



Free-roaming Dogs and Cats in Central Italy: Public Perceptions and Magnitude of the Problem

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Introduction

On August 14, 1991, the Italian Parliament approved Law n. 281 "Companion Animals and the Prevention of Strays" (1) which described the problems and laid the foundation for actions to solve them, emphasizing the welfare of the animals. This law made a dramatic change in stray animal management by making it illegal to euthanize dogs and cats unless they were seriously or incurably ill and by promoting dog registration and sterilization as well as protection and assistance for free-roaming dogs and cats. After 15 years, free-roaming dogs and cats have continued to be a major problem, particularly in the central and southern parts of Italy (2,3,4). Shelters for dogs and cats are always full and there is never enough space. The major objective of the present research was to learn more about the extent, types and potential solutions for problems associated with free-roaming dogs and cats in the province on Teramo, Italy.

Sample selection. Due to the high variability of population density within the 47 municipalities of Teramo province, stratified random sampling was performed, therefore the municipalities were combined into three regions: central hill municipalities, eastern coastal municipalities and western (inland) mountain municipalities. We elected to estimate the sample size for a proportion of 0.5 using a 95% confidence level and 0.05 error rate. A sample size of 384 was calculated.

Questionnaire Design. A telephone questionnaire was designed with input from social scientists, animal behaviorist, veterinarians, experts in pedagogy and epidemiologists. The questionnaire was pre-tested and revised accordingly. It consisted of an introduction section explaining the purpose of this study and a section on free-roaming

animals, where it was asked about their number, species and location and whether anyone was caring for them. Respondents were also asked if they considered free-roaming animals to be a problem and what type of problem as well as why owners abandoned animals and what might be done about it. The final section of the questionnaire included demographic information about the respondent and household.

Table 1. Extent and perceived risks of free-roaming cat and dog problems

Variable	Number	%	Number	%
Are Free-Roaming Cats And/or Dogs A Problem?				
Yes	357	89.9		
No	37	9.3		
Missing	3	0.8		
Personal Safety				
Yes	239	60.2	129	32.5
No	158	39.8	268	67.5
Animal Welfare				
Yes	177	44.6	90	22.7
No	220	55.4	307	77.3

Table 2. Location and human interaction of free-roaming dog and cat populations

Variable	Number	%	Number	%
Free-Roaming Dogs And/or Cats Present Where Live				
Yes	274	69.2		
No	121	30.6		
Missing	1	0.3		
Which Species				
Cats	66	23.9		
Dogs	108	39.1		
Both	101	36.6		
Missing	1	0.4		
Are They Owned				
Yes	98	35.6		
No	92	33.5		
Don't know	77	28.0		
Missing	8	2.9		
How Many Cats				
1 - 2	5	3.0	19	9.1
3 - 5	77	46.1	136	65.1
6 - 14	61	36.5	42	20.1
More Than 14	18	10.8	4	1.9
Missing	6	3.6	8	3.8
Where Cats Seen				
Abandoned Buildings	47	28.3	51	24.4
Public Property	52	31.3	91	43.5
Private Property	30	18.1	24	11.5
Dumps	0	0.0	2	1.0
Other	16	9.6	16	7.7
Don't Know	13	7.8	17	7.7
Missing	8	4.8	8	3.8
Is Someone Caring For The Cats?				
Yes	95	56.9	89	42.6
No	45	26.9	65	31.1
Don't Know	19	11.4	47	22.5
Missing	8	4.8	8	3.8
Is That Person Yourself				
Yes	39	40.6	21	21.6
No	50	52.1	60	61.9
Missing	7	7.3	16	16.5

Results

Three hundred and ninety seven respondents agreed to participate in the interview which resulted in a response rate of 74%. Ninety percent of respondents (95% CI: 87%, 93%) felt free-roaming dogs and cats were a problem. Respondents who indicated personal safety was a problem were significantly less likely to also consider animal health a problem ($p=0.05$). Respondents who listed personal safety as a problem were significantly more likely to also list public health ($p=0.001$) and environmental hygiene ($p=0.0003$) as problems. Respondents who selected public health as a problem were also more likely to select environmental hygiene ($p<0.0001$). There was no association between respondents who selected animal health and their selection of either public health ($p=0.9$) or environmental hygiene ($p=0.5$). Variables tested for potential association with free-roaming animals being a problem and with the 4 types of problems were: gender, age, marital status, education level, profession, household size, owning a pet and region. Variables which were significantly associated with whether respondents felt free-roaming animals were problem (yes or no) in the bivariate analysis were age ($p=0.002$), household size ($p=0.007$) and owning a pet ($p=0.05$). Variables which were significantly associated with personal security as a response were age ($p=0.02$), household size ($p=0.002$) and region ($p=0.09$). Variables which were significantly associated with a response of animal welfare were gender ($p=0.009$), age ($p=0.0006$), marital status ($p=0.13$), education ($p=0.0003$) and owning a pet ($p=0.001$). Variables which were significantly associated with a response of public health as a problem were gender ($p=0.07$), marital status ($p=0.03$) and region ($p=0.15$). One variable was significantly associated with environmental hygiene as a response: owning a pet ($p=0.05$). Pet owners were less likely to respond that it was impossible to keep the pet than non-pet owners ($p=0.01$).

