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Moving: Characteristics of Dogs and Cats and Those Relinquishing Them to 12 U.S. Animal Shelters

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The National Council on Pet Population Study and Policy Regional Shelter Survey identified moving as the most often cited of 71 reasons for relinquishing dogs and the 3rd most common reason for relinquishing cats. Most relinquished companion animals were less than 3 years old and female. Dogs were most often intact, whereas cats were most often altered. Friends had given the majority of these companion animals to the relinquishers, who had obtained them at no cost. Most had lived with the relinquishers for less than 2 years. The majority of relinquishers were White and female, and had at least a high school education. Based on the U.S. population age distribution, young adults seem to be using shelters at a significantly higher rate than would be expected. These age groups are also more mobile, according to U.S. Census data. Therefore, educational efforts that target young, potentially mobile adults could decrease the number of animals relinquished.

The Regional Shelter Study, sponsored by the National Council on Pet Population Study and Policy, reported 71 reasons for relinquishment of dogs, cats, or both (Salman et al., 1998). Of the animals relinquished, 569 individual animals (330 dogs, 239 cats) were given away because their owners were moving. At a time when targeted intervention strategies are being developed to reduce relinquishments, this article addresses how the issues associated with companion animals and moving should be considered.

MATERIALS AND METHODS

On randomly selected days for 1 year, interviews were conducted with relinquishers of dogs and cats at 12 shelters in four regions of the United States. Three shelters were located in California, 3 were located in Colorado, 2 each in Tennessee and Kentucky, and 1 each in New Jersey and New York. Interviews were conducted using a standardized questionnaire. All interviewers received the same training. Participation by relinquishers was voluntary. Confidential interviews were conducted (Salman et al., 1998).

The subset of data that provided the focus of this study was derived from completed questionnaires on dogs and cats who were taken to U.S. shelters because their owners were moving. Descriptive data were evaluated for the following items:

1. Reasons for relinquishment. Relinquishers were allowed to give up to five reasons.
2. Animal characteristics such as age, sex, neuter status, breed, frequency of veterinary visits, source of acquisition, purchase cost, length of ownership, animal housing (inside vs. outside), and selected behaviors during the month prior to relinquishment.

3. Relinquisher characteristics such as age, sex, ethnicity or race, income range, level of education, and knowledge about the care and behavior of companion animals.

Data were entered into Epi Info (Dean et al., 1994) and frequencies and descriptive statistics were done using the BMDP Statistical Software (Dixon, 1992). Because an adequate comparison group for all variables was not available, this article is limited to descriptions of the variables associated with relinquishment where moving was a contributing cause. The only comparisons made and tested for significance used U.S. Census Bureau data. Pairs of population proportions of selected relinquisher variables were compared using a two-tailed hypothesis test with a null hypothesis that the two proportions were equal. Because samples were large, the test statistical (z value) was considered to be normally distributed. A weighted average of the two sample proportions was used as an estimator of the common hypothesized proportion (Milton & Arnold, 1990). The level of significance was set *a priori* at $p \leq .05$.

RESULTS

Moving was the most common reason given for relinquishing dogs. It was the third most common reason for relinquishing cats, following reasons of too many animals in the house and allergies. Moving, however, was not the only reason given for relinquishment. Dog and cat relinquishers reported an average of 2.2 and 2.0 other reasons, respectively. Refusal of a landlord to allow animals was the most common additional reason. This response was given by 128 (38.8%) of the dog relinquishers and 91 (38.1%) of the cat relinquishers. A total of 13 dogs (3.9%) were relinquished because parents or others living in the household would not allow the companion animals to stay. Consequently, 40.8% of the animals—141 of 330 dogs and 91 of 239 cats—who were given away because an owner was moving were also relinquished because of housing rules or restrictions.

Reports of physical housing limitations such as homes or yards that were too small, homes that had no yards, or homes with "no place to keep the animal" were cited as reasons for relinquishment by 12.7% of dog owners (42 of 330). A total of 6.1% owners reported too many animals, and 5.2% reported that the cost of maintaining a dog was more than they could afford or were willing to spend. Of cat owners who were moving, 9.2% (22 of 239) of the relinquishers reported that they or some member of their family had allergies that might be associated with their cat.

