

Statistical Analysis of Pet Ownership and Care Expenses in Urban Families of Ajman, UAE

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Abstract: In this paper, we investigated the relationship between certain demographic variables and pet ownership among urban families in the Emirates, focusing on 299 randomly selected parents from Ajman who own cats and dogs. Participants completed an online survey, which included a question about pet care expenses with six response options. The survey was distributed through WhatsApp and was available from October 2023 to February 2024. To analyze the data, we employed analysis of variance (ANOVA) using SPSS software, considering a p-value of less than 0.05 as statistically significant.

Keywords: Pet Ownership, Dog, Cat, Care, Expenses, Household.

1 Introduction

Even though pets are cherished companions and frequently seen as members of the family, research on the bond between humans and animals indicates that pet owners do not receive financial support from institutions and organizations [1, 2, 3]. Studying the existence, ownership, and classification of pets within families is becoming more popular, particularly since pets are now frequently used as social support for family relationships. According to earlier studies, pet owners view their animals as members of the family and acknowledge that their pets play a role in the household, drawing comparisons between this role and that of humans [4, 5, 6, 7, 8, 9, 10].

Previous studies have addressed the value of having a pet throughout adolescence because these pets have a significant impact on their lives [11], form strong emotional bonds with their owners, and cause them to be careful about their basic needs [12].

In Arab societies, where families understood animal husbandry from the standpoint of economic benefit in what is known as the household livelihood economy, the animal remained part of the family, particularly regarding cows, camels, and goats. The family had no desire to own or raise dogs, cats, or birds.

Pet ownership now has more social than economic implications due to shifts in the social structure, particularly the family unit [13]. The focus has shifted from raising animals that contribute to the living economy to raising animals that increase the financial burden on the family because of changes in the family, social relations patterns, housing types, and family size. This has led to a new pattern of pet ownership, particularly for pets with fur (dogs and cats).

Due to these modifications, it is now evident that families in the Emirates, whether they are residents or Emiratis, are passionate about owning pets, particularly dogs and cats, and having them live in the family home [14].

By the end of the 20th century, and particularly in the 1990s and the start of the 21st, families in the United Arab Emirates were beginning to have pets more and more. Additionally, during this time, the definition and makeup of the urban family were changing, and attitudes toward pets reflected these shifts in definitions [15].

The United Arab Emirates has an active pet trading market, especially since the United Arab Emirates legislation emphasizes the protection of pets and their ownership, which has led to the opening of individual pet shops in urban areas as well as in upscale shopping malls. Pet shops are found in most major cities within each emirate in the UAE, and the main customers are UAE citizens and the expatriate community in the country [16].

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2 Literature Review

In their description of the demographics of pet ownership, MC Gates et al. (2019) noted that people with higher incomes, those living in rural areas, and families with female children were more likely to own pets [17].

Jill Johnson (2009) investigated how pet owners perceive their dogs and cats within their social and kinship bonds to evaluate the ways in which pets are integrated into the home. According to his research, there are certain correlations between the gender of the primary pet caregiver and the degree of pet integration in the home [18].

Numerous academics have examined the demographic factors associated with pet ownership. In 2015, Sarah J. Fifield and Darryl K. presented their research on the demographic factors associated with pet ownership in families in New Zealand. They looked at the makeup of families, the motivations behind pet ownership, and the benefits and drawbacks of having pets. According to their research, most of these households had a child who was the only pet owner. The variables of parents' employment, place of residence, and number of children were linked to pet ownership [19].

Veterinary care for pets is a concern for pet owners and one way to alleviate this concern is to have pet health insurance. Williams A et al. (2020) was interested in investigating the impact of pet health insurance on dog owners and their veterinary expenses. They discovered that pet health insurance had a significant and positive impact on the amount spent at the veterinarian. The study's conclusions contribute to resolving Americans' accessibility problem in finding reasonably priced pet care [20].

