
A Survey of Attitudes Toward Responsible Pet Ownership

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BEFORE CATS AND DOGS were domesticated, natural ecological forces controlled their population density (1). After these animals became domesticated the effects of these forces diminished, and man's created environment and attitudes—including breed popularity, personal needs, cost, housing restrictions, spaying, euthanasia, mortality due to accidents, and disease prevention and control—became more influential. Of major concern are factors that affect the size of the pet and feral (or stray) subpopulations and their interactions. Some animals move from the pet population into the feral population and, although it is not common, some move from the feral population into the pet population (2).

Contributing to an excess number of stray or feral animals are abandoned or lost pets and uncontrolled matings that result in unwanted young. Preventive measures to keep cats and dogs in the pet population include adoption, neutering, chemical prophylaxis for pregnancy control, and owner education. Safe return of lost cats and dogs to their homes is important for humanitarian and population control reasons. Also, animal control agencies, in cooperation with community veterinarians and humane societies, need to make attempts

to capture, provide treatment for, and place strays in homes. Other ways to decrease the stray animal population include elimination of available shelter and food and depopulation measures such as euthanasia. However, these measures require a responsible, educated public that understands the issues related to dog and cat overpopulation and its potential as a community health problem.

Responsible pet ownership has become an increasing concern of medical professionals and national, State, and community officials. This concern includes the environmental impact of pets' solid and liquid wastes and the more specific problems associated with free-roaming or stray animals in a community. Some officials argue that "irresponsible owners" are a major reason for pet overpopulation, free-roaming pets, and associated community health problems (3-6). Before a practical solution can be found, or the problems properly defined, one must determine attitudes regarding issues such as irresponsible pet ownership, overpopulation, and potential community health problems resulting from stray or free-roaming animals, as well as possible solutions to control of pet populations and stray animals. We present the results of a survey of pet owners and non-owners about these issues.

Study Methods

For this study, pet owners were defined as adults who had a cat or dog, or both, and nonowners as those who did not have either animal when they were interviewed. Interviews were conducted on a part-time basis by

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volunteers who were members of the Greater Kansas City Veterinary Medical Associations or students and faculty of the College of Veterinary Medicine, Columbia. The volunteers were asked to select pet owners as well as nonowners for the survey. Before the interviews were carried out, the study was explained to each person selected, either verbally or by memorandum, and each was asked to sign a written informed-consent form that had been approved by the University of Missouri-Columbia Human Experimentation Committee.

Because the volunteer veterinary professionals and their associates selected their own samples for the interviews, we obtained a respondent population that was better informed and more aware of pet ownership responsibilities than the average members of a community. Our intent was to determine the attitudes of community members already exposed to current public education efforts conducted by veterinarians and public health professionals. Most of the questionnaires were self-administered and took about 35 minutes to complete. Fewer than 15 percent of the persons contacted refused to participate or misplaced the survey questionnaire that was left with them. In addition to the attitudinal information, demographic data were collected from each respondent.

The questions were designed so that responses could be analyzed by a Lickert scale, that is, responses were listed in a scale of strongly agree to strongly disagree. The results of a preliminary evaluation of data from a pilot study suggested that respondents' sex and pet ownership might influence their opinions. Thus, these two factors were considered as independent variables in the present analysis of the data. The Statistical Package for the Social Sciences (SPSS) and the Statistical Analysis System (SAS) were used to evaluate the data (7,8). Initially, the responses to each question were cross tabulated with each independent variable. The chi square test was then applied to these frequency determinations to identify statistically significant deviations from the null hypotheses. The null hypotheses tested were that there is no difference in the responses (*a*) of owners and nonowners within a sex category, (*b*) of men versus women for a particular question, and (*c*) among the ownership categories, that is, three levels of pet ownership—owners of a cat, a dog, or both, and nonowners. In this study *P* values were considered significant if they were ≤ 0.01 .