Characteristics of Animals

Table 1 displays the characteristics of dogs and cats relinquished because the owner was moving. The majority of dogs were less than 2 years old. Most cats were less

TABLE 1
Characteristics of Dogs and Cats Relinquished to 12 U.S.
Shelters (1995–1996) Because Owner Was Moving

| Characteristic | Dogs | | Cats | |
|---------------------------|------|-------|------|-------|
| | n | % | n | % |
| Age | | | | |
| 0–5 months | 27 | 8.4 | 13 | 5.8 |
| 5 months–3 years | 175 | 54.5 | 104 | 46.2 |
| 3–8 years | 100 | 31.2 | 79 | 35.1 |
| 8+ years | 19 | 5.9 | 29 | 12.9 |
| Total | 321 | 100.0 | 225 | 100.0 |
| Sex | | | | |
| Male | 146 | 45.3 | 92 | 40.2 |
| Female | 176 | 54.7 | 137 | 59.8 |
| Total | 322 | 100.0 | 229 | 100.0 |
| Neuter status of males | | | | |
| Neutered | 49 | 33.6 | 53 | 57.6 |
| Intact | 93 | 63.7 | 38 | 41.3 |
| Unknown | 4 | 2.7 | 1 | 1.1 |
| Total | 146 | 100.0 | 92 | 100.0 |
| Neuter status of females | | | | |
| Neutered | 74 | 42.0 | 76 | 56.7 |
| Intact | 99 | 56.2 | 55 | 41.0 |
| Unknown | 3 | 1.7 | 3 | 2.2 |
| Total | 176 | 100.0 | 134 | 100.0 |
| Purebred? | | | | |
| No | 236 | 74.2 | 207 | 95.8 |
| Yes | 76 | 23.9 | 7 | 3.2 |
| Unknown | 6 | 1.9 | 2 | 0.9 |
| Total | 318 | 100.0 | 216 | 100.0 |
| Time animal spent outside | | | | |
| Always or almost always | 73 | 23.2 | 10 | 4.5 |
| Most of the time | 61 | 19.4 | 15 | 6.8 |
| Some of the time | 145 | 46.0 | 43 | 19.5 |
| Rarely or never | 36 | 11.4 | 153 | 69.2 |
| Total | 315 | 100.0 | 221 | 100.0 |
| Source | | | | |
| Offspring of pet | 26 | 8.2 | 19 | 8.3 |
| Pet shop | 19 | 6.0 | 20 | 8.8 |
| Breeder | 43 | 13.5 | 6 | 2.6 |
| Shelter | 65 | 20.4 | 33 | 14.5 |
| Veterinarian | 1 | 0.3 | 4 | 1.8 |
| Friend | 83 | 26.0 | 71 | 31.1 |
| Stranger | 34 | 10.7 | 13 | 5.7 |
| Stray | 38 | 11.9 | 47 | 20.6 |
| Gift | 4 | 1.3 | 10 | 4.4 |
| Other | 6 | 1.9 | 5 | 2.2 |
| Total | 319 | 100.0 | 228 | 100.0 |

(Continued)

TABLE 1 (Continued)

| Characteristic | Dogs | | Cats | |
|---------------------------------|------|-------|------|-------|
| | n | % | n | % |
| Length of ownership | | | | |
| 0-7 months | 109 | 34.1 | 60 | 26.6 |
| 7 months-1 year | 34 | 10.6 | 19 | 8.4 |
| 1-2 years | 61 | 19.1 | 37 | 16.4 |
| 2-5 years | 66 | 20.6 | 54 | 23.9 |
| 5+ years | 50 | 15.6 | 56 | 24.8 |
| Total | 320 | 100.0 | 226 | 100.0 |
| Purchase cost | | | | |
| None | 180 | 57.3 | 173 | 77.6 |
| Some | 134 | 42.7 | 50 | 22.4 |
| Total | 314 | 100.0 | 223 | 100.0 |
| Visits to a veterinarian | | | | |
| None | 62 | 19.9 | 85 | 38.3 |
| 1 or more | 249 | 80.1 | 137 | 61.7 |
| Total | 311 | 100.0 | 222 | 100.0 |

