Dogs' Demographic Characteristics Associated with Relationship Differences Perceived by the Guardian

Marcos Díaz Videla, PhD
María Alejandra Olarte
University of Flores, Buenos Aires, Argentina

Abstract

Dogs are the most popular animal species in our culture, probably because of their higher tendency to establish emotional and affective roles with humans. Even though the identification of factors that influence in the human-animal relationship may contribute to improve the human and animal wellbeing, few studies have investigated which dogs' characteristics influence in the quality of this relationship. A descriptive study was carried out by means of surveys aiming to describe the demographic characteristics of companion dogs that are associated with the perception of the relation quality by their guardians. An incidental sample of 425 dogs' guardians was taken in the city of Buenos Aires, who filled out a questionnaire with six relational intensity measures: Dog-Owner Interaction, Perceived Emotional Closeness, Perceived Costs, Anthropomorphism, Willingness to Adapt, Perceived Benefits. Dogs' age was associated with lower scores in interaction and perceived benefits and costs. Dogs' size was associated with higher benefits and will to adaptation by guardians, without association with costs perception. Dogs of specific breeds differentiated from those of mixed breeds only in terms of a higher interaction behavior linked to the incorporation of the animal in social activities. No differences were observed related to the dog's breed nor its reproductive status. The associations identification carried out may direct the selection of a dog for adoption, as well as help the development and upkeep of successful human-dog relationship. Potential applied implications are delineated. Human-dog relationship develops mainly at an emotional level, with little involvement of cognitive and social components that increase the complexity of relationships among humans.

Keywords: Companion animal, dog, human-animal relationship, pet

Introduction

The domestic dog (*Canis familiaris*) belongs to a family of canids, a group of carnivorous mammals biologically related, that is divided in thirty-eight species, which inhabit almost the whole world, except for the Antarctic and some oceanic islands. Wild canids are land animals, fast runners, mainly nocturnal, and have their young in burrows or caves. They can be lonely hunters, such as the fox, or social hunters, such as the wolf, the jackal and the coyote. All of them communicate with each other by means of facial expressions, body postures, tail movements and vocalizations. The domestic dog is the only canid that can be defined as completely domesticated (Clutton-Brock, 1995).

Dogs could have originated as carrion-eating animals, that were domesticated to be used as food or workforce, as is the case of other domestic animals such as goats, that pull carts, or oxen, that pull plows. Differently from other domestic animals, dogs turn out to be, as well, an excellent company (Coppinger& Schneider, 1995).

The selective dog breeding has given place to nearly 400 breeds that exist nowadays, which were developed since the antiquity to carry out different functions, the main of which was to keep company and raise the owner personal status within the household or during hunting (Clutton-Brock, 1995). The wish for company was and still is the main reason for which people promote the relationship with their pets. Nowadays the importance of these companion animals as a status symbol has been diluted and rather represents other aspects of the social identity. Particularly, dogs symbolize the humanitarian character of their owners, love and fun. For owners who belong to the higher social classes dogs represent as well a connection to ordinary people (Sanders, 1999).

The tendency to ally voluntarily with humans, even in the presence of rejection and punishment, places the dogs in a unique position respect to the rest of non-human animals (Serpell, 1995). Among the vast variety of species that function as companion animals, dogs turn out to be exceptional due to their display of affection, loyalty and devotion signs, and behaviors that encourage the game and physical contact (Hart, 1995). No other specie gets so close to humans in emotional and symbolic terms, hence, no other specie demands so hard to be treated as human (Serpell, 1995).

Even though dogs can develop tight emotional tieswith people at any age, the process tends to occureasier in the early development, during the so-called socialization period, from the third to the twelfth week of life. This process of primary socialization not only will determine towards whom or what the puppy will react in a positive fashion, but the puppy will also define before whom it will behave as one of their kind (Serpell, 1995; Serpell & Jagoe, 1995).