Results

A total of 910 persons, 414 men and 496 women, completed the questionnaire; their median age was 33 years (table 1). A cat and a dog were owned by 18 percent of the respondents, 35 percent owned only a dog, 11 percent owned only a cat, and 36 percent were nonowners.

Overpopulation. Responses to items relating to overpopulation or stray animals in a community are shown in table 2. Concerning "irresponsible owners" as the major cause of too many stray animals, the distribution of responses differed between female owners and nonowners ($P=0.01$). A majority of the respondents agreed that pet overpopulation is a major problem "in our society today." Concerning stray dogs being a problem "in my community," male nonowners agreed most strongly; male owners were equally divided between agreed and disagreed. As to stray dogs being a problem "in my neighborhood," the distribution of responses differed between female owners and nonowners ($P=0.01$) as well as among all ownership categories ($P=0.004$); the nonowners tended to agree more strongly. In contrast, concerning overpopulation of cats in their community, most of the respondents tended to be neutral or to disagree.

Community health problems. Responses to items relating to potential community health problems are shown in table 3. There was no difference in the distribution of responses between owners and nonowners by sex in their overall opinions toward potential health problems. Although most of the respondents agreed that stray or free-roaming dogs caused accidents, the distribution differed between males and females ($P=0.01$) and among pet ownership categories ($P=0.004$). However, concerning "stray cats cause accidents," opinions were more diverse; the distribution of responses differed only among the pet ownership categories ($P=0.006$). As for "I don't like stray dogs because they can spread disease," again the distribution of responses differed only among the pet ownership categories; owners tended to disagree with the statement. However, opinions on "free-roaming or stray dogs tend to bite" were more divided; owners tended to disagree. Concerning destruction of property by dogs and cats, the distribution of responses differed between male owners and nonowners ($P=0.001$) and among pet ownership categories ($P=0.0001$); owners disagreed more strongly.

For the question about nuisance and pollution by cats, the distribution of responses differed between both female owners and nonowners ($P=0.01$) and among the categories of pet ownership ($P=0.001$). Male owners tended to disagree that cats cause pollution; however, overall a majority of respondents who strongly disagreed were nonowners. In contrast, both men and women, as well as owners and nonowners, generally agreed that dogs are a nuisance or cause pollution, although nonowners tended to agree more strongly.

Population control. Opinions about methods of controlling pet or stray animal populations are shown in

Table 1. Distribution of 910 dog and cat owners and nonowners, by age and sex of respondents

Age group (years)	Men		Women		Total	
	Owner	Nonowner	Owner	Nonowner	Owner	Nonowner
10-19	3	5	14	6	17	11
20-29	90	61	113	76	203	137
30-39	78	28	98	38	176	66
40-49	64	19	54	13	118	32
50-59	16	15	19	17	35	32
60-69	13	14	14	17	27	31
70 plus	3	5	6	11	9	16
Total number	267	147	318	178	585	325
Total percent	64.5	35.5	64.1	35.9	64.3	35.7

Table 2. Responses to questionnaire items directly related to overpopulations of dogs and cats

Item and ownership category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No opinion	P values ¹		
							Owner versus nonowner, by sex	Male versus female	Ownership category ²
<i>The major cause of too many stray animals is irresponsible owners</i>									
Male owner	120	130	3	5	3	3	0.40	0.16	0.02
Male nonowner	62	75	5	2	0	3			
Female owner	184	119	5	3	1	4	0.01		
Female nonowner	76	87	6	4	1	0			
<i>Overpopulation in dog and cat populations is a major problem in society today</i>									
Male owner	96	96	27	36	4	5	0.37	0.04	0.54
Male nonowner	51	58	18	11	4	3			
Female owner	123	138	14	24	5	5	0.16		
Female nonowner	56	79	16	19	1	3			
<i>Free-roaming or stray dogs are a problem in my community</i>									
Male owner	29	106	25	96	5	3	0.02	0.36	0.19
Male nonowner	31	52	17	37	4	4			
Female owner	49	123	41	86	7	6	0.33		
Female nonowner	24	63	23	49	5	10			
<i>Free-roaming or stray dogs are a problem in my neighborhood</i>									
Male owner	27	96	27	99	12	2	0.04	0.64	0.004
Male nonowner	24	49	23	39	8	4			
Female owner	44	112	41	104	11	3	0.01		
Female nonowner	28	54	17	56	9	11			
<i>We have too many (an overpopulation) of cats in our community</i>									
Male owner	18	59	68	73	5	29	0.35	0.57	0.04
Male nonowner	17	41	33	32	2	16			
Female owner	32	73	64	86	9	36	0.65		
Female nonowner	21	46	34	40	2	22			

