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Sterilization of Companion Animals: Exploring the Attitudes and Behaviors of Latino Students in South Texas

Catherine A. Faver
Department of Social Work, University of Texas-Pan American

A sample of 131 Latino students attending a university in south Texas near the United States–Mexico border completed a self-administered questionnaire regarding their companion animals (pets). Compared with dog caregivers (owners) (n = 106), cat caregivers (n = 25) were significantly more likely to favor early spay/neuter of pets and to report that the primary benefit received from their own pet was relational (for example, companionship) rather than functional (for example, sense of safety). The rate of sterilization was significantly higher for cats (60%) than for dogs (26.4%). Sterilization rates were significantly higher for cats whose owners favored early spay/neuter and had accurate knowledge about sterilization of female cats and dogs. Sterilization rates were significantly higher for dogs whose owners had a veterinarian, favored early spay/neuter, and valued relational benefits of guardianship more than functional benefits. Approximately 41% of owners whose pets were not sterilized reported that they wanted puppies or kittens, and 25% reported that the cost of the procedure was the primary barrier. Sterilization programs must include both education about the benefits of sterilization and low-cost spay/neuter services.

Companion animal (pet) overpopulation results in suffering and death for millions of unwanted pets each year. To combat this problem, animal welfare organizations use various strategies such as low-cost spay/neuter clinics and public education campaigns to encourage sterilization of pets. Yet there is

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relatively little research on the factors that affect the willingness of caregivers (owners) to have their pets spayed or neutered, and only a few studies address the impact of ethnicity on sterilization rates (Fielding, Samuels, & Mather, 2002; Poss & Bader, 2007; Risley-Curtiss, Holley, & Wolf, 2006). To devise effective sterilization programs, relevant information about specific target audiences is essential. Thus, the study reported in this article focused on the factors associated with sterilization of cats and dogs owned by Latino university students residing in south Texas near the United States–Mexico border.

The demographic profile of the sample in this study is important for several reasons. Prior research suggests that rates of sterilization of pets are lower than average among some Latino subgroups (Poss & Bader, 2007; Risley-Curtiss et al., 2006). There is, however, great variation within the U.S. Latino population in levels of acculturation and other factors that may affect attitudes toward pets. Moreover, second generation Latinos, characterized by higher educational levels and greater fluency in English, are rapidly replacing new immigrants as the largest U.S. Latino subgroup (Suro & Passel, 2003). Because the Latino students in this study are highly educated and bilingual or English dominant, they reflect the characteristics that will be most prominent in the U.S. Latino population in future decades. Thus, knowledge of the factors associated with sterilization of pets within this sample of Latinos may be useful in planning pet sterilization programs targeting Latinos in other areas of the United States.

REVIEW OF THE LITERATURE

Scope of the Problem

The problem of pet overpopulation is depicted by estimates of the number of nonhuman animals entering shelters and the number of nonhuman animals euthanized by shelters annually. The Humane Society of the United States (HSUS) estimates that 6 to 8 million dogs and cats enter shelters each year and that 3 to 4 million of these animals are euthanized (HSUS, n.d.). Using the most recent available shelter data, Merritt (2007) estimated that 3.7 million dogs and cats were killed in U.S. shelters in 2006. This figure represents 12.5 animals killed per 1,000 humans in the population, the lowest number of animals killed in shelters in the 37-year period that the journal Animal People has evaluated shelter data (Merritt, 2007). According to the Animal People report, its projection each year is based on compilations of the tolls from every open admission shelter handling significant numbers of animals in specific cities, counties, or states. The sample base each year is proportionately weighted to ensure regional balance. Only data from the preceding three fiscal years is included. (Merritt, 2007, p. 1)
Although there are no reliable national estimates of the number of pets who are sterilized, Mahlow (1999) reported sterilization rates from 14 licensing agencies and 16 animal shelters in various regions of Texas. She found that 26.9% of dogs and 32.6% of cats were sterilized. Higher sterilization rates were found for female pets, for pets in urban (compared with rural) areas, and for licensed pets (compared with sheltered pets).