Whereas the relationships established with some animals that function as pets turn out to be relatively parasocial or unilateral, (e.g., tortoise, goldfish), the relationships establish with others, such as dogs and cats, imply company, physical contact and wellbeing (Green, Mathews, & Foster, 2009). Dogs show a higher tendency to create emotional roles with humans and represent the specie of pets with the highest level of popularity in our culture; they can be considered the only specie that has established an own niche in the human society (Nagasawa, Mogi, &Kikusui, 2009).

Many dogs have a privileged position in our society, living close to their human guardians, who can even make considerable efforts to provide them according to their needs and wishes. Others do not have such luck and are abandoned or put to sleep, sometimes,because of behaviors that are considered problematic (Bennett & Rohlf, 2007).

The identification of the factors that influence the human-dog bond can help improve the wellbeing of humans and dogs, in this unique dyadic relationship (Payne, Bennett, & McGreevy, 2015).

A relationship implies a series of interactions between two individuals known to each other, which are the consequence of a succession of interchanges during a limited time laps, that will take a course influenced by both participants (Hinde, 1976, 1987).

Whether the foundation of the human-animal relationship be conscious, unconscious or based on the evolutionary development of a collective unconscious, people expect reciprocity from animals, and hence, they go into intimate and special relationships with them (Menache, 2000). Many people not only allow these animals to stay inside their homes, but they also seek to uphold this relationship and make considerable emotional and financial efforts to keep it (Serpell, 1996).

The nature of the relationship between guardians and pets have a significant impact on the lives of both (Meyer & Forkman, 2014). However, there is still no agreement on what factors predict which relationships will prosper, potentially providing both with a myriad of benefits, and which will not (Thorn, Howell, Brown, & Bennett, 2015).

Although the interactions with dogs organize mainly in an asymmetrical manner, and it is possible that the guardian's characteristics influence more than that of the dog's in the quality of the relationship (Meyer & Forkman, 2014), few studies have investigated which are the dogs' characteristics that influence the quality of the relationship with their guardians.

The negative influence of some personality and behavioral problems of dogs have been highlighted, such as fear and shyness (Meyer & Forkman, 2014), the tendency to bark excessively, to disobey or to be aggressive, mostly regarding the intensity of the guardian-dog interaction.Dogs'

characteristics such as sociability and congeniality could predict a higher intensity of this relational dimension (Bennett & Rohlf, 2007).

As of the sociodemographic characteristics, it has been informed that castrated dogs were considered less destructive by their owners, that crossbred dogs showed more problematic behaviors and that small dogs were more disobedient (Bennett & Rohlf, 2007). Besides, in household in which there were more than one dog, the guardians tended to perceived them emotionally closer, and guardians who had their first dog were prone to perceived higher costs of the relationship (Meyer & Forkman, 2014).

This work aimed to describe the demographic characteristics of companion dogs and to analyze their association with the perception of the relationship quality with their guardians. For this, we have considered different relational dimensions (i.e., interactions, emotional closeness, costs, anthropomorphism, willingness to adapt and perceived benefits).

Method

Design

We carried out a transversal descriptive correlational study by means of surveys, with an incidental sampling of guardians in the City of Buenos Aires. This study focused to make correlations and comparisons among groups and subgroups of people, regarding the companion dogs characteristics.

Sample

This study had 425 participants, between 21 and 95 years of age (*M*=42.96, *SD*= 16.08), 119 of which were men and 306 were women, representing 28% and 72% of the sample respectively.

The dogs were between 1 and 18 years old (*M*=5.89, *SD*=3.86). The time of cohabitation with this dog was on average longer than 5 years (*M*=5.43, *SD*= 3.85). See Table 1.

Table 1. Sociodemographic variables related to the dogs (*n* = 425).

Variable		%
Sex	Male	56.7
	Female	43.3
Breed	Specific	57.4
	Mixed	42.6
Size	Small (< 10kg)	40.6
	Medium (10-25kg)	35.7
	Big (> 25kg)	23.7
Sterilization	Yes	40.7
	No	59.3

Instrument

A sociodemographic questionnaire was made, which reflected some characteristics of the owner, the companion animal, and the relationship between each other.We also used adaptations[83] of the scales:

Owner-Dog Interaction (ODI)

Taken from Dwyer, Bennett and Coleman (2006), it reflects general activities related with taking care of the dog, such as grooming, as well as more intimate activities such as kissing and hugging the dog. It also reflects activities linked to the incorporation of the dog to the guardian's social life, such as carrying it in their car or taking it to visit people (α de Cronbach .72).

