Perceptions of Cat Rearing, Feeding, and Health Management by Cat Owners

ABSTRACT

Background and Objectives: Perceptions of cat owners may affect the lives of pet animals. The study was conducted to learn about the socio-economic standard of cat owners as well as their contentment with and motivations for raising cats in Rajshahi districts of Bangladesh. **Materials and Methods**: Data were collected by a face-to-face interview with 150 pet owners who came to the recognized pet clinics in Rajshahi city between January to December 2023. **Results**: According to the study, cat owners made up 70% by female of the total, while 30% made up by male. The majority of cat owners were young people, between the ages of 21 and 30 (49.3%). Urban residents tend to be rear cat (62.0%) and have better educational levels. Among the cat owners, 87.7% raised their cats indoors, and 11.3% nurtured them outdoors. Residence and educational attainment of cat owners have a substantial association ($p<0.05$). The breed of cats and their origins were likewise of great worth ($p<0.05$). The feeding habits of cats varied from owner to owner; however, the majority (20.7%) fed their cats cooked meat, cooked fish, and pellets. Different factors influence cat-raising with the majority (30.0%) for hobbies. According to impact studies, biting had a big detrimental impact, while unconditional love had a major positive influence. During the investigation, various cat health issues were noted; alopecia was the most common issue (24.7%). The vaccination and deworming rates for their cat were 54.0% and 52.7%, respectively. **Conclusion**: It was concluded that different owners raised cats for different reasons, with a different preference in choice of cat breed, feeding practice, and medication approach, and through a fuller understanding of these features, such research will aid in the development of a cat-rearing approach that improves the well-being of both pets and their owners.

Keywords: Cat, owner, perception, pet clinic, impact, breed.

INTRODUCTION

Pet animals can significantly impact human lives by bringing companionship, support, and amusement. There was proof that having a pet as company might enhance psychological well-being in people by fostering close emotional connections (Ståhl et al., 2023; Wells, 2009). Every

year, large quantities of money were spent, often ineffectively, on therapeutic treatment and preventative medicine for people with a variety of physical and mental health issues. Several studies reported that cats can improve human health status and wellbeing. Researchers discovered that having a pet is linked to lower levels of depression (Clark Cline, 2010). A companion animal may also serve as a form of social support for its owner (Staats et al., 2008; Beetz et al., 2012), meaning that having the animal around will likely make the owner's life better overall and may even make it easier for them to handle difficult situations. Some owners have reportedly found emotional support in their cats (Stammbach and Turner, 1999), particularly when they used them as a kind of nonjudgmental confidante (Hafen et al., 2007; Pachana et al., 2011). Despite the fact that the owner is frequently referred to as the career, companion animals may also be able to fulfill the reciprocal duty of the source of security and protection in an attachment connection (Rockett and Carr, 2014). They may also bring happiness and comfort to their owner (Kurdek, 2009); they may be a source of joy and comfort (Prato-Previde et al., 2006; Kurdek, 2008; Walsh, 2009); and they may make their owner feel missed while they are gone (Walsh, 2009). In Bangladesh, the urban population has grown quickly during the past 40 years (Helal and Hossain, 2013). People have a wide variety of opportunities to work in many different fields as a result of these rapid urbanizations, which helps them enhance their income (Rana, 2011). Due to the prevalence of nuclear families in urban life and the activities of the majority of family members, people are becoming more and more interested in raising pets (Bhowmik et al., 2020). They commonly raised pets, especially dogs and cats, to combat loneliness (Kuzniar, 2006; Beck, 2011; Irvine, 2013; Bradshaw, 2017).

Control methods like quarantine, lockdown, and social seclusion during the COVID-19 pandemic may impact not only people but also their companion animals (Bowen et al., 2020; Parry, 2020). The chances of COVID-19 transmission from pets to people were extremely unlikely, according to research published shortly after the COVID-19 pandemic (Bowen et al., 2020; Goumenou et al., 2020). However, it's possible that the media caused a cultural reaction that led to thousands of abandoned pets and the euthanasia of many more (Parry, 2020). However, qualitative insights revealed that cat owners considered their experience of the lockdown as being made easier by having a pet. Oliva and Johnston (2021) reported that cat ownership was not a significant predictor of loneliness scores during lockdown. Along with