Factors Associated With Sterilization of Pets

In a regional study, Frank and Carlisle-Frank (2003) found that sterilization of dogs was implemented less by owners who were male, had lower levels of education, lived in single-family homes, had not licensed their dogs, and paid lower average prices for their dogs. “Breeding” was the most common reason for not spaying or neutering dogs among respondents who were more highly educated, had higher incomes, lived in single-family homes, or had larger families. Respondents with lower educational levels most often reported that their dog was not sterilized because “the dog does not go out.” Respondents with lower incomes most frequently cited “cost,” “concerns about mutilation,” and “wanting puppies” as their reasons for not spaying and neutering; urban respondents most often cited “concerns about mutilation” as their primary reason.

Several studies have examined sterilization of pets among Latinos. A telephone survey in a southwestern county compared sterilization rates and related attitudes among members of six ethnic groups (Risley-Curtiss et al., 2006). Forty-one Latinos were respondents in the survey, including owners of 29 dogs and 5 cats. Compared with other ethnic groups, Latinos were less likely to have a veterinarian for their pet, more likely to receive a sense of safety from their pet, and less likely to have their pet spayed or neutered. Given the relatively small number of Latinos in the sample, however, it is not possible to draw definitive conclusions from this study.

Poss and Bader (2007) conducted a telephone survey of 206 residents of a colonia in El Paso County, Texas. A colonia is a rural community within 150 miles of the United States–Mexico border that lacks basic necessities such as potable water or adequate sewage systems (U.S. Department of Housing and Urban Development, 2006). More than three fourths (77%) of the respondents in this study were born in Mexico and 92.1% reported that Spanish was their primary language. Of the 254 dogs owned by these respondents, only 11% were sterilized; of the 40 cats owned, 27.5% were sterilized. Yet, in response to a question about whether it is a “good idea” to sterilize male and female dogs and cats, the vast majority said “yes,” as evidenced by the following percentages of affirmative responses for each gender and species: male dogs, 89.7%; female dogs, 92.2%; male cats, 95.1%; and female cats, 98.1%.
In a related study, Poss and Everett (2006) evaluated a bilingual, mobile spay/neuter program in El Paso, Texas. In a 5-month period in 2004, the program sterilized 1,108 pets (959 dogs and 149 cats) at an average cost of $15.13 per pet. The researchers concluded that the program was cost effective; however, given the large number of owned pets in the county, they suggested that additional strategies are needed to increase the sterilization rate.

A study of birth and death rates of cats and dogs in U.S. households asked owners why they had not had females spayed prior to births of unplanned litters (New et al., 2004). The most frequent reason given for not having a mother cat spayed was cost; other reasons included a belief that spaying was dangerous and the desire for kittens. The most frequent reason given for not having a mother dog spayed was lack of reproductive knowledge (specifically, “did not know she was in heat”).

A study focusing on relinquishment of cats and dogs to shelters found that sterilized pets were less likely to be relinquished (New et al., 2000). Moreover, people relinquishing pets were more likely to believe that female dogs and cats would be “better off” by having one litter prior to being spayed. In the general population, approximately half the dog and cat owners interviewed also held this belief or indicated that they did not know whether it was true or false. Together, the studies by New et al. (2004) and New et al. (2000) suggest that the problem of pet overpopulation is exacerbated by the public’s lack of knowledge about the reproductive cycle of female dogs and cats and by the widespread belief that female dogs and cats should have one litter before being spayed.

For clarification, it should be noted that the scientific community does not support the belief that dogs and cats should have one litter prior to being spayed (Miller, n.d.). In a review of the relevant scientific literature, Miller summarized the advantages of pediatric spay/neuter and encouraged compliance with the recommendations of the Cornell studies (Spain, Scarlett, & Houpt, 2000a, 2000b), which are generally favorable regarding early (or pediatric) spay/neuter.

As previously noted, a regional study found that men were less likely to have their dogs sterilized (Frank & Carlisle-Frank, 2003). Moreover, previous research has shown that women are more attached to their pets (Johnson, Garrity, & Stallones, 1992; Kidd & Kidd, 1989), have stronger feelings of intimacy and kinship with their pets (Cohen, 2002), and are less likely to relinquish their animals to a shelter (New et al., 2000). Gender also predicts differences in attitudes about the uses of animals (Driscoll, 1992; Gallup & Beckstead, 1988; Herzog, Betchart, & Pittman, 1991).