Perceived Emotional Closeness (PEC)

Taken from Dwyer et al. (2006), it reflects activities linked to the attachment of the guardian towards the companion animal (α de Cronbach .78).

Perceived Costs (PC)

Taken from Dwyer et al. (2006), it reflects the perception of costs of the animal's care, including money aspects, restrictions and increase in responsibilities for the guardian (α de Cronbach .78).

Anthropomorphism (A)

Taken from Boya, Dotson and Hyatt (2012), it reflects the degree in which owners ascribe human characteristics to their dogs and consider them in human terms. It includes attitudes such as considering the dog as a child, and behaviors such as celebrating its birthday (α de Cronbach .82).

Willingness to Adapt (WA)

Taken from Dotson and Hyatt (2008), it assesses the degree in which the owners are willing to make changes to accommodate their dogs (α de Cronbach .67).

Perceived Benefits (PB)

[83] The translation from the original language into Spanish was done by a professional expert who speaks both languages. The scales items underwent asymmetry and kurtosis analysis, and only those which showed coefficients between ± 2 were kept, which were considered adequate for all techniques to count with a sufficient range of answers variability. The discarded items were replaced by other similar ones taken from the specific literature. The complete scales and their adaptations are described in detail in Díaz Videla (2016).

Taken from Díaz Videla and Olarte (2016), it reflects the perception of emotional and instrumental benefits that guardians havebecause of their relationship with their dog (α de Cronbach .80).

Procedure

A printed questionnaire was done and personally distributed to the guardians who were at different parks of the city, as well as clients of two shops related to pets (i.e., vet clinic and pet-shop). Before starting to answer, participants were informed about the anonymous and voluntary quality of the study, the general idea of the objectives and the academic goals, and the survey approximate duration (estimated in 12 min). The inclusion criteria were: the guardians had to be 18 years of age or older, and had owned at least a companion dog for which they considered themselves totally or partially responsible. The data collection took place during the first term of 2015, the analysis and brief writing were made during the following months. For the statistical analysis, we used IBM SPSS 2.0 for Windows software.

Data analysis

The variables taken from the raw scores of the psychometric scales were processed as interval variables, the reason why Pearson'*r* test was applied to analyze associations among them and with other interval variables. The analysis of associations that include ordinal variables (e.g., dog's size) were performed using Spearman's *Rho*. As of the comparison of groups in function of the different characteristics (e.g., sex, age, breed, reproductive status) on the behavior in different relational dimensions, significant differences in their variances were observed, according to Levene test (*ps*<.01), that is why, we chose to disaggregate the comparative analyses. For the comparisons of two groups in relation with their scores in interval variables the Student *t* test was used for independent samples, whereas the non-parametric Mann Whitney *U* test was used if the dependent variable was ordinal (e.g., comparison of men and women about dog size); due to the big sample size, the *Z*score of the contrast statistics was reported. When more than two groups were compared, the Krukal Wallis *H* test was used. To assess associations among nominal variables (e.g., sex of the surveyed and dog's breed) we used Pearson's chi-squared test. We established an α level of significance of 0.05 for all statistical tests.

Results

Demographic comparisons

The guardians' gender showed that men had dogs significantly bigger than women ($z = 2.35$, $p<.05$). On the other hand, men and women showed

no significant differences regarding the dog's sex, animal sterilization, neither the fact that the dogs were of a specific breed (*ps*>.19).

Animals of a specific breed and crossbred ones showed significant differences regarding their sterilization, with a higher sterilization rate in the crossbred group (X^2[1] = 16.39, *p*< .001).

Crossbred dogs lived in households with higher number of cats (*t*[411] = 3.83, *p*< .001) than dogs of a specific breed, although these groups showed no difference regarding the amount of dogs (*p*>.08), neither regarding the animal size (*p*>.26).