than 3 years old (39.1% < 2 years old). More female animals were relinquished than male animals. Dogs were more likely to have been turned over to a shelter intact. Cats were more likely to have been altered. Far fewer cats than dogs were reported to be purebred. Cats were predominantly indoor companion animals (rarely or never outside). Fewer dogs were kept indoors. Most of the dogs and cats who were given to shelters had been given to their owners by friends. Shelters were the second most common source for obtaining a dog. Strays were the second most common source for cats. Most dogs and cats had been owned for less than 2 years. In addition, approximately one third of the dogs and one quarter of the cats had been owned for less than 7 months. The majority of dogs and cats were obtained at no cost. Fewer cats than dogs had been to a veterinarian in the year prior to their relinquishment.

Table 2 displays the reported frequency of selected behaviors of dogs and cats during the month prior to relinquishment. Many dogs were reported to be hyperactive at least some of the time during the prior month. One quarter or more of the dogs had soiled in the house or damaged things or were too noisy or fearful at least some of the time during the month prior to relinquishment. Almost 40% of the cats had seemed fearful during the previous month. Approximately 25% of the cats were reported to have been hyperactive, too noisy, or both at least some of the time.

Characteristics of Relinquishers

Table 3 displays the characteristics of the relinquishers who reported that they were moving. Relinquishers were more likely to be White, female, and educated beyond

high school. The median household income range was \$27,500 to \$34,999 for dogs and \$20,000 to \$27,499 for cats. Table 4 includes the age distribution of all relinquishers who participated in this study compared with the age distribution present in the U.S. population (U.S. Department of Commerce, 1995). The 25- to 39-year-old age groups were significantly overrepresented ($p < .001$) among the relinquishers.

Table 5 displays responses to questions about the general care and behavior of companion animals. Many people relinquishing dogs did not know that dogs can come into heat approximately twice a year. People relinquishing cats were even

TABLE 2
Responses to Questions on Selected Behaviors of Dogs and Cats During the Month Prior to Relinquishment to 12 U.S. Shelters (1995–1996) Because the Owner Was Moving

| Statement | | Responses | | | | | | | |
|--|------|-------------------------|------|------------------|------|------------------|------|-----------------|------|
| | | Always or Almost Always | | Most of the Time | | Some of the Time | | Rarely or Never | |
| | | n | % | n | % | n | % | n | % |
| How often did the animal soil in the house? | Dogs | 11 | 3.5 | 16 | 5.1 | 55 | 17.5 | 233 | 74.0 |
| | Cats | 3 | 1.3 | 5 | 2.2 | 20 | 9.0 | 195 | 87.4 |
| How often did the animal damage things, either inside or outside? | Dogs | 13 | 4.1 | 11 | 3.5 | 80 | 25.3 | 212 | 67.1 |
| | Cats | 1 | 0.4 | 3 | 1.3 | 32 | 14.3 | 187 | 83.9 |
| How often do you think the animal was overly active (hyper)? | Dogs | 38 | 12.0 | 42 | 13.2 | 100 | 31.5 | 137 | 43.2 |
| | Cats | 11 | 4.9 | 12 | 5.4 | 35 | 15.7 | 165 | 74.0 |
| How often do you think the animal was too noisy? | Dogs | 4 | 1.3 | 16 | 5.0 | 105 | 33.1 | 192 | 60.6 |
| | Cats | 3 | 1.4 | 6 | 2.7 | 44 | 19.8 | 169 | 76.1 |
| How often did the animal show fear (people/animals/noise/objects)? | Dogs | 10 | 3.2 | 21 | 6.6 | 75 | 23.7 | 210 | 66.5 |
| | Cats | 9 | 4.0 | 28 | 12.6 | 51 | 22.9 | 135 | 60.5 |
| How often did the animal growl/hiss/snap/attempt to bite people? | Dogs | 4 | 1.3 | 3 | 0.9 | 26 | 8.2 | 284 | 89.6 |
| | Cats | 0 | 0.0 | 1 | 0.4 | 15 | 6.7 | 207 | 92.8 |
| How often did the animal growl/hiss/snap/threaten other animals? | Dogs | 2 | 0.6 | 1 | 0.3 | 40 | 12.6 | 274 | 86.4 |
| | Cats | 6 | 2.7 | 5 | 2.3 | 23 | 10.4 | 187 | 84.6 |
| How often did the animal attack/start a fight with other animals? | Dogs | 1 | 0.3 | 2 | 0.6 | 15 | 4.7 | 298 | 94.3 |
| | Cats | 0 | 0.0 | 1 | 0.5 | 13 | 5.6 | 208 | 93.7 |
| How often did the animal escape from the house/yard? | Dogs | 8 | 2.5 | 8 | 2.5 | 46 | 14.6 | 254 | 80.4 |
| | Cats | 0 | 0.0 | 3 | 1.4 | 10 | 4.6 | 206 | 94.1 |