One study (Kellert & Berry, 1987) may be particularly useful in understanding the types of attitudes that may predict differential willingness to spay or neuter a pet. Using scales based on several different types of attitudes toward animals and the environment, Kellert and Berry found that males had significantly higher scores on the utilitarian scale, indicating “a greater willingness . . . to endorse
exploitation of animals,” and on the dominionistic scale, indicating “a greater tendency . . . to derive satisfaction from the mastery and control of animals” (p. 366). Females scored significantly higher on the humanistic scale, indicating “far stronger emotional attachments for individual animals, particularly domestic pets,” and on the moralistic scale, indicating “a greater concern for . . . animal cruelty issues and less support for the exploitation of and dominance over animals” (p. 366).

As a backdrop to the current study, what can be gleaned from Kellert and Berry’s (1987) research is that different types of attitudes toward animals may be associated with greater or lesser willingness to spay or neuter a pet. Compared with owners who are primarily interested in “exploiting” (however benignly) an animal’s usefulness to the family (for example, for protection), owners who value the inherent benefits (such as comfort and companionship) of their relationship with their dog or cat may be more solicitous about the pet’s welfare. Such concern may lead to greater knowledge about the benefits of sterilization and a greater willingness to incur the costs of the procedure.

The Study Context

This study was conducted in Hidalgo County in south Texas; the county’s southern boundary is the Rio Grande River, which forms the United States–Mexico border. In 2006, 89.5% of the county’s population was Latino (U.S. Census Bureau, 2006). The percentage of individuals living below poverty level was 36.9%, compared with 13.3% in the United States as a whole; only 60.2% of the county’s population had graduated from high school, compared with 84.1% of the U.S. population (U.S. Census Bureau, 2006).

As a Hispanic-serving institution (HSI), the university in which this study was conducted has an ethnic composition resembling that of Hidalgo County and the United States–Mexico border region. Of the 17,337 students enrolled in the university in fall 2006, 86.6% were Latino. Four fifths (80.9%) of the students were residents of Hidalgo County, and 11.7% were residents of three other south Texas counties in the region. Eighty-seven percent of the students were undergraduates, and 59% were female (University of Texas-Pan American [UTPA], 2006).

As university students, the participants in this study have completed more education and are more highly acculturated than many residents of the region. Many students in this university, however, are the first in their families to pursue higher education, and their financial resources are extremely limited. As noted previously, a recent study (Poss & Bader, 2007) found that the rate of sterilization of dogs and cats owned by primarily Spanish-speaking residents of a colonia in El Paso was relatively low. Overall, the participants in the current study have completed more formal education and have acquired greater English language
proficiency than the El Paso sample; nevertheless, many university students remain closely tied to less acculturated, extended family members residing in the Texas-Mexico border region. Within this social context, this study was designed to explore the likelihood that university students will have their cats and dogs spayed or neutered and the factors affecting the sterilization rate of these pets.

At the time of the study, there were no low-cost spay/neuter programs in the county. There was one major shelter in the county, which in recent years has received approximately 40,000 pets annually. The adoption rate has recently increased from 3 to 5% (L. Powell, personal communication, December 4, 2007), which means that the rate of euthanasia has declined slightly but is still much higher than estimates of the national average for euthanasia in shelters across the United States.

Research Questions

In a sample of Latino university students, this study explored rates of sterilization of pets and selected attitudes and behaviors that are likely to be associated with the decision to spay or neuter pets. The relevant attitudes and behaviors included in this study were (a) having a veterinarian for one’s animal, (b) having a positive attitude regarding early spay/neuter for pets, (c) having accurate knowledge about veterinary recommendations regarding spaying female dogs and cats, and (d) valuing one’s pet primarily for the relationship offered by the pet rather than for the functions served by the pet. The following specific research questions were asked:

1. Is the rate of sterilization different for cats and dogs?
2. Are there significant differences between cat owners and dog owners in the attitudes and behaviors relevant to sterilization listed in the previous paragraph?
3. Is there a significant relationship between sterilization of cats and each of the attitudes and behaviors listed in the previous paragraph?
4. Is there a significant relationship between sterilization of dogs and each of the attitudes and behaviors listed in the previous paragraph?
5. Among cat owners and dog owners whose pets are not sterilized, what are the primary reasons for not having their pets spayed or neutered?