Sukono (2023) also sought to assess how Indonesian middle-class people's lifestyle make decisions about getting pet insurance and how important it is to foster a community of pet lovers. According to the study's findings, the costs of pet insurance premiums offered are still within acceptable bounds when considering the size of the community of pet owners that makes these decisions [21].

Many scholars have discussed, such as Howe, L., & Easterbrook, M. J. (2018), which have addressed the cost of pets to vulnerable groups in society versus the companionship and sense of responsibility their pets provide [22].

Carr, N., & Cohen, S. (2009) evaluated how much the travel industry is doing to satisfy dog owners' desire to travel with their pets, and the extent to which the tourism sector is meeting this demand. The growing significance of dogs in people's lives is reflected in their study. The study's findings suggest that while dog owners strongly want to holiday with their pets, the availability of pet-friendly accommodation leaves this willingness comparatively unfulfilled [23].

3 Study Hypothesis

There is a relationship between Pet Care Expenses and demographic variables of the participants.

4 Materials and Methods

4.1 Recruitment and Procedure

A Google Form was used to create the online survey, and participants were sent the link to it via WhatsApp messaging app. The survey, which was available in Arabic, asked questions concerning the correlation between having a pet in the home and various demographic information, including the number of family members, type of living arrangement, monthly family income, type of pet, age of pet owner, and length of time of pet ownership. The questionnaire was available from October 2023 to February 2024.

4.2 Pet Care Expenses

Participants were asked: *How would you describe a pet care expense?* through one of the following six options:

1. Pet beauty expenses
2. Pet food expenses
3. Pet health care expenses
4. Pet transportation expenses
5. Pet expenses are included in the family monthly income
6. There is a difference between dog and cat expenses

4.3 Participants

The current study included 299 parents from families owning furry pets (cats and dogs) in the city of Ajman, who were randomly selected from a total of families of citizens and expatriates.

5 Dissection and Result

Table 1: ANOVA Test: Pet Care Expenses and Number of Family Members

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	1.700	2	0.850	2.867	0.058
Within Groups	88.067	297	0.297		
Total	89.767	299			

The findings of the ANOVA test of participial answers according to this variable are shown in Table 1. The findings clearly illustrate that there are no statistically significant differences in pet owner according to the variable of family member numbers, given that $p = 0.058$ is above the level of statistical significance required (0.05).

While there are no statistically significant differences in the pet owner according to the variable of family member number, we observe that the participants in families with more than 5 members, most pet care expenses go towards food and healthcare, while for families with three members, most pet care expenses go towards pet beauty, food and healthcare.