¹ Level of significance for X² values.² Ownership categories are dog only, cat only, both dog and cat, and nonowner.

Table 3. Responses to questionnaire items related to potential community health problems as a result of overpopulations of dogs and cats

Item and ownership category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No opinion	P values ¹		
							Owner versus nonowner, by sex	Male versus female	Ownership category ²
<i>Free-roaming or stray dogs cause accidents</i>									
Male owner	36	140	48	32	4	2	0.55	0.01	0.004
Male nonowner	22	78	30	12	0	1			
Female owner	53	177	38	24	10	9	0.09		
Female nonowner	23	100	30	14	0	8			
<i>Stray or free-roaming cats cause accidents</i>									
Male owner	6	75	53	98	11	11	0.16	0.08	0.006
Male nonowner	7	51	57	39	7	4			
Female owner	16	100	66	83	15	21	0.66		
Female nonowner	10	47	41	49	4	13			
<i>I don't like stray dogs because they can spread disease</i>									
Male owner	16	120	46	67	7	5	0.20	0.20	0.01
Male nonowner	19	55	27	33	3	10			
Female owner	25	128	63	62	11	16	0.03		
Female nonowner	15	75	33	29	2	16			
<i>Free-roaming or stray dogs tend to bite</i>									
Male owner	5	68	73	101	7	6	0.51	0.26	0.11
Male nonowner	4	41	43	47	2	8			
Female owner	17	75	83	107	7	16	0.15		
Female nonowner	5	59	48	45	4	9			
<i>The major problem that dogs and cats cause is destroying other people's property</i>									
Male owner	4	49	50	144	12	3	0.001	0.22	0.0001
Male nonowner	6	50	25	56	4	4			
Female owner	9	79	56	144	16	7	0.02		
Female nonowner	12	52	39	59	4	7			
<i>Free-roaming or stray cats create a nuisance and cause pollution</i>									
Male owner	12	95	50	80	9	10	0.001	0.28	0.0001
Male nonowner	19	68	14	29	2	8			
Female owner	18	132	49	73	12	18	0.01		
Female nonowner	20	62	29	34	2	20			
<i>Free-roaming or stray dogs create a nuisance and cause pollution</i>									
Male owner	28	137	47	43	4	3	0.03	0.20	0.06
Male nonowner	29	78	13	18	2	3			
Female owner	43	175	40	37	5	7	0.31		
Female nonowner	25	97	15	22	2	10			

¹ Level of significance for X² values.

² Ownership categories are dog only, cat only, both dog and cat, and nonowner.

Table 4. Responses to questionnaire items related to methods of population control and control of stray dogs and cats in a community