METHOD

Data Collection

This research used data collected in a larger study of pets in Latino families. A self-administered survey questionnaire was used to collect the data between
January and July 2007. The respondents were both graduate and undergraduate students enrolled in a university identified as an HSI located in Hidalgo County in south Texas near the United States–Mexico border. During sessions of classes in the social work and educational psychology departments, students were asked to participate voluntarily in the study. Students who volunteered signed an informed consent form and completed the study questionnaire during the class session. The study methods were approved by the Institutional Review Board of the university in which the study was conducted.

Sample

Of 237 respondents in the original study, the sample for this report was limited to respondents who self-identified as Latino and who owned at least one dog or cat. Ethnic identity was determined from responses to a questionnaire item asking respondents to choose their ethnic identity from a list of 11 response alternatives, including an option to write in a preference not listed. Only respondents whose preferred ethnic identity could be subsumed under the general category of “Latino” (n = 208) met the ethnic identity criterion for the study sample. Dog and cat ownership was determined by a questionnaire item listing a series of nonhuman animal species and asking respondents to indicate the number of each type of species they currently owned.

Of 208 Latino respondents, 54.33% (113/208) owned at least 1 dog and 18.75% (39/208) owned at least 1 cat. For clarity, it should be noted that 21 respondents owned both dogs and cats; thus, the total number of cat and dog owners was 131 (113 plus 39 minus 21). According to a survey conducted by the American Veterinary Medical Association (AVMA, 2007), 37.2% of all U.S. households owned at least 1 dog and 32.4% of all U.S. households owned at least 1 cat in 2006. The AVMA survey also determined the percentages of households owning dogs and cats, respectively, among four ethnic groups: Hispanic households, 40.1% and 28.0%; White households, 40.9% and 36.1%; African American/Black households, 17.2% and 8.9%; and Asian/Pacific Islander/American Indian/Aleut Eskimo households, 30.9% and 23.4%. As these figures reveal, compared with a national sample of Latino households, the sample of 208 Latinos in the current study are more likely to own dogs (54.33% compared with 40.1%) and less likely to own cats (18.75% compared with 28.0%). This difference is addressed in the discussion of the limitations of this study.

Of 208 Latino respondents, 131 indicated that they owned at least 1 dog or cat. Dog and cat guardians who owned more than one pet were asked to respond to a series of items with reference to the dog or cat they had owned the longest. Of the total of 131 dog and cat guardians, 92 owned only dogs, 18 owned only cats, and 21 owned both dogs and cats. Twenty-five respondents identified a
cat as the pet they had owned the longest, and the remaining 106 respondents identified a dog as the pet they had owned the longest. Thus, the analyses in this article are based on a sample of 25 cat owners and 106 dog owners.

Measures

All measures were constructed from responses to the self-administered survey. Dog and cat guardians were asked a series of questions about the dog or cat they had owned the longest, including whether they had a veterinarian for the dog or cat (yes or no) and whether the dog or cat was spayed or neutered (yes or no).

Knowledge about pet sterilization was measured by a questionnaire item asking the respondent to indicate whether the following statement was “true” or “false”: “Veterinarians recommend that female dogs and cats give birth to one litter prior to being spayed.” The statement is false; thus, responses indicating that the statement was false were coded as correct or accurate knowledge and responses indicating that the statement was true were coded as incorrect or inaccurate knowledge about sterilization.

Attitude toward sterilization of pets was measured by responses to the following item: “Pets should be spayed or neutered (fixed) early in life.” The four response alternatives were (a) strongly agree, (b) agree, (c) disagree, and (d) strongly disagree. From these responses a dichotomous variable was created consisting of the categories “agree” and “disagree.”

To determine the primary benefit of pet ownership, cat and dog guardians were provided a list of potential benefits and asked to indicate the most important benefit provided by their pet. Responses to this question were used to create a dichotomous variable indicating whether the most important benefit selected by the respondent was “relational” or “functional.” Relational benefits refer to benefits that are experienced through the respondent’s direct involvement and interaction with the pet. Benefits coded as relational were (a) companionship, (b) unconditional love, and (c) emotional support. Functional benefits refer to functions fulfilled or services provided by the pet that do not require direct interaction between the respondent and the pet. Benefits coded as functional were (a) a sense of safety, (b) companionship for the respondent’s children, and (c) help in teaching children responsibility.