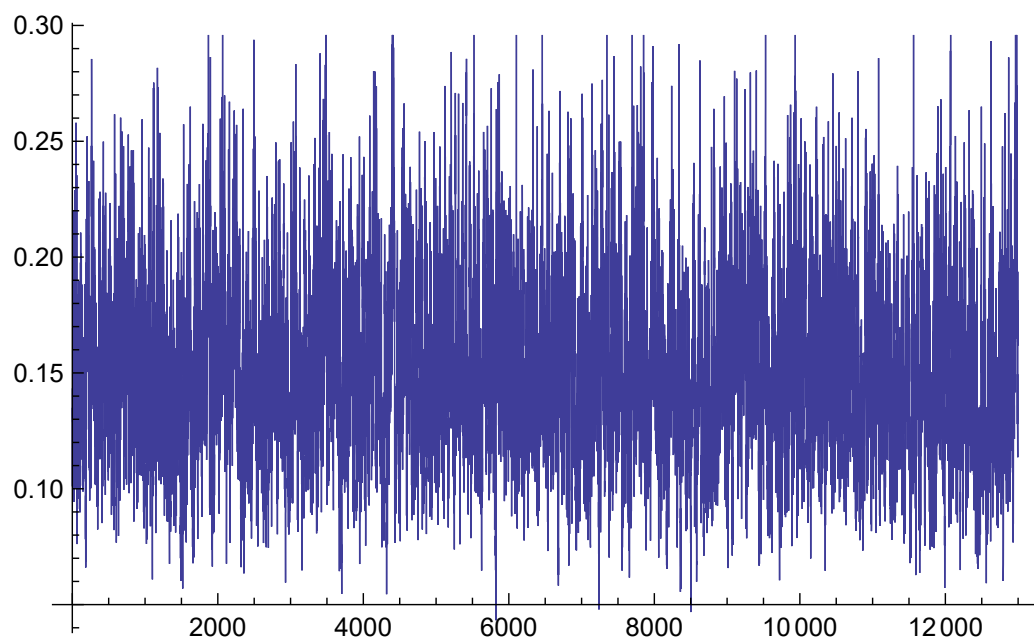


Fig. 1: number of family members

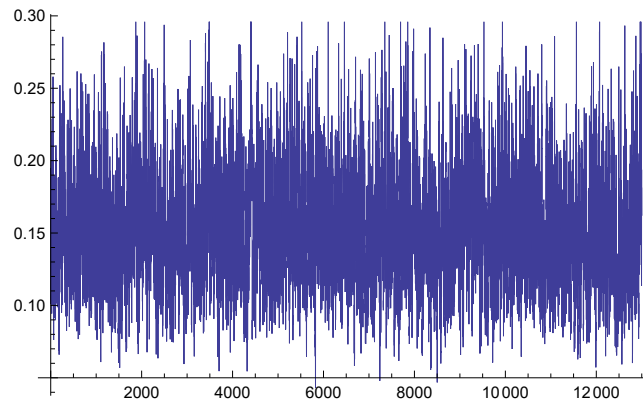
As shown in Table 2, the findings show that there are no statistically significant differences in living in relation to the Pet Care Expenses variable. Whereas $p = 0.735$ is therefore above the required level of statistical significance (0.05).

While there are no statistically significant differences in the pet owner according to the variable of living, we discover that participants who reside in public housing and villas are more worried about the expense of pet care than those who live in apartments.

The findings of the ANOVA test of participants according to monthly family income are shown in Table 3. The findings illustrate that there are no statistically significant differences in the pet care expenses according to the variable of monthly family income given that $p = 0.079$, and thus above the statistical significance level needed (0.05).

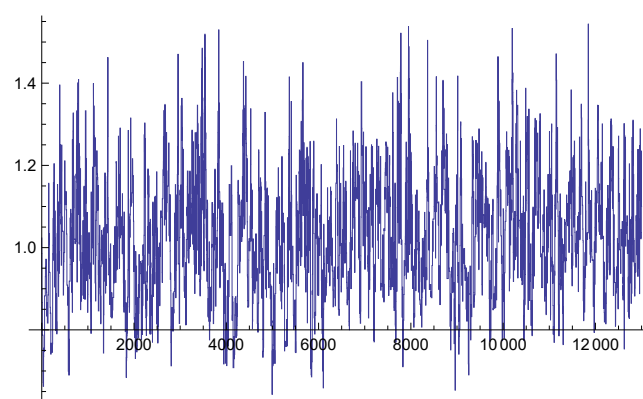
Table 2: ANOVA test: Pet Care Expenses and living

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	0.385	3	0.128	0.425	0.735
Within Groups	89.383	296	0.302		
Total	89.767	299			

**Fig. 2:** type of living**Table 3:** ANOVA test: Pet Care Expenses and monthly family income

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	2.028	3	0.676	2.281	0.079
Within Groups	87.739	296	0.296		
Total	89.767	299			

It is important to note here that pet owners with a high monthly income spend more on pet care.