combating loneliness, pets, especially cats, usually rear for many reasons, including companionship, loneliness and depression, companionship and hobby, animal welfare, depression, anxiety, hobby, marital complexity, children's demands, and others. According to reports, pet owners are happier and more satisfied with their lives than non-owners (Bao and Schreer, 2016). Additional responsibilities related to proper pet care include housing, feeding, deworming, immunization, grooming, and exercise (Bhowmik et al., 2020). The well-known zoonotic disease of rabies can be prevented in cats by proper anti-rabies immunization. Other vaccines those help to prevent illness and strengthen a cat's immune system included a combination of antiviral vaccines against feline parvovirus, feline herpes, and feline infectious rhinotracheitis. A crucial factor in keeping cats worm-free is the regular use of anthemetic medications. Regular grooming improves a cat's attractiveness and helps to prevent ectopasites. The same holds true for nutritionally balanced diets, which support protection against several chronic diseases and improve health (Case et al., 1995). There were many commercial cat foods accessible in our country, but the majority was imported because there was no such cat food production facility in Bangladesh. Some cat owners solely fed their pets' homemade food or leftovers, while others fed them processed foods, but most owners were unaware of their balanced diet. The purpose of the current study was to ascertain cat owners' perceptions in Rajshahi district, Bangladesh.

MATERIAS AND METHODS

Study area: The study was conducted in the divisional city of Rajshahi, Bangladesh with involving 150 cat owners.

Preparation of questionnaire: A comprehensive, coordinated questionnaire was developed to gather information from cat owners at three different pet clinics in Rajshahi. The questionnaire includes questions about the pet owner's age, gender, place of residence, level of education, as well as the pet animals' breed, food preference, feeding habits, deworming, vaccinations, and overall health.

Questioned to pet owner: Pet owners were questioned face-to-face utilizing a questionnaire on the hospital grounds. Pet owners were surveyed from January 2023 to December 2023, and information was gathered from three pet clinics namely: Kittycat care and cure; Birds Pet Animal

Clinic and Dr. Shazid's Pet clinic. The sample size was 150 pet owners who brought their cats to the hospital for treatment or routine health checks were interviewed during this study.

Data analysis: Following data collection, data were compiled and analyzed using SPSS version 2021. The percentages and p-values for the categorical variables were calculated using a chi-square test with a significance level set at alpha <0.05.

RESULTS

Demographic status of pet owners

The majority of cat owners (70%) were women, with 30% being men. The age of the respondents ranged from less than 10 years (3.3%), 10 to 15 years (6.7%), 16 to 20 years (15.3%), 21 to 30 years (49.3%), 31 to 40 years (13.3%), and more than 40 years (12.0%), and Urban residents make up 62.0% of cat owners, followed by rural residents (16.7%) and suburban residents (21.3%). According to the educational level, there were four levels of education: primary (18.0%), secondary (28.0%), higher (44.7%), and none (9.3%). Indoor and outdoor cat rearing systems make up, respectively, 88.7% and 11.3% of the population (Table 1).

Table 1. Demographic status of pet owners

Characteristics		Frequency (%)
Sex	Male	45 (30.0%)
	Female	105 (70.0%)
Age	<10 Years	05 (3.3%)
	10-15 Years	10 (6.7%)
	16-20 Years	23 (15.3%)
	21-30 Years	74 (49.3%)
	31-40 Years	20 (13.3%)
	>40 Years	18 (12.0%)
Residence	Urban	93 (62.0%)
	Rural	25 (16.7%)
	Sub-urban	32 (21.3%)
Educational Status	Primary	27 (18.0%)
	Secondary	42 (28.0%)
	Higher	67 (44.7%)
	None	14 (9.3%)
Rearing system of cat	Indoor	133 (88.7%)
	Outdoor	17 (11.3%)

Educational status and residence of pet owners

The correlation between educational level and residence of cat owners was greatly significant ($p<0.05$). Out of 150 cat owners, 93 live in urban areas, where the majority had higher levels of education (Table 2). In contrast, there were 25 cat owners in rural areas who have lower education levels than urban residents. There were 32 respondents in suburban areas, where owners' educational levels are higher than those in rural areas (Table 2).