Cat and dog owners whose pets were not spayed or neutered were asked to select their primary reason for not sterilizing their pet from a list including the following alternatives:

1. I can’t afford it;
2. I don’t think my pet is old enough yet;
3. I want my pet to have puppies/kittens;
4. I intend to sell puppies or kittens from my pet;
5. Spaying/neutering will change my pet’s temperament;
6. I don’t believe it is right to spay/neuter animals; and
7. My culture does not approve of spaying/neutering animals.

All questionnaire items used in this study were adapted with permission from a study conducted by Risley-Curtiss et al. (2006). The investigator in the current study, however, created the distinction between relational and functional benefits of pets and determined which benefits should be designated as relational and functional in order to create a dichotomous variable for use in data analysis.

Analysis

Descriptive statistics were computed for all variables. Relationships between variables were assessed through cross-tabulations and computation of the chi-square statistic and Fisher’s exact test. The data were analyzed using SPSS 15.0 for Windows.

RESULTS

Description of Sample

Undergraduate students comprised 59% of the 131 dog and cat owners; 91% of the 131 were female. The age of the respondents ranged from 18 to 56, with a mean of 30.7 years ($SD = 8.5, n = 128$).

Sixteen percent (21/131) of the respondents owned both a dog and a cat, whereas 70% (92/131) were dog owners only and 14% (18/131) were cat owners only. As noted previously, 19% (25/131) of the respondents answered the survey questions as cat owners, and the other 81% (106/131) of the respondents answered as dog owners.

Attitudes and Practices Toward Cats and Dogs

Three differences in attitudes and behaviors toward cats compared with dogs were statistically significant (Table 1). Compared with dogs, cats were more likely to be spayed or neutered ($\chi^2 = 10.3, p < .005$) and more likely to be valued primarily for the relationship they offer their owners rather than for the functions they serve in the family ($\chi^2 = 4.98, p < .05$). Moreover, compared with dog owners, cat owners were more likely to report that they favor early spay/neuter for pets ($\chi^2 = 4.9, p < .05$). Cat and dog owners did not differ significantly in the percentage having a veterinarian for their pet and in the
TABLE 1
Attitudes and Behaviors Toward Cats and Dogs

<table>
<thead>
<tr>
<th>Attitude or Behavior</th>
<th>Cat Owners</th>
<th>Dog Owners</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterilized pet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Yes</td>
<td>60.0%</td>
<td>26.4%</td>
<td>10.3**</td>
</tr>
<tr>
<td>Total ( N )</td>
<td>25</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>Have veterinarian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Yes</td>
<td>68.0%</td>
<td>76.4%</td>
<td>ns</td>
</tr>
<tr>
<td>Total ( N )</td>
<td>25</td>
<td>106</td>
<td></td>
</tr>
<tr>
<td>Favor early spay/neuter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Yes</td>
<td>80.0%</td>
<td>48.0%</td>
<td>4.9*</td>
</tr>
<tr>
<td>Total ( N )</td>
<td>25</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Accurate knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Yes</td>
<td>52%</td>
<td>53.5%</td>
<td>ns</td>
</tr>
<tr>
<td>Total ( N )</td>
<td>25</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>Relational benefit most important</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Yes</td>
<td>85.7%</td>
<td>54.0%</td>
<td>4.98*</td>
</tr>
<tr>
<td>Total ( N )</td>
<td>14</td>
<td>87</td>
<td></td>
</tr>
</tbody>
</table>

* \( p < .05 \). ** \( p < .005 \).

percentage responding accurately to the item assessing knowledge of veterinary recommendations regarding spaying female dogs and cats.

Predictors of Sterilization of Cats

None of the 5 cat owners who disagreed that pets should be spayed or neutered early in life, compared to 75% (15/20) of the cat owners who agreed with the idea of early sterilization, reported that their own cat had been spayed or neutered (Fisher’s exact test, \( p < .01 \)). Similarly, 84.6% (11/13) of the cat owners who had accurate knowledge of veterinary recommendations about sterilization of female cats and dogs, compared with 33.3% (4/12) of those who believed inaccurate information, reported that their own cat was spayed or neutered (Fisher’s exact test, \( p < .05 \)). Sterilization of cats was not predicted by whether the owner had a veterinarian for the cat or by the type of primary benefit (relational or functional) received from the cat.