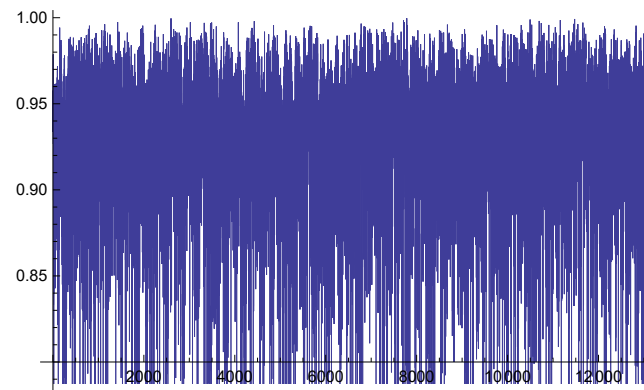
**Fig. 3:** Family income monthly

According to pet care expenses and type of pet shown in Table 4, the findings demonstrate that the observed $p = 0.993$ is above 0.05. Thus, the test at the level of 0.05 indicates that there is no significant difference in the level of pet owners depending on the type of pet variable.

It should be noted that participants spend more on dog care than cat care, even though there is no statistically significant difference between the variables of pet type and pet care expenses.

Table 4: Pet Care Expenses and Type of Pet

Levine's Test for Equality of Variances		t-test for Equality of Means		
F	Sig	t	df	
Equal variances assumed	0.000	0.993	-0.559	298
Equal variances not assumed			-0.559	293.026

**Fig. 4:** Type of pet family ownership**Table 5:** Pet Care Expenses and Gender (males and females)

Levine's Test for Equality of Variances		t-test for Equality of Means		
F	Sig	t	df	
Equal variances assumed	0.011	0.916	2.450	298
Equal variances not assumed			2.449	296.738

According to pet owner and gender, as shown in Table 5, the findings demonstrate that the observed $p = 0.916$ is above 0.05. Thus, the test at the 0.05 level indicates that there is no significant difference in the level of pet care expenses depending on the gender variable (males and females).

Although there was no statistically significant difference between the variable of pet care expenses and the variable of gender, observations showed that pet care expenses for women were higher than for men, especially in the age group 16–26. This outcome is in line with the findings of Peter M. Schwarz et al. (2007), that women are more flexible in spending on pets [24,25,26].

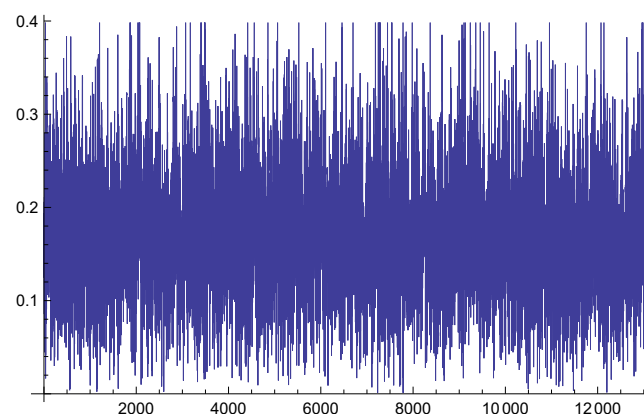
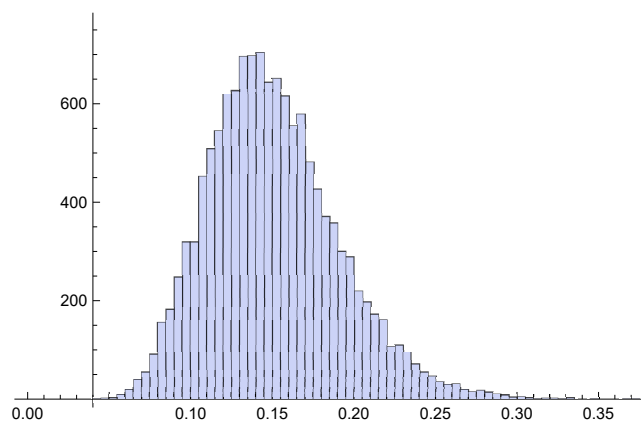
**Fig. 5:** Gender and pet ownership

Table 6: ANOVA test: Pet Care Expenses and social status member of family

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	1.889	3	0.630	2.121	0.098
Within Groups	87.879	296	0.297		
Total	89.767	299			

The findings of the ANOVA test of participants according to the social status member of family are shown in Table 6. The findings illustrate that there are no statistically significant differences in the pet care expenses according to the variable of social status members of family, given that $p = 0.098$, and thus above the statistical significance level needed (0.05).

