020). Attractiveness of foreign breeds than local may be the reason behind this.

#### ***Sex***

Findings of this study shows that, female cat patient was more prevalent than male cat. According to Bhowmik *et al.* 2020, female cat prevalence was 52.6%, which agrees with the findings of this study. This may be due to willingness of pet parents to have kitten from female. In case of dogs, males were more prevalent than females which agrees with the findings of Bhowmik *et al.* (2020) where male dog was 66%. It could be due to the decline in

female breeding issues and people's preference for keeping only one dog (Bhowmik *et al.*,2020).

### ***Age***

In between different age group of cats, less than one year age group was more prevalent than other two group (1–2-year age and more than 2-year age). In terms of dog also, young age group is more dominant than other two group. According to previous research, greater percentages of the age of the cats (1 to 3 years) and dogs (3 to 6 years), respectively, because the lifetime of dog and cat breeds is shorter, from 2 to 16 years (Bhowmik *et al.* 2020) which shows dissimilarity with the findings of this study. As young get sick because of their low immunity, they need to visit hospitals more. The maturation and deterioration of the immune system are strongly influenced by age. There is a higher risk of illness in all juvenile mammalian species (Schultz *et al.*, 2010). This may be the cause of high prevalence of young age group of pet animals in hospital.

### ***Health status***

#### ***Vaccination***

Most of the cat registered in SAQTVH was non-vaccinated. The rate was too poor in dog also which is alarming for health status of pet society as major diseases of cat can be prevented by vaccination. May be this scenario is because of unawareness of pet parents about vaccination. According to previous research, practically all pet owners vaccinate their animals against dangerous pet illnesses annually (57.9% of cat and dog owners and 52.5% of dog owners, respectively) (Bhowmik *et al.*, 2020), which is contradictory with this study.

#### ***Deworming***

According to findings of this study, minimum amount of cat and dog owners maintain regular deworming schedule. But according to Bhowmik *et al.* (2020) pet parents are aware of deworming which varied from every three months to six months depending on situations such as potential zoonotic risks or housing conditions.



## ***Diseases***

### ***Feline Panleukopenia***

The most prevalent disease in cat was Feline Panleukopenia according to this study. Previous study says that, the prevalence of FPL in Bangladesh was reported as 22.4% (Islam *et al.*, 2010) which is almost similar with the finding of the present study. This deadly disease can be avoided by vaccination (Jakel *et al.*, 2012). So, low vaccination rate is the cause of high prevalence of FPL.

### ***Digestive disorder and Parasitic infestation***

The findings of this study show that, digestive disorders were the most dominant problem of dog. According to Rakha *et al.* (2015), the prevalence of digestive disorders in dogs was 56.5%, which is almost similar to this study. In case of cat, this was the second most prevalent health issue.

The second- and third-most prevalent issues with cats and dogs, respectively, were parasitic infestations. In a study by Bhowmik *et al.* (2020), it was shown that the majority of cats and dogs did not have any digestive issues, such as diarrhea, constipation, or appetite. This may be due to the proper use of anthelmintics and vaccinations, which stopped the spread of gastrointestinal parasites and diseases. So, the high prevalence of digestive problems and cause of parasitic infestation in both cats and dogs may be due to a low deworming and vaccination rate.

### ***Other diseases***

There were several problems of cat encountered in this study such as eye infection, accidental problem, chronic kidney disease, systemic infections, paracetamol poisoning, mineral deficiency disease, fungal infection which prevalent is not so high.

## **Conclusion**

The findings of this study have provided an overall picture of the general characteristics, health status, and disease prevalence of dogs and cats admitted to SAQTVH in the Chattogram Metropolitan Area. The study reveals that, among the patients (cats and dogs), cats are the more dominant species attending the hospital. In regards to breed, the most common were local cat breeds and dog crossbreeds. The young animal was more patient than usual. Vaccination and deworming data disclose the unawareness of pet parents about disease prevention methods. The analysis of the disease history of pets also agrees with these findings. This might not be a precise picture, though, due to inadequate data and a lack of a diagnosis. In order to determine an accurate survey of dogs and cats at CMA, more research with a large sample size is required.

## **Limitations**

This study was conducted with proper sincerity, despite some limitations. Selection bias during data collection from pet owners may be one of them. In addition, a lack of proper data, a small sample size, and a short study period may affect the results of this study.

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## **Biography**

I am Mohammed Mynul Hasan, son of Mohammed Atiqul Haque and Jahanara Begum. I have completed my Secondary School Certificate from Nasirabad Government High School in 2014 and Higher Secondary School Certificate from Hazera-Taju Degree College in 2016. I am an intern veterinarian at Chattogram Veterinary and Animal Sciences University, Bangladesh under the Faculty of Veterinary Medicine. I am very interested in veterinary medical research, and I wish to use my abilities and creativity for the good of the nation. So that we can get past the obstacles we currently encounter with this field.