It is possible that owners of multiple cats may be more likely than owners of only one cat to have their animals sterilized to prevent unplanned pregnancies. Thus, an additional analysis was conducted to determine whether the presence of multiple cats in the household predicted sterilization of the “target cat.” Cat guardians who owned more than one cat (\( n = 11 \)) were no more likely than cat guardians who owned only one cat (\( n = 14 \)) to have their cat sterilized (Fisher’s exact test, \( p < .05 \)).
Predictors of Sterilization of Dogs

One third (33.3%, 27/81) of the dog owners who have a veterinarian for their dog, compared to only 4% (1/25) of the dog owners without a veterinarian, reported that their dog was spayed or neutered ($\chi^2 = 8.4, df = 1, p < .01$). Moreover, 44.9% (22/49) of the dog owners who agreed that pets should be spayed or neutered early in life, compared with 9.4% (5/53) of those who disagreed, reported that their dog was sterilized ($\chi^2 = 16.4, df = 1, p < .001$). Finally, 29.8% (14/47) of the dog owners who selected a relational benefit as the most important benefit provided by their dog, compared with 12.5% (5/40) of those who selected a functional benefit as most important, reported that their dog was spayed or neutered (Fisher’s exact test, $p < .05$). Sterilization of dogs was not predicted by the owner’s knowledge of veterinary recommendations about spaying female cats and dogs.

It is possible that owners of multiple dogs may be more likely than owners of only one dog to have their animals sterilized to prevent unplanned pregnancies. Thus, an additional analysis was conducted to determine whether the presence of multiple dogs in the household predicted sterilization of the “target dog.” Dog guardians who owned more than one dog ($n = 38$) were no more likely than dog guardians who owned only one dog ($n = 68$) to have their dog sterilized ($\chi^2 = .813, p > .05$).

Reasons for Not Spaying and Neutering

All 10 of the cat owners whose cats were not sterilized and 70 of the 78 dog owners whose dogs were not sterilized indicated a primary reason for not having their pet spayed or neutered. As Table 2 indicates, two fifths of the cat and dog owners reported that they want their cat or dog to have kittens or puppies. One fifth of the cat owners and one fourth of the dog owners indicated that they could not afford to have their pet sterilized. An additional one fifth of the cat

<table>
<thead>
<tr>
<th>Reason</th>
<th>Cat Owners ($N = 10$)</th>
<th>Dog Owners ($N = 70$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wants kittens or puppies</td>
<td>40.0%</td>
<td>41.4%</td>
</tr>
<tr>
<td>Can’t afford procedure</td>
<td>20.0%</td>
<td>25.7%</td>
</tr>
<tr>
<td>It’s not right</td>
<td>20.0%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Temperament will change</td>
<td>20.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pet is too young</td>
<td>0.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Wants to sell kittens or puppies</td>
<td>0.0%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
owners and almost one fifth (18.6%) of the dog owners indicated that they don’t believe it is right to spay or neuter pets. One fifth of the cat owners, but only 2.9% of the dog owners, believe that spaying or neutering would change the pet’s temperament. Only 10% of dog owners and no cat owners believed that their pet was not old enough to be spayed or neutered.

A Note About Gender

Because there were only 12 men in the sample, it was not feasible to conduct an in-depth analysis of gender differences in the factors affecting sterilization rates. However, it is important to note that men and women did not differ significantly in the type of pet they had owned the longest or in sterilization rates of pets. Moreover, in order to assess the impact of the small number of male respondents on the overall findings, the analyses were replicated excluding men from the sample. The findings regarding differences between cat and dog owners and regarding the factors affecting sterilization rates did not change when men were excluded from the sample.

DISCUSSION

Summary and Significance of the Findings

Overall, the sterilization rate for cats in this study (60%) was higher than the rates found in Mahlow’s (1999) Texas study (32.6%) and in Poss and Bader’s (2007) study of a colonia in El Paso, Texas (27.5%). The sterilization rate of dogs in this study (26.4%) was roughly equivalent to the rate in Mahlow’s Texas study (26.9%) and higher than the rate in Poss and Bader’s El Paso study (11%). In assessing these differences, however, it is important to note that the current study was based on a relatively small, nonprobability sample.