**Fig. 6:** Adge group and pet ownership**Table 7:** ANOVA test: Pet Care Expenses and age

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	1.364	3	0.455	1.523	0.209
Within Groups	88.403	296	0.299		
Total	89.767	299			

According to pet care expenses shown in Table 7, the findings demonstrate that the observed $p = 0.209$ is above 0.05. Thus, the test at the 0.05 level indicates that there is no significant difference in the level of pet owner depending on the age variable.

It should be noted here that although there is no statistically significant difference between the variable of pet care expenses and the variable of age, observations have shown that pet owners in the age groups 15–26 tend to spend more on pet care expenses towards pet beauty.

Table 8: ANOVA test Pet Care Expenses and number of years pet ownership

Sum of Squares		df	Mean Square	F	Sig.
Between Groups	1.817	3	0.606	2.038	0.109
Within Groups	87.951	296	0.297		
Total	89.767	299			

According to the pet care expenses and number of years of pet ownership, as seen in Table 8, the findings clearly illustrate that there are no statistically significant differences in the pet care expenses according to the variable of number of years of pet ownership, given that $p = 0.109$ is above the level of statistical significance required (0.05).

Considering all the results shown in Tables 1–8, we find that there are no statistically significant differences between all demographic variables and the Pet Care Expenses variable, where p is above the required statistical significance level (0.05), but it should be noted that the participants' responses confirm the interest in pet care expenses.

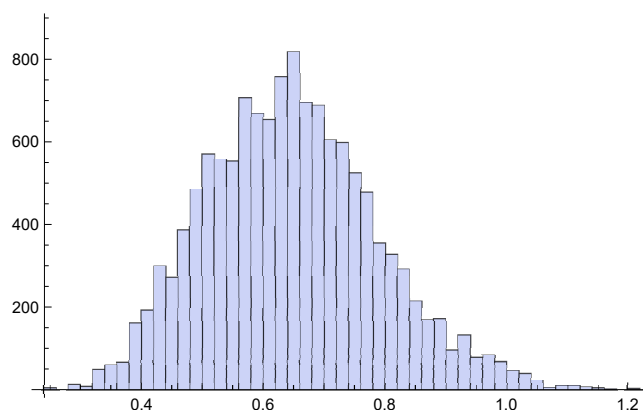


Fig. 7: years number of pet ownership

6 Conclusion

There is a steady increase in pet ownership in urban households in the UAE, as evidenced by the active pet trade market. Future research should use more consistent methods across broader populations of participants in studies of pet ownership in urban households in the UAE.

There is a need to study the important role of pets in the lives of their owners and how they are viewed as family members. In addition, we expect that future studies will examine the relationship between pet owners and emotional support in the Emirati family.

In addition to all the above, there is a research need to develop pet insurance companies and the protection they provide for the health of the pet and to discuss practical ways to integrate pets into the health care of pet owners in the Emirati family.

Author Contributions

Conceptualization, O.S.A.; methodology, O.S.A.; software, A.S.A.; validation, A.R.A., O.S.A., and A.Z.A.; formal analysis, A.S.A.; investigation, A.Z.A.; resources, O.S.A.; data curation, O.S.A.; writing—original draft preparation, O.S.A. and A.S.A.; writing—review and editing, A.R.A.; visualization, O.S.A.; supervision, A.R.A.; project administration, A.S.A.; funding acquisition, A.Z.A. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

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