Table 2. Relation between educational status and residence of pet owners

Characteristics			Educational status					Chi-Square Tests	
			Primary	Secondary	Higher	None	Total	Value	Asymp. Sig. (2 sided)
Residence	Urban	Count	11	27	49	6	93	13.563	0.035**
		Expected	16.7	26.0	41.5	8.7	93.0		
	Rural	Count	5	6	10	4	25		
		Expected	4.5	7.0	11.2	2.3	25.0		
	Sub-urban	Count	11	9	8	4	32		
		Expected	5.8	9.0	14.3	3.0	32.0		
	Total	Count	27	42	67	14	150		
		Expected	27.0	42.0	67.0	14.0	150.0		

*p<0.01

Available cat breeds in Bangladesh with their sources

In Bangladesh right now, there are many cat breeds accessible. Due to the high value of foreign cats, raising foreign breeds was done by financially stable individuals. The analysis revealed several cat-producing sources. Cat breeds came from a variety of sources, including gifts, street collections, purchases, and adoptions. The study's findings indicate that native breeds were preferred over imported ones in the majority of cases. The comparison between cat breed and sources was significant at $p<0.05$ (Table 3).

Table 3. Various cat breed and their sources

Cat breed	Sources of cat					Total	Pearson Chi-Square Test	
	Adoption	Buying	Collection from street	Gift	Others		Value	Asymp. Sig. (2 sided)
Deshi	33	1	24	7	5	70	129.498	0.000***
Deshi+Persian	2	6	0	0	0	8		

Mixed+Persian	0	7	0	0	0	7
Deshi+ Mixed	6	0	0	1	0	7
Deshi+Mixed+Persian	4	2	0	1	1	8
Mixed	5	8	1	0	0	14
Persian	0	15	0	2	0	17
Turkish angora	0	5	0	0	0	5
British short hair	1	4	0	0	0	5
Maine coon	0	2	0	1	0	3
Others	3	0	0	2	1	6
Total	54	50	25	14	7	150

***p<0.001

Experience and reasons of cat rearing

Different owners had different experiences with raising cats. A maximum experience of two years (35.30%) of cat-rearing was obtained (Fig. 1). There were some fascinating justifications for raising cats. The common causes included pressures from children, marital difficulty, animal welfare, loneliness, depression, anxiety, and other factors. The most common reason among them was their hobbies (Fig. 2).

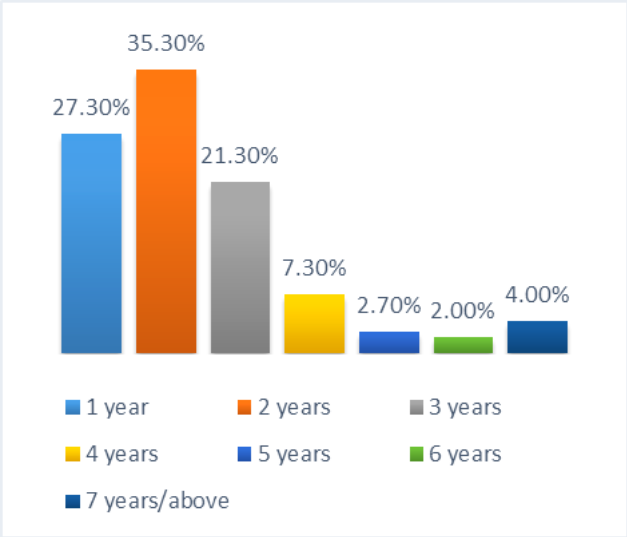

Fig. 1 Experience of cat rearing

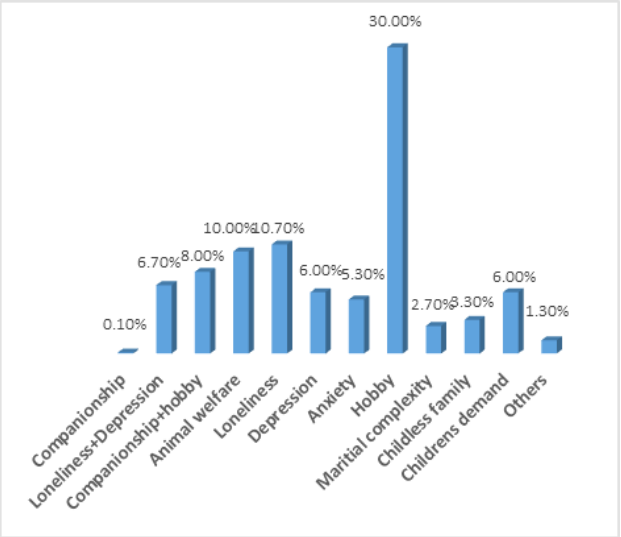

Fig. 2 Reasons of cat rearing

Feeding management and practices

Cat owners feed their pets in a variety of ways. They have supplied both homemade foods and some commercial foods (pellets, cans, and pouches). Most cat owners (20.7%) offered their pets

cooked meat, cooked fish, and pellets. Usually, three to four times a day were set aside for feeding (Table 4).