Discussion

A very high proportion of respondents felt that free-roaming dogs and cats were a problem even if all of them did not actually see these animals. Three quarters of the respondents did see dogs and 60% saw free-roaming cats. They believed about a third of these animals were owned. Free-roaming dogs and cats were most commonly seen on public property followed by abandoned buildings and private property. Age of the respondents and household size were significantly associated with whether or not the respondents felt free-roaming dogs and cats were a problem. In particular, the oldest age category from 65 to 90 years were one third less likely to consider free-roaming animals problem compared to the age group 34 years and under. Households with three people in them were 10 times more likely to consider free-roaming animals a problem than households with only one person. Personal safety was the most commonly cited problem (60% of respondents) followed by animal welfare, public health and environmental hygiene. Perhaps the more common sightings of free-roaming dogs accounts for personal safety as the most commonly reported problem. The only variable which predicted the selection of personal safety was household size. Three-person households and households of six or more were significantly more likely to consider personal safety a problem than two-person households. Animal welfare was the second most commonly cited problem demonstrating the high level of concern of the public for the well-being of these animals. Gender of the respondent, education level and pet ownership were the important predictors for

this response. Men were half as likely to give this answer as women. Any education beyond elementary increased the likelihood of animal welfare as a problem. Households which owned pets were about twice as likely to believe this was a problem as non-pet owners. Respondents who were concerned about public health and free-roaming animals were also more likely to be concerned about environmental hygiene. Men were about twice as likely to indicate that public health was a problem compared to women. Respondents who were single or widowed were about half as likely to be concerned about public health as those who were married. When respondents were asked why they believed pets were abandoned by their owners, about two thirds felt that people lost interest in keeping the pet and about 23% believe that it had become impossible to properly care for the pet. Pet owners were less likely to respond that it was impossible to keep the pet than non-pet owners. These replies would tend to support the idea that a strong relationship between the pet and the owner has not developed, making it relatively easy for an owner to abandon the pet. They also suggest that a poor choice of pet for the household members lifestyle may play an important role. When asked what people who could not keep the pet should do, responses were divided approximately in half between giving the pet to a reliable person and putting it in a public kennel. It is unknown whether respondents would be willing to pay more to expand the capacity of public kennels. Respondents clearly felt it was the community government's responsibility to deal with free-roaming dogs and cats. In addition, the views of the local private practice veterinarians as well as the government veterinarians on sterilization, including prepubertal surgery, should be examined. When asked what to do about the currently free-roaming animals, respondents primarily chose building new kennels and birth control. These are essentially the options which are currently being pursued. Only 2% felt that euthanasia of these animals was appropriate. This demonstrates support for the law which makes it illegal to euthanize animals except for serious or incurable illness. But again, 11% did not have an opinion. Because the prevailing view was that people lost interest and therefore abandoned their pets, the factors which contribute to a lack of interest should be studied and addressed. Strengthening the relationship between pet and owner will play an important role in resolving this problem. In addition, the fact that people feel abandonment is their best or only alternative is a factor which needs to be studied. This perception could be due to too few animal shelters or to the belief that shelters were not good choices for pets. It could be due to the belief that the dog or cat could look after itself or that someone might adopt the animal if they found it homeless. Abandonment could also be rooted in a lack of knowledge about what pet ownership is like and how to select a pet who will be a good match for the household. A pet who is easy to care for, well behaved and generally not too difficult to live with will be easier for someone to keep and to feel attached to than a pet who is untrained, noisy, aloof and aggravating.

Conclusions

This cross-sectional survey demonstrated that free-roaming dogs and cats are a common problem in the province of Teramo, Italy. Personal safety was the most commonly reported concern, perhaps as a result of the visibility and numbers of free-roaming dogs. Animal welfare was the second most commonly reported problem. This underscores the public concern for animal well-being in this part of Italy and is consistent with national and regional legislation designed to protect and reduce the numbers of free-roaming dogs and cats. The view of the respondents was that this problem should be handled by primarily by the government and not by private organizations. While this type of study can only suggest hypotheses to be tested by more stringent study designs, the result indicate that abandonment is likely a result of lack of interest or difficulty in maintaining the pet. These results are probably due to a poor choice of pet for the situation, failure to bond with the pet or lack of infrastructure to help owners with problem situations.

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