Item and ownership category	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	No opinion	P values ¹		
							Owner versus nonowner, by sex	Male versus female	Ownership category ²
<i>I believe having family planning for pet dogs and cats is a good idea</i>									
Male owner	114	123	12	8	2	4	0.004	0.09	0.02
Male nonowner	57	60	18	1	1	9			
Female owner	167	118	11	55	0	9	0.11		
Female nonowner	76	75	9	3	2	9			
<i>If I had a dog or cat, I would not have it neutered (e.g., spayed or castrated)</i>									
Male owner	12	35	52	106	57	2	0.07	0.001	0.0001
Male nonowner	10	19	25	63	20	6			
Female owner	22	119	40	123	104	5	0.001		
Female nonowner	11	21	18	87	29	6			
<i>I would not want to have a dog or cat because the local registration and ordinances are too strict</i>									
Male owner	3	6	21	148	54	17	0.21	0.82	0.0001
Male nonowner	0	6	17	78	23	15			
Female owner	2	3	19	159	83	23	0.001		
Female nonowner	2	9	24	89	24	18			
<i>A community should have fines for letting dogs or cats wander or run free</i>									
Male owner	54	127	44	31	6	3	0.07	0.13	0.0001
Male nonowner	46	12	16	9	3	1			
Female owner	93	135	43	31	7	5	0.44		
Female nonowner	61	74	17	13	2	5			
<i>A leash law would or does keep me from allowing my dog or cat to wander or run free</i>									
Male owner	19	93	21	103	13	4	0.0001	0.02	0.0001
Male nonowner	16	58	14	14	8	27			
Female owner	33	131	33	73	19	13	0.0001		
Female nonowner	19	77	13	19	2	31			
<i>I would not want to own a dog because it might annoy the neighbors</i>									
Male owner	0	18	43	165	38	1	0.0001	0.19	0.0001
Male nonowner	2	28	28	66	16	5			
Female owner	2	23	36	183	63	3	0.0001		
Female nonowner	7	44	33	75	14	4			

¹ Level of significance for X² values.

² Ownership categories are dog only, cat only, both dog and cat, and nonowner.

table 4. The respondents generally agreed that "family planning for dogs and cats is a good idea," but male owners tended to agree more strongly. Yet, the respondents' opinions about "not neutering a dog or cat" were quite diverse. The distribution of responses differed between female owners and nonowners ($P=0.001$), with owners tending to strongly disagree; between men and women ($P=0.001$); and among the pet ownership categories ($P=0.0001$). Ninety percent of the female owners of cats and 70 percent of the female owners of dogs disagreed or strongly disagreed on not having their pets neutered. In contrast, male owners of cats tended to disagree or were neutral about not neutering their pets. Among dog owners, twice as many men as women agreed that they would not neuter their pets.

Regarding ordinances and local registration limiting pet ownership, most respondents disagreed that ordinances or registration would prevent them from having a cat or dog. Yet, the distribution of responses differed between female owners and nonowners ($P=0.001$) because owners disagreed more strongly. The distribution of responses also differed among the pet ownership categories ($P=0.0001$); nonowners tended to disagree or to be neutral, whereas owners—especially dog owners—disagreed. Most respondents agreed with a system of fines to control free-roaming cats and dogs, but the distribution of responses differed by category of pet ownership ($P=0.001$); nonowners tended to agree more strongly.

The statement that a leash law would keep people from allowing their dogs or cats to run free resulted in some of the most diverse opinions in our study; the distribution of responses differed between owners and nonowners for both men and women ($P=0.0001$). Male owners disagreed; female owners agreed. In contrast, the female owners and nonowners agreed, but more nonowners than owners agreed or strongly agreed. Also, the distribution of responses differed by pet ownership category ($P=0.0001$); dog owners tended to disagree that a leash law would keep them from "allowing their dogs to wander or run free."

The final item dealt with one possible reason for not owning a dog, that is, if ownership might annoy a neighbor. Again, the distribution of responses differed among owners and nonowners for both men and women ($P=0.0001$). Of the owners, 80 percent disagreed or strongly disagreed, whereas only 60 percent of the male and 50 percent of the female nonowners disagreed or strongly disagreed.

Discussion

A majority of the respondents, both owners (97 percent) and nonowners (94 percent) agreed or strongly

agreed that the issue of irresponsible pet owners was a problem in our society; yet, it was the female owners who agreed most strongly. Most respondents also agreed that pet overpopulation is a problem. However, concerning the issues of overpopulation in their community or in their neighborhood, it was the nonowners who agreed most often that a problem existed at the local level. This response pattern may reflect the true situation existing within a community; but, if there is an overpopulation or stray animal problem at the community or neighborhood level, a number of pet owners do not believe that they are contributing to this problem.