Table 4. Feeding practices of cat

Food items	Frequency (%)
Pellet (commercial food)	14 (9.3 %)
Others	01 (0.7%)
Pellet+ Cooked fish+ Cooked meat	31 (20.7%)*
Cooked fish+ Cooked Meat	21 (14.0%)
Rice+ Milk	14 (9.3%)
Rice+ Fish bone	05 (3.3%)
Cooked fish+ Cooked meat+ Rice+ Vegetable	08 (5.3%)
Cooked fish+ Cooked meat+ Rice	05 (3.3%)
Pellet+ Canned	04 (2.7%)
Commercial canned food	07 (4.7%)
Bone (fish)+ Rice	02 (1.3%)
Bone (fish)+ Biscuit+ Vegetable	06 (4.0%)
Cooked fish	18 (12.0%)
Cooked meat	05 (3.3%)
Rice	04 (2.7%)
Bone (fish)	05 (3.3%)
Total	150 (100.0%)

Impact analysis of pet management

This study examined the effect of cat ownership on cat owners' mental health. Both positive and negative effects have been observed. Unconditional love dominated the favorable effects (34.7%), whereas biting (21.3%) had the most adverse effects (Table 5).

Table 5. Impact analysis of cat rearing

Characteristics	Frequency (%)
Positive impact	
Unconditional love	51 (34.7%)
Home safety	07 (4.7%)
Nurture	19 (12.7%)
Health benefit	21 (14.0%)
Playing with cat	27 (18.0%)
Spent time	25 (16.7%)
Total	150 (100.0%)
Negative impact	
Biting	32 (21.3%)

Others	08 (5.3%)
Stool/ Urination	23 (15.3%)
Living expenses	11 (7.3%)
Allergies	25 (16.7%)
Respiratory problem	07 (4.3%)
Damage house/ property	20 (13.3%)
Disturbances of sleep	08 (5.3%)
Loss of food or curry	05 (3.3%)
Bad odor	11 (7.3%)
Total	150 (100.0%)

Vaccination, deworm and common health issues of cat

Vaccination was a significant concern for cats. The rabies vaccine aids in the prevention of zoonotic illnesses. The combined antiviral vaccine which includes calcivirus, feline rhinotracheitis virus, and feline panleukopenia virus was the most significant vaccination. The administration of a combination antiviral vaccines was increased the cat's immunity. According to the present research, 54.0% of cat owners vaccinated their cats (Table 6). The cat was kept free of worms by routine deworming. Our research reported that 52.7% of cat owners dewormed their cats (Table 6). Many health issues were monitored while raising cats. Among the common health problems were diarrhea, alopecia, inappetance, vomiting, and indigestion. The most frequent health problem was vomiting 22.70% (Fig. 3).

Table 6. Vaccination and deworm status of cat rearing

Characteristics	Frequency (%)
Vaccination	
Yes	81 (54.0%)
No	69 (46.0%)
Total	150 (100.0%)
Deworming	
Yes	71 (52.7%)
No	17 (47.3%)
Total	150 (100.0%)

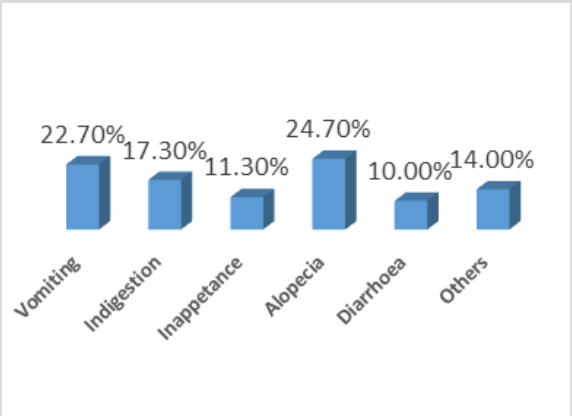

Fig. 3 Common health issues of cat

DISCUSSION

A pet is defined as a cat, dog, or companion animal that the subject can interact with (Parslow et al., 2004). Interacting with animals improves a person's attitudes, behavios, sense of personality and social support (Serpell, 1999). This study showed that female owners raised 70% of cats, whereas male owners raised 30%. A study conducted in the UK and Ireland suggested that women were more likely than men to keep cats and that this link should also be applied to children's ownership of cats and dogs (Downes et al., 2009; Murray et al., 2010; Westgarth et al., 2010). This may be because, in Bangladesh, the majority of women are responsible for household duties, so they feel spending their free time with pets. In addition, women may be more interested in companionship with pets during pregnancy. In this study, females owned significantly more pets.