This study found several significant differences in attitudes and practices toward cats compared with dogs. As in previous research (Poss & Bader, 2007), cats were more likely than dogs to be sterilized. Most (85.7%) cat owners perceived the primary benefit from their cat to be relational, whereas almost half (46%) of the dog owners identified a functional benefit of dog ownership as most important. Four fifths of the cat owners, compared with less than half (48%) of the dog owners, favored spaying or neutering a pet early in life. These findings suggest that public education campaigns regarding sterilization of pets should take into account the differential attitudes and practices of dog and cat owners.

Despite their differences, however, dog and cat owners were similar in their knowledge levels. As in the general population (New et al., 2000), almost half
the dog and cat owners in this study mistakenly believed that veterinarians recommend that female dogs and cats should be allowed to have one litter prior to being spayed. The widespread belief in this myth must be countered through public education.

Among both dog owners and cat owners, a positive attitude toward sterilization of pets early in life was significantly associated with sterilization of the guardian’s own pet. On the other hand, accurate knowledge about veterinary recommendations was associated with sterilization rates of cats but not dogs. It is possible that the somewhat higher cost of sterilization of dogs could be a factor that inhibits some dog owners from acting in accordance with their knowledge.

Among dog owners, having a veterinarian for one’s dog and valuing the relational benefits of guardianship (such as companionship) more than the functional benefits (such as a sense of safety) were both positively associated with having one’s dog spayed or neutered. Both of these predictors reflect positive regard for the inherent worth of the dog and a concern for the dog’s well being. It is not surprising that owners who highly value their relationships with their dogs would be likely to have the dogs spayed or neutered to protect the animals’ health. Owners who are focused more on the services provided by their dogs, such as protection or help in teaching children responsibility, may be less likely to attend to information about spaying and neutering and to act on this information to ensure their dogs’ well being.

The reason most often offered for not sterilizing a pet was that the owner wanted puppies or kittens. This finding supports previous research (Frank & Carlisle-Frank, 2003) suggesting that cost is not the only important factor that must be addressed in efforts to encourage sterilization of pets; this point is discussed in the next section.

Limitations

The findings of this study must be considered in light of its limitations in both sampling and measurement. Targeting university students made it possible to obtain a sample of Latinos who are relatively acculturated. As a convenience sample, however, the study participants were recruited from only two university departments, both of which prepare students for the helping professions. Students choosing social work or counseling as a career may not represent the range of attitudes toward pets that could be found in a random sample of university students. In addition, compared with the university’s student population, women and graduate students were overrepresented in the sample. Having a predominantly female sample is an important limitation because prior research indicates that women are more likely than men to have their dogs spayed or neutered (Frank & Carlisle-Frank, 2003). Thus, the rates of sterilization found
in this study may be higher than would be found in a more gender-balanced sample.

Perhaps the most serious limitation in the study is the small number of cat owners in the analysis. Although there were 39 cat owners in the original sample of 208 Latinos, only 25 guardians identified a cat as the pet they had owned the longest. Thus, the analysis of sterilization attitudes and behaviors toward cats relied on the responses of only 25 cat owners. In light of the small sample size, the findings regarding cat owners and comparisons between cat and dog owners must be interpreted cautiously and considered exploratory.

A related issue is the representativeness of the sample. As noted previously, compared with national data on Latinos (AVMA, 2007), Latinos in this sample were more likely to own dogs (54.33% compared with 40.1%) and less likely to own cats (18.75% compared with 28.0%). The two locality-based studies of Latinos and pets cited earlier (Poss & Bader, 2007; Risley-Curtiss et al., 2006) found an even greater differential in rates of dog and cat ownership. Specifically, in the study conducted by Risley-Curtiss et al., 70.7% of a sample of 41 Hispanic respondents owned dogs, but only 12.2% owned cats. In Poss and Bader’s study, 66.8% of 205 Latino respondents owned dogs, but only 10.2% owned cats.

Without additional information about the respective samples, it is not possible to explain the differences between the cat and dog ownership rates in these locality-based studies and the national rates for Latinos. Nevertheless, for extremely low-income Latinos, including colonia residents such as those in Poss and Bader’s (2007) study, having a dog may provide a sense of safety for the household that otherwise is not possible to obtain. Owning a cat may be perceived as adding to the family’s financial burden without tangible benefits to offset the costs. However, data about income level are not available for the current study or the study conducted by Risley-Curtiss et al. (2006). Thus, it is not possible to determine whether the Latino samples in these two studies have significantly lower incomes than a national sample of Latino pet owners, nor is it possible to determine whether income differences explain the differences in rates of cat and dog ownership between the national data and the locality-based studies. Clearly additional research is needed to assess and explain variations among Latinos in rates of dog and cat ownership.