Dog's age and ownership duration

Dog's age correlated negatively with ODI (*r* = -.31, *p*< .001), with PB (*r* = -.14, *p*< .01) and with PC (*r* = -.14, *p*< .01), and showed no other association with the other scales (*ps*>.06).

As of benefits, dog's age correlated negatively with owner´s exerciseencouragement (r_s = -.13, *p*< .01) and with the fact of giving them energy (r_s = -.19, *p*< .001).As of costs, dog's age correlated negatively to the fact of causing disorder (r_s = -.20, *p*< .001) and generating annoyance because of preventing the owner from doing thing they used to enjoy (r_s = -.11, *p*< .05). When it comes to ODI the differences were observed in nearly all the scales items.

Expectedly, the ownership duration showed similar correlation as the dog's age: it correlated negatively with ODI (*r* = -.27, *p*< .001), with PB (*r* = -.13, *p*< .01) and with PC (*r* = -.11, *p*< .05). Whereas the intensity of the associations was slightly smaller than those established regarding the dog's age, the relevance of this last variable is highlighted over the time of ownership.

Sex

Male and female dogs showed no difference in the acquisition age (*p*>.35), although the female were significantly older than the male (*t*[368.23] = 2.31, *p*< .01), and besides, the male were bigger than the female (*z* = 2.32, *p*< .05).

A significantly higher level of ODI was observedin guardians of male dogs than female ones. To explore this variable, we dichotomized the age variable by forming two groups, considering the median (young and older) and the two groups were compared according to sex: young male, older male, young female and older female. Significant differences were found in the ODI (X^2[3] = 41.05, *p*< .001). When comparing the groups between each other, the Mann Whitney *U* test showed that young male dogs had more ODI than older male and female dogs and that young female dogs had higher scores than older male and female dogs (*ps*<.05), whereas there was no

difference between young male and female dogs, neither between older male and female dogs (*Zs*< 1.74, *ps*> .08). This shows that young dogs have a higher ODI than older ones and that these differences are independent of the dog's sex (see Figure 1).

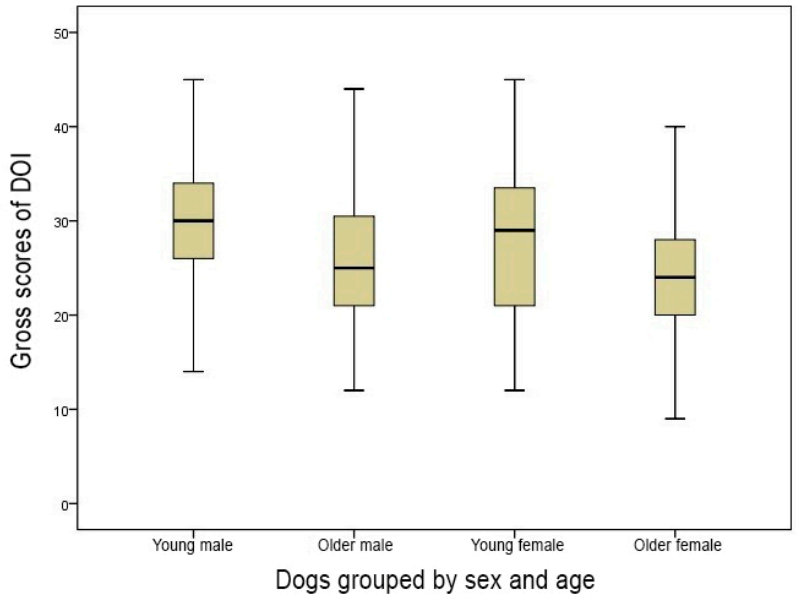

Figure 1. Comparison of the groups: young male, older male, young female, older female, according to the ODI (X^2[3] = 41.05, *p*< .001).