The present research showed that owners of cats were able to lower their depression levels by receiving the unconditional love of their pets. According to Garrity et al. (1989), having a pet has a favorable effect on depression, emotional well-being, and physical well-being. Pet ownership has been shown by McConnell et al. (2011) to improve well-being and reduce depression in those who have unmet social needs. (Serpell, 1999) conducted a research and found that interacting with animals improves a person's attitude, behavior, sense of responsibility, and social support.

Cats are mostly found in indoor environments (80.7%) and outdoors (11.3%). Although it has been demonstrated that domestic cats' home ranges were wider in rural than urban areas, the

quantity of outdoor activity relies on the location of the home and the neighborhood (Metsers et al., 2010; Hall et al., 2016). Contrarily, research showed that indoor-only pet cats interact with their owners more than those kept outdoors as pet cats (Hubrecht and Turner, 1998). According to those studies, the majority of pet owners were well-educated and financially stable. We also found the same.

According to our findings, the majority of cat owners (49.3%) were young people between the ages of 21-30 years old. A previous research by Purewal et al. (2017) reported that the younger age group's lower involvement in pet rearing activities may be attributed to a lack of free time and education-related activities.

Contrarily, older people may raise cats as a way to pass the time and show them unconditional love. Most cat owners in our study were rear deshi cats, and their primary source of cats was adoption. Fewer individuals keep exotic breeds (such as Persian, Maine Coon, Russian Blue, and Turkish A ngoora), and their primary source was purchasing them because of their financial value. Persian breeds dominated among foreign breeds due to their availability in Rajshahi, Bangladesh. In Rajshahi, several people offer Persian breeds commercially.

In order to provide nutritious, high-quality food for their pets, pet owners should be aware of quality meals and consult with vets. The majority of dogs and cats were being fed commercial pet food, but many poor participants also said they provided homemade recipes to their pets (Bhowmik et al., 2020). In addition, pet owners may use homemade feeding regimens as a means of providing affection or strengthening their bond with their animals. They may have found these feeds to be more palatable or believed that they were healthier than commercially prepared diets (Remillard, 2008). However, this was at odds with other experiments conducted by Baldwin et al. (2010) and Freeman et al. (2011), which proposed that the food available on the market is a nutrient-dense, well-balanced, easily prepared diet. In our study, the majority of cat owners offer their cat’s homemade food in addition to a few commercial foods (cooked fish, cooked meat, and pellets). But if homemade food is not prepared properly, that food will cause several health problems for cats. Some owners directly give raw fish and meat to their cats, which cause dyspepsia and a higher risk of worm infestation. Cats who consume spicy food may develop a variety of skin disorders, such as dermatitis and alopecia were reported by the pet owners during the interviewed in present study.

A number of health problems were claimed by the pet owners during the interview, and the most common of which was alopecia (24.70%) and vomiting (22.70%) in the present study. Similar results also found in the UK, Japan, and Sweden, dermatological illnesses were among the most common disease categories (O Neill D.G et al., 2014; Inoue et al., 2016; Egenvall et al., 2010). Numerous health effects were discovered in the study, with the most notable good impact being unconditional love (37.7%) and the most notable negative effect being the cat's propensity for biting (21.3%). According to the survey, 52.7% of cats were dewormed, and 54.0% of cats received vaccinations. There was a greater risk to owners if the cat was not vaccinated against rabies. A combined antiviral vaccine is also required for cat immunity building. Deworming was essential for maintaining worm-free conditions and preventing zoonotic worm infestations. Public education was crucial for reducing the risk of parasitic zoonosis in both humans and companion animals (Baneth et al., 2016; Traversa, 2012).

CONCLUSIONS

A big number of cats were being raised indoors on a daily basis. The majority of owners were unaware of zoonotic diseases. Therefore, regularly immunizing and deworming their cats and counseling cat owners about health issues and zoonotic diseases of cats were crucial. Additionally, Rajshahi district needs modern medical facilities for treatment of pet animals.

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