The responses pertaining to potential community health problems related to free-roaming or stray cats and dogs suggest that the respondents had some knowledge of such problems; however, for specific medical problems such as animal bites, the average person's knowledge is superficial (9,10). When cats or dogs are allowed to stray or "roam free," a number of community health problems may arise (9-16). The results of another study indicated that although both owners and nonowners agreed that there is a need for control measures to prevent free-roaming dogs in the neighborhood, nonowners agreed to a greater extent (17).

On questions of nuisance and pollution, ownership status had some effect on the extent of agreement or disagreement. Nonowners in our study believed that free-roaming or stray cats, rather than dogs, create nuisance and pollution problems. Nuisance and pollution have been mentioned in the reports of a number of studies (2,6,10-12,16,18); yet, in many instances the severity of the problems was not measured qualitatively. Educational materials on nuisance and pollution problems related to cats and dogs must be stated in terms that the average owner or nonowner can understand; for example, thousands of kilograms of feces or liters of urine per day are figures to which the average person cannot relate.

Opinions about various methods of controlling pet or stray animal populations resulted in the greatest differences in the distribution of responses in our study. Owners agreed most strongly on family planning for pets, but male owners of dogs stated that they would not have their pets neutered. Local registrations, ordinances, and leash laws would not stop owners from acquiring a dog or cat; however, they would discourage nonowners from becoming pet owners. The nonowners agreed most often that owners should be fined for allowing dogs or cats to wander or run free. Although nuisance problems are a major concern of city officials (19), 76 percent of the owners disagreed or strongly disagreed that they would not want to own a dog because it might annoy the neighbors; only 53 percent of the nonowners had similar opinions.

Several conclusions can be drawn from the study results. Although people in general are knowledgeable about the issue of irresponsible pet ownership, responsible pet ownership must be stressed in community health education, extension, and continuing education programs.

A pet owner should be responsible for the animal at all times. A pet should not be allowed to trespass or defecate on a neighbor's property; if it does, the feces should be picked up by the owner. A dog usually does not bark without reason; if it does, it needs attention. A barking dog also disturbs the neighbors. Many breeds of dogs, especially large ones, require exercise in a fenced outdoor area or on a leash.

If one does not breed pets for show or as a source of income, the pet should be neutered. Neutering not only prevents unwanted offspring; it may also lengthen the animal's life expectancy by reducing the risk of certain diseases and lessen the animal's desire to roam. Dogs and cats do not have to wander or run free to be healthy. In fact, wandering or running free increases the potential for community health problems associated with animal populations. Abandoning pets is cruel—they require food, shelter, and daily attention and care.

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SYNOPSIS

SELBY, LLOYD A. (College of Veterinary Medicine, University of Missouri-Columbia), RHOADES, JOHN D., HEWETT, JOHN E., and IRVIN, JAMES A.: *A survey of attitudes toward responsible pet ownership. Public Health Reports, Vol. 94, pp. 380–386.*

The concerns of medical and community officials about responsible pet ownership have increased. Before a practical solution can be found for irresponsible ownership and community health problems associated with pet populations, the public's attitudes

on issues related to responsible pet ownership must be determined. Such issues include attitudes on dog and cat overpopulation, potential public health problems associated with pet populations, and methods of controlling pet populations and stray animals.

Responses to a questionnaire were used to evaluate the attitudes of 910 pet owners and nonowners toward factors comprising responsible pet ownership. The median age of the respondents was 33 years; 414 (45 percent) were men, and 496 (55 percent) were women. At the time of the

study, 18 percent owned a cat and a dog, 35 percent owned only a dog, 11 percent owned only a cat, and 36 percent were nonowners.

Not only the sex of the respondent but also the category of pet ownership affected opinions on overpopulation of dogs and cats, nuisance and pollution problems associated with these animals, and methods of controlling pet populations in the community. For example, owners agreed strongly on family planning for pets, but a majority of male owners stated that they would not have their dogs neutered.