TABLE 3
Characteristics of People Relinquishing Dogs and Cats to 12
U.S. Shelters (1995–1996) Because the Owner Was Moving

| Characteristic | Dogs | | Cats | |
|-----------------------------------|------|-------|------|-------|
| | n | % | n | % |
| Sex | | | | |
| Male | 140 | 49.3 | 69 | 36.3 |
| Female | 144 | 50.7 | 121 | 63.7 |
| Total | 284 | 100.0 | 190 | 100.0 |
| Level of education reached | | | | |
| Less than high school | 24 | 8.8 | 18 | 9.7 |
| Graduated high school | 95 | 34.7 | 58 | 31.2 |
| Beyond high school | 155 | 56.6 | 110 | 59.1 |
| Total | 274 | 100.0 | 186 | 100.0 |
| Annual household income | | | | |
| <\$12,499 | 39 | 14.9 | 25 | 14.8 |
| \$12,500–19,999 | 34 | 13.0 | 23 | 13.6 |
| \$20,000–27,499 | 34 | 13.0 | 38 | 22.5 |
| \$27,500–34,999 | 60 | 23.0 | 25 | 14.8 |
| \$35,000–44,999 | 48 | 18.4 | 27 | 16.0 |
| \$45,000–74,999 | 29 | 11.1 | 18 | 10.7 |
| \$75,000–124,999 | 13 | 5.0 | 9 | 5.3 |
| >\$125,000 | 4 | 1.5 | 4 | 2.4 |
| Total | 261 | 100.0 | 169 | 100.0 |
| Cultural/ethnic identity | | | | |
| Hispanic/Latino(a) | 34 | 12.0 | 20 | 10.6 |
| White | 203 | 71.5 | 134 | 71.3 |
| Black/African American | 28 | 9.9 | 21 | 11.2 |
| Asian/Pacific Islander | 8 | 2.8 | 6 | 3.2 |
| American Indian/Native American | 8 | 2.8 | 4 | 2.1 |
| Other | 3 | 1.1 | 3 | 1.6 |
| Total | 284 | 100.0 | 188 | 100.0 |

less knowledgeable about the estrus cycle of dogs. Their confusion was even more apparent when they were asked about the estrus cycle of cats. Almost 75% of dog relinquishers and nearly 50% of cat relinquishers admitted that they did not know how often a cat could come into heat. Alarmingly, the majority of dog relinquishers and almost half of cat relinquishers felt that a female dog or cat would be better off if she had one litter before being altered, or they did not know if this was true or not. When asked if dogs and cats misbehaved to spite their owners, most dog and cat relinquishers thought they did, or did not know. More dog than cat relinquishers did not realize that cats mind how many other cats there are in the

Although there were significantly more relinquishers in the 25- to 39-year-old age groups compared with the U.S. population, there were no significant differences in the proportion of these age groups across regions. However, there were significant differences in the distribution of relinquishers' ethnic identities among regions (Table 6). A significantly greater percentage of Hispanic/Latino(a) relinquishers used the New York-New Jersey shelters compared with the Colorado shelters ($p < .05$) and the California shelters ($p < .001$). Further, a significantly greater percentage of Black relinquishers used the New York-New Jersey shelters compared with each of the other regions ($p < .05$).