Size

The dog's size correlated positively with WA (r_s = .20, *p*< .001) and with PB (r_s = .10, *p*< .05), whereas it did not with the other relational dimensions (*ps*> .11). The differences regarding the willing to adaptation were given in the sense that a bigger dog's size was related to a higher adaptation as of the organization of the house interior (r_s = .18, *p*< .001) and exterior (r_s = .18, *p*< .001) spaces and a higher influence of the dog in the grocery store shopping (r_s = .14, *p*< .01). As of the consequent benefits, the bigger size of the dog was related with more exercise (r_s = .15, *p*< .01) and with a higher sense of safety (r_s = .13, *p*< .001).

Surprisingly, the dog's size did not correlate with the interaction level (*p*>.91). By analyzing the scale items individually, the bigger size correlated positively with the frequency with which they received treats (r_s = .15, *p*< .01) and negatively with the frequency with which they were carried in cars (r_s = -.10, *p*< .05).

It was also surprising that the dog's size would not correlate with the costs perception (*p*>.11). When analyzing the items individually it was

observed that the only correlation with the animal size was a larger furniture damage (r_s =-.16, p< .001).

Breed

The group of male dogs had a higher number of animals of a specific breed compared to the group of female dogs, with a statistically significant difference (X^2[1] = 3.94, p< .05); in the case of female dogs, the percentage of dogs of specific breed and crossbred dogs was similar, of male dogs 61.7% were of a specific breed. Dogs of specific breed and crossbred dogs were not different in their age (p>.40).

Dogs of a specific breed showed scores significantly higher than crossbred in ODI (t[355.92] = 3.23, p< .001); the difference were observed with respect to the frequency with which they were taken to visit people (z = 4.62, p< .001), were carried in the car (z = 3.98, p< .001), were groomed (z = 3.26, p< .001) and trained (z = 2.42, p< .05).

Quantity of companion animals

The number of dogs and companion animals (dogs and cats) showed no evidence of a significant correlation with the assessed relational dimensions (ps>.14).

Reproductive status

The group of sterilized dogs was significantly different from the non-sterilized dogs showing an older age of the animal (t[395] = 3.96, p< .001), longer time since its adoption (t[395] = 3.26, p< .001) and an older age at the adoption time (t[395] = 2.83, p< .01). Besides, the group of sterilized dogs differed from the non-sterilized showing an older age of the guardian (t[393] = 3.89, p< .001).

Male and female dogs showed significant differences about the percentage of sterilized animals (X^2[1] = 16.39, p< .001); whereas for the female the percentage of the groups was similar, only 31.9% of the male dogs was sterilized.

The group of non-sterilized dogs showed scores of interaction with their owners significantly higher than the sterilized group (t[347.19] = 2.53, p< .05), with no difference in the other dimensions (ps> .07).

The differences in ODI could be due to the fact that both groups also differed in age. To explore this possibility, we dichotomized the variable age making two groups split by the median (young and older) and the resulting groups were compared according to their reproductive status: young castrated, young intact, older castrated and older intact. Significant differences were observed in the ODI scores (X^2[3] = 38.28, p< .01). When comparing the groups with each other, the Mann Whitney U test showed that

young castrated dogs had more ODI than older castrated and intact dogs (*ps*< .01) and that the young intact dogs also had higher scores than older castrated and intact dogs (*ps*< .01), whereas no difference was detected between groups of younger with each other or older with each other (*Zs*< 1.79, *ps*> .07). These data show that young dogs show a higher ODI than the older and that theses differences do not dependon their reproductive status (see Figure 2).