At the same time, it should be noted that the AVMA (2007) survey found that Hispanics were equally likely to regard their dogs and their cats as members of the family. Specifically, 52.9% of Hispanics regarded their dogs as family members (AVMA, 2007, Table 3-21), and 52.5% of Hispanics regarded their cats as family members (AVMA, 2007, Table 3-22). Thus, in Latino families, when cats are owned, they are regarded as highly as dogs.

The study is also limited in the measures used. No information was obtained regarding the gender of the respondents’ pets. This omission is unfortunate because previous research (Poss & Bader, 2007) suggests that attitudes toward
sterilization vary somewhat depending on the gender as well as the species of the pet. The questionnaire also did not determine whether the respondent was responsible for the decision regarding sterilization of the pet. It is possible that another family member, such as a spouse or parent, made the decision about sterilization or that the animal was already spayed or neutered when the respondent acquired the animal. Thus, the sterilization rates found in this study may not accurately reflect the actual preferences of the respondents in the study.

Another important limitation in the study’s measures is the ambiguity in the item used to assess attitudes toward sterilization of pets: “Pets should be spayed or neutered (fixed) early in life.” This item did not define the meaning of “early in life” for the respondents. According to Miller (n.d.), “Early age spay/neuter should be broadly defined as surgical sterilization procedures performed on animals who are 6–16 weeks of age or under the traditional age of 6 months” (p. 1). Miller adds, “… because the term ‘early’ implies that the procedure is being performed prematurely, some veterinarians proposed that alternative language might be more acceptable” (p. 1). Because the questionnaire used in this study did not provide the respondents with a definition of “early in life,” some respondents who actually favored sterilization of animals prior to 6 months in age may have disagreed with the item because they interpreted the term “early” to mean “prematurely.” An additional limitation in the item is that the response alternatives required respondents either to agree or to disagree; no neutral option such as “neither agree nor disagree” was provided. In sum, the ambiguity in the item and the lack of a “neutral” response alternative could have seriously undermined the item’s reliability and thus affected the study results.

Implications of the Findings

In conjunction with previous research, the findings of this study have implications for efforts to encourage sterilization of pets through public education and low-cost spay/neuter programs. Approximately two fifths of the owners whose pets were not sterilized indicated that their primary reason for not spaying or neutering their dog or cat was the desire for puppies or kittens. In the region where this study was conducted, anecdotal evidence suggests that individuals who can afford to do so may purchase a female dog, allow her to breed, and then offer her puppies as gifts to lower income relatives and friends. Efforts in the community to encourage shelter adoptions are met with the complaint that the shelter requirement of paying to have an adopted dog spayed or neutered is not affordable for many potential adopters. Indeed, this study found that the cost of spaying and neutering was the primary obstacle to sterilization for one fifth of the cat owners and one fourth of the dog owners whose pets were not sterilized. Thus, educational efforts and low-cost spay/neuter programs must work in tandem to respond to these obstacles.
Public education campaigns must focus on the rate of unnecessary euthanasia for pets in shelters, the availability of sheltered pets for adoption, and the health benefits of early spay/neuter. Changing attitudes about early spay/neuter is important because this study found that favorable attitudes were positively associated with sterilization of both dogs and cats. At the same time, low-cost spay/neuter programs must be made available not only for those who already own pets but also for those who are willing to adopt from a shelter.

CONCLUSION

Perhaps the most provocative finding of this study was the significantly higher sterilization rate of dogs who were valued primarily for the relationship they provided compared with dogs valued primarily for the functions they served in the family. Much more research is needed to determine if this finding can be replicated and to explore the impact of a range of attitudes on willingness to have a pet spayed or neutered. Such research should include Kellert and Berry’s (1987) distinction between “humanistic” and “utilitarian” attitudes, which are roughly analogous to the current study’s distinction between “relational” and “functional” benefits of pet ownership. In the meantime, public education campaigns can emphasize that even if a dog is acquired primarily to serve the family’s needs for safety and protection, having the dog sterilized is in the best interests of the dog, the owner, and the community.

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REFERENCES