At least one of the significant ethnic differences remained when the proportion of owners who were moving was compared across regions. The percentage of Hispanic relinquishers using the New York-New Jersey shelters was significantly higher ($p < .05$) than the percentage shown for those using California shelters.

Regarding the demographics of relinquishers who reported that the animal's owner was moving, two other significant regional differences were evident. Relinquishers using the Tennessee-Kentucky shelters were significantly more likely to have graduated from high school than relinquishers using California shel-

TABLE 4
People by Age Group: U.S. Census Population Compared With
All Relinquishers of Dogs and Cats to a Shelter

| Age Group (Years) | U.S. Population | | All Relinquishers | |
|----------------------|-------------------|-------|-------------------|-------|
| | Number (1000s) | % | Number | % |
| 10-14 | 19,082 | 8.7 | 10 | 0.3 |
| 15-19 | 17,599 | 8.0 | 110 | 3.6 |
| 20-24 | 18,341 | 8.4 | 317 | 10.3 |
| 25-29 | 19,438 | 8.9 | 465 | 15.0 |
| 30-34 | 22,177 | 10.1 | 509 | 16.5 |
| 35-39 | 21,890 | 10.0 | 471 | 15.2 |
| 40-44 | 19,480 | 8.9 | 330 | 10.7 |
| 45-49 | 16,487 | 7.5 | 309 | 10.0 |
| 50-54 | 12,920 | 5.9 | 189 | 6.1 |
| 55-59 | 10,699 | 4.9 | 114 | 3.7 |
| 60-64 | 9,991 | 4.6 | 86 | 2.8 |
| 65-69 | 9,581 | 4.4 | 80 | 2.6 |
| 70-74 | 8,485 | 3.9 | 60 | 1.9 |
| 75-79 | 5,971 | 2.7 | 24 | 0.8 |
| 80-84 | 3,873 | 1.8 | 9 | 0.3 |
| 85+ | 2,830 | 1.3 | 9 | 0.3 |
| Total | 218,844 | 100.0 | 3,092 | 100.0 |

TABLE 5
Responses to Selected Statements on General Knowledge of Pet Care and
Behavior by Relinquishers of Dogs and Cats to 12 U.S. Shelters (1995–1996)
Because the Owner Was Moving