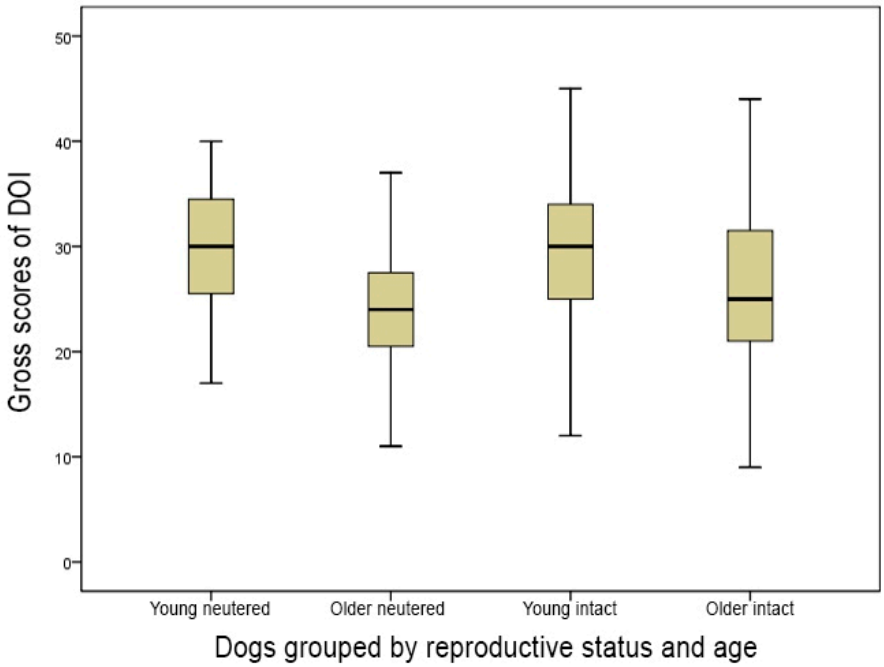

Figure 2. Comparison of dogs' groups: young castrated, young intact, older castrated and older intact in ODI scores (X^2[3] = 38.28, *p*< .01)

Discussion

This study allowed us to identify some demographic characteristics of companion dogs that are associated with differences in the perception of the human-dog relationship by the guardian, and other characteristics that are not. In both cases, it is possible to outline differentpotential applied implications.

Dogs' age was related to a lower level of interaction with their owners, fewer perceived benefits and a lower cost perception, whereas it was not related with the other dimensions. These results might be reflecting, on one hand, higher level of activities in younger dogs and, on the other hand, a higher synchronicity given in time between guardian and dog, with higher mutual acknowledgement and adaptation, which can develop more rigid

bonds of a lower intensity. The most intense correlation with the age variable could account for a higher influence of the first consideration.

When it comes to the interactions, younger dogs received more training and discipline, as well as more frequent gifts and grooming; moreover, they were taken more often to run errands and visit people. As of the perceived benefits, younger dogs tended to encourage more exercising and motivate their guardians. Regarding the costs, younger dogs showed a higher tendency to cause disorder and to interfere in a negative manner in the guardian's activities, generating more restrictions.

Thus, people with tendency to perceive higher costs in the relationship and with fewer possibilities to develop a high level of interaction with their dogs could benefit from adopting companion dogs of older age.

When considering the idea of adopting a dog, guardians could choose small dogs presuming that these would imply lower costs. However, in the present study, the dog's size was not associated with the costs perception. Besides, guardians interacted with their dogs, perceived themselves emotionally close to them and considered them in human terms regardless of the dog's size. On the other hand, guardians of dogs of bigger size had identify and allowed more changes in their lives because of the dog, which were not necessarily perceived as costly or negative. Moreover, guardians of dogs of bigger size were likely to perceive more benefits from the relationship with them. The differences were given in the sense that dogs of bigger size encouraged to a higher degree the realization of physical activity and provided a higher sense of safety to their guardians.

In other words, guardians tended to establish more intense and successful relationships (more benefits and lower costs) with dogs of bigger size. On the other hand, when considering the size of the dog to be adopted, it will be convenient to assess the guardian's flexibility —mainly regarding the changes in the household organization— rather than the possibility of affording financial or social costs.

The dog's sex showed differences only regarding higher levels of interactionin male dogs; after a second analysis, when controlling the dog's age, no differences were in relation with the dog's sex.

According to popular knowledge, female dogs may result emotionally closer, while male dogs are more watchful, protective and potentially more aggressive (what might lead to higher levels of perceived benefits and costs). Nonetheless, the dog's sex showed no evidence of these differences in the relational dimensions.