| <i>Statement</i> | | <i>Response^a</i> | | | | | |
|--|------|-----------------------------|----------|-------------|----------|-------------------|----------|
| | | <i>False</i> | | <i>True</i> | | <i>Don't Know</i> | |
| | | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> |
| Dogs and cats need shots or they can become seriously ill or even die. | Dogs | 4 | 1.4 | 270 | 97.5 | 3 | 1.1 |
| | Cats | 7 | 3.8 | 174 | 94.6 | 3 | 1.6 |
| In general, female dogs can come into heat (season) about twice a year. | Dogs | 26 | 9.4 | 154 | 55.6 | 97 | 35.0 |
| | Cats | 10 | 5.4 | 85 | 46.2 | 89 | 48.4 |
| There are not many differences in behavior between breeds of dogs, even though they look different. | Dogs | 230 | 83.0 | 32 | 11.6 | 15 | 5.4 |
| | Cats | 153 | 83.2 | 14 | 7.6 | 17 | 9.2 |
| Dogs and cats will misbehave to spite their owners. | Dogs | 103 | 37.2 | 142 | 51.3 | 32 | 11.6 |
| | Cats | 56 | 30.4 | 108 | 58.7 | 20 | 10.9 |
| It is necessary to catch a dog or cat in the act of doing something wrong in order to correct them. | Dogs | 38 | 13.7 | 233 | 84.1 | 6 | 2.2 |
| | Cats | 31 | 16.8 | 140 | 76.1 | 13 | 7.1 |
| In general, cats come into heat (season) about twice a year. | Dogs | 29 | 10.5 | 48 | 17.3 | 200 | 72.2 |
| | Cats | 33 | 17.9 | 72 | 39.1 | 79 | 42.9 |
| When house training a dog, it is helpful to rub the dog's nose in its mess when it soils in the house. | Dogs | 157 | 56.8 | 93 | 33.6 | 27 | 9.8 |
| | Cats | 79 | 42.9 | 53 | 28.8 | 52 | 28.3 |
| A female dog or cat will be better off if she has one litter before being fixed. | Dogs | 97 | 35.0 | 59 | 21.3 | 121 | 43.7 |
| | Cats | 95 | 51.6 | 30 | 16.3 | 59 | 32.1 |
| Cats don't mind how many other cats there are in the home. | Dogs | 120 | 43.3 | 42 | 15.2 | 115 | 41.5 |
| | Cats | 106 | 57.6 | 42 | 22.8 | 36 | 19.6 |
| Cats may pounce or scratch or bite as a form of play. | Dogs | 8 | 2.9 | 226 | 81.6 | 43 | 15.5 |
| | Cats | 6 | 3.3 | 172 | 93.5 | 6 | 3.3 |
| It will cost more than \$100 a year to keep a dog or cat as a pet. | Dogs | 8 | 2.9 | 256 | 92.4 | 13 | 4.7 |
| | Cats | 9 | 4.9 | 169 | 91.9 | 6 | 3.3 |

^aN = 277 dog relinquishers and 184 cat relinquishers.

ters ($p < .05$). They were, however, significantly less likely to have reached an education level beyond high school compared to relinquishers using Colorado ($p < .05$) and California shelters ($p < .001$). Dogs relinquished to Colorado shelters were significantly less likely ($p < .001$) to have been obtained at no cost compared with the other three regions. The same was true for cats relinquished to the Colorado shelters ($p < .05$) when compared with the proportion of cats obtained at no cost and relinquished to California and Tennessee–Kentucky shelters.

TABLE 6
Cultural or Ethnic Identity of Relinquishers of Dogs and Cats to 12 U.S. Shelters
(1995–1996) Because the Owner Was Moving, by Region

| <i>Cultural/Ethnic Identity</i> | <i>Region</i> | | | | |
|---------------------------------|---------------|-----------|--------------|--------------|--------------|
| | <i>CO</i> | <i>CA</i> | <i>NY/NJ</i> | <i>TN/KY</i> | <i>Total</i> |
| Hispanic/Latino(a) | | | | | |
| <i>n</i> | 23 | 106 | 291 | 5 | 425 |
| <i>%</i> | 7.6 | 10.6 | 31.3 | 0.5 | 13.4 |
| White | | | | | |
| <i>n</i> | 261 | 725 | 426 | 840 | 2,252 |
| <i>%</i> | 86.7 | 72.2 | 45.9 | 89.6 | 71.0 |
| Black | | | | | |
| <i>n</i> | 9 | 80 | 158 | 79 | 326 |
| <i>%</i> | 3.0 | 8.0 | 17.0 | 8.4 | 10.3 |
| Asian or Pacific Islander | | | | | |
| <i>n</i> | 1 | 41 | 35 | 3 | 80 |
| <i>%</i> | 0.3 | 4.1 | 3.8 | 0.3 | 2.5 |
| American Indian/Native American | | | | | |
| <i>n</i> | 6 | 30 | 3 | 7 | 46 |
| <i>%</i> | 2.0 | 3.0 | 0.3 | 0.7 | 1.5 |
| Other | | | | | |
| <i>n</i> | 1 | 22 | 16 | 3 | 42 |
| <i>%</i> | 0.3 | 2.2 | 1.7 | 0.3 | 1.3 |
| Total | | | | | |
| <i>n</i> | 301 | 1,004 | 929 | 937 | 3,171 |
| <i>%</i> | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

DISCUSSION AND CONCLUSIONS

Moving as an important reason for animal relinquishment to shelters is not a new finding. Many shelters have recognized this factor for some time. However, data from this study provide some new insights. The U.S. Department of Commerce (1995) monitors the mobility of the population and tracks trends. Based on data collected in March 1994, 16.7% of the population had moved within the previous year. The overall moving rate was not significantly different from the rate seen a year earlier ($16.8 \pm 0.3\%$), and the moving rate has remained relatively constant since the mid-1980s.