The human-dog relationships would result potentially intense and successful in the same degree regardless of the dog's sex. Thus, it is possible that this is an overrated aspect —at least in the relational aspects— when choosing to adopt a dog.

The comparison between dog of a specific or unspecific breed showed differences only regarding the interaction intensity, which was higher in the former group. These differences were related with behaviors linked to the dog's esthetics and the its incorporation into the guardian's social life. These differences might be reflecting some sociocultural persistence of the consideration of the dog's breed as a symbol of social status, what may lead to a greater social exposure of dogs of a specific breed.

Dogs showed no other difference in the relational dimensions related with their breed. This contrasted with Bennett and Rohlf (2007), who had highlighted that crossbred dogs showed more troublesomebehaviors, whereas in the present study there was no difference in the perceived costs by the guardians.

These results may be used to encourage the adoption of dogs from shelters over their commercialization, based on the animal's breed. People can opt for an animal that does not belong to a specific breed as they consider that this fact will not be associated with a differential perception of the relationship intensity, beyond what was exposed. What´s more, shelter animals' adoption campaigns might focus to disarticulate the association between dog's breed and social status. This is associated with the regulation of animal population politics, linked to the prohibition of dog breeding within the City of Buenos Aires and the encouraging of castration (Law N° 5346, 2015; Ordinance N° 41831, 1987); which, in time, would lead to lower costs for the estate, generated from animal abandonment, contributing, obviously, to the animal wellbeing.

The number of animals in the household showed no differences regarding the assessed aspects of the relationship. This contrasted with Meyer and Forkman (2014) findings, who reported that in households with more dogs, guardians tended to have higher scores in emotional closeness and lower ones in perceived costs. In other words, in this study there were no differences regarding the benefits and costs perception, the intensity of interaction or emotional closeness with dogs between guardians of one and of multiple companion animals (cats and dogs). When considering the adoption of a second dog or a cat, the dog's guardian could take into consideration that this will probably not be associated with the perception of any difference in the intensity of the relationship with their dog, in a positive nor a negative fashion.

Despite the possibility that dog's sterilization might lead to a hormonal reduction that placate their temper, dominance, behavior problems or activity levels (Bennett and Rohlf, 2007), in this study this was not reflected in the perception of costs by the guardian. Sterilized and intact dogs showed no differences in the relational dimensions.

The lack of perception of differences regarding the relationship intensity can be used when promoting animal castration, avoiding the possible fear some guardians have, who think that dog sterilization may affect their relationship with it.

Conclusion

The identification of the dogs' characteristics that are associated with differences in the perception of the relationship by the guardian can help the establishment and preservation of successful relationships. These characteristics might be considered when deciding to adopt a companion dog. For instance, if the guardian expected the dog to help them increase their physical activity or give themsense of safety, it would be convenient to consider an animal of a bigger size, whereas its sex, breed and reproductive status would not make any difference.

Besides, the lack of relationship between the relational dimensions and the reproductive status of the animal may apprise people who fear that making animals undergo this procedure —recommended not only for population control, but also for the individual health of the animal— might alter their relationship.

The scant differences found between animals of specific and unspecific breeds seem to reflect the persistence in the culture of the idea of an association between breed and social status. Beyond these differences circumscribed to some interactions, the animal's pedigree does not affect the relational quality.

The descriptive nature of the study leads to some limitations, for example, regarding the causality of the assessed characteristics. Besides, it is worth highlighting that it considered an incidental sample of guardians with a certain emotional implication with their dogs, with whom they had lived for more than a year; a reason why we should be cautious with the data generalization. Upcoming studies with probabilistic samples might approach the causal dimension when considering the influence of the dogs' characteristics in the relational dimensions. Dogs do not have the cultural burden usually associated with humans, as it happens with sex and race. The cognitive-behavioral differences socioculturally determined in the relationships among humans regarding sex and race of others have a slight or null expression in the human-dog relationship. Human-dog relationships operate mostly on an emotional level, with little intervention of cognitive and social components, which increase the complexity in the relationships among humans. Thus, companion dogs may offer support relationships qualitative different, especially in comparison