The highest rates of moving were found among young adults in their 20s (U.S. Department of Commerce, 1995). Almost one third of those from 25 to 29 years old (30.7%) had moved during the previous year. Moving rates decline as age increases. When the age distribution of the U.S. population was compared with the age distribution of dog and cat relinquishers, the most mobile age groups were significantly overrepresented among relinquishers. Because mobile young adults are

using shelters at a higher rate than would be expected, moving may be reported as a frequent reason for giving up a companion animal.

However, the number of people in this age range who had companion animals may be greater than those in other age ranges. For example, in one survey, 390 dog owners and 320 cat owners (34 and 37%, respectively) were between 25 and 44 years of age (American Pet Products Manufacturers Association [APPMA], 1996). Consequently, age may be linked to the ownership of companion animals.

Hispanics and Blacks have higher rates of moving (22.4% and 19.6%, respectively) compared with Whites (16.0%). This is partially due to differences in the age distributions by race, as Blacks and Hispanics have lower median ages (28.6 and 26.4 years, respectively) than those (34.9 years) of Whites (U.S. Department of Commerce, 1995). Consequently, it is probably a combination of age, companion animal ownership, and, in some regions, ethnic identity that account for much of the relinquishment attributed to moving. To discriminate against these age, ethnic groups, or both regarding companion animal ownership—formally restricting their ability to obtain companion animals—would be inappropriate. We do not know the proportion of those who move and take their companion animals with them or otherwise overcome the challenges of moving when they own a dog or cat.

In general, most people who move stay in the United States, and more than half stay in the same general area that they had lived previously. Local moves were usually made for housing reasons. These included the desire to obtain better or different housing or a response to changes in life-cycle events such as marriage, divorce, separation, birth of children, children reaching school age, purchase of first home, graduation from school, and financial independence gained by a first job. Many local moves, however, are not voluntary (U.S. Department of Commerce, 1995). Consequently, moves can represent situations over which those with companion animals have little or no control. Therefore, the reasons for moving and limitations and restrictions of the new housing are also important factors. Undesirable characteristics of dogs and cats, such as problem behaviors, also figured into decisions to relinquish companion animals at the time of a move.

Although moving was frequently reported as a reason for giving animals away, relinquishers reported additional reasons that may have played a role in their decisions. Responses to selected questions on behavior suggest reasons for dissatisfaction with relinquished animals. More than half of the dog relinquishers reported that their dogs were hyperactive at least some of the time. Almost half of the cat relinquishers reported the same problem. Reports of hyperactive dogs or cats may reflect relinquishers' perceptions instead of true hyperactivity. Owners who did not have time for their companion animals may have been bothered by natural, attention-seeking activities, especially when their pets had been left alone for an extended period of time.

Approximately one third of dog relinquishers reported that their dogs had soiled in the house, damaged things, been too noisy, or been fearful at least some of the time during the month prior to relinquishment. A similar number of cat relinquishers reported that their cats had been too noisy, fearful, or both at least some of the time during the month prior to relinquishment. These reasons could represent an unrealistic expectation of the inexperienced owner, documented as one component of relinquishment (Kidd, Kidd, & George, 1992; Miller, Staats, Partlo, & Rada, 1996; Patronek, Glickman, Beck, McCabe, & Ecker, 1996).

The primary and secondary source of dogs were friends and shelters, respectively. In the APPMA study (1996) of those who own companion animals, the most common sources of acquisition were friends or relatives. Shelters were a fourth source, following a breeder and the newspaper or a private party. The primary and secondary sources of acquisition for cats were the same for both studies—cats were most often found as strays or given to the relinquishers by friends or relatives. Interestingly, the population relinquishing animals to shelters may be more racially diverse when compared with the general pet-owning population, because the APPMA study reported that most who own companion animals were White (93% and 95% of dog and cat owners, respectively).

The large proportion of relinquishers who had a level of education beyond high school may reflect the location of the study shelters in or near counties with large universities and colleges. Consequently, shelters in communities without such populations may have different frequencies of variables. Also, those who had reached educational levels beyond high school may have been more willing and less intimidated to participate in an interview. The overall refusal rate of this study was 9.2% (Salman et al., 1998).

Friends are often the most frequent source for companion animals. It is reasonable to assume that owners in a highly mobile age group and of a particular ethnic identity are very likely to have friends with the same characteristics. Consequently, shelters may be seeing the results of an informal network of passing companion animals within a circle of friends who may, at a later time, have to deal with the same problem of disposition when they move. Consequently, highly mobile age groups should be educated about the selection of, and responsibilities inherent with, owning companion animals, as well as the possible difficulties of finding a place for their dog or cat when a move becomes necessary.

Some people relinquished all or part of a litter because they were moving. Homes had been found for only 20% of the puppies and kittens prior to the rest of the litters arriving at shelters. Our lack of knowledge about what efforts owners expended to find homes for puppies and kittens or the proportion of litters that were fully placed documents the need for continued efforts to encourage spaying and neutering. Otherwise, a proportion of litter owners will be faced with the need to relinquish healthy, adoptable puppies and kittens to community shelters. There, for a lack of good homes, many will have to be killed.

In summary, moving represents an important life event that impacts the relinquishment of dogs and cats to shelters in the United States. This phenomenon is influenced by the overrepresentation in the sample of mobile age groups, by the possibly larger proportion of those with companion animals in these age groups, and perhaps, indirectly, by ethnicity. These demographic identifiers could be used to help develop focused educational efforts stressing companion animal selection and the process and difficulties of moving with dogs or cats.

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REFERENCES

- American Pet Products Manufacturers Association. (1996). *APPMA national pet owners survey*. Greenwich, CT: Author.
- Dean, A. G., Dean, J. A., Coulombier, D., Brendel, K. A., Smith, D. C., Burton, A. H., Dicker, R. C., Sullivan, K., Fagan, R. F., & Arner, T. G. (1994). Epi Info (Version 6) [Computer software]. Atlanta, GA: Centers for Disease Control and Prevention.
- Dixon, W. J. (1992). *BMDP statistical software* (Version 7) [Computer software]. Bognor Regis, England: Wiley.
- Kidd, A. H., Kidd, R. M., & George, C. C. (1992). Successful and unsuccessful pet adoptions. *Psychological Reports*, 70, 547-561.
- Miller, D. D., Staats, S. R., Partlo, C., & Rada, K. (1996). Factors associated with the decision to surrender a pet to an animal shelter. *Journal of the American Veterinary Medical Association*, 209, 738-742.
- Milton, J. S., & Arnold, J. C. (1990). *Introduction to probability and statistics: Principles and applications for engineering and the computing sciences*. New York: McGraw-Hill.
- Patronek, G. J., Glickman, L. T., Beck, A. M., McCabe, G. P., & Ecker, C. (1996). Risk factors for relinquishment of dogs to an animal shelter. *Journal of the American Veterinary Medical Association*, 209, 572-581.
- Salman, M. D., New, J. C., Scarlett, J., Kass, P., Ruch-Gallie, R., & Hetts, S. (1998). Human and animal factors related to the relinquishment of dogs and cats in 12 selected animal shelters in the U.S.A. *Journal of Applied Animal Welfare Science*, 1, 207-226.
- U.S. Department of Commerce. (1995). *Geographical mobility: March 1993 to March 1994* (Current Population Reports, Population Characteristics, P20-485, pp. vii-xvi, 3). Washington, DC: U.S. Government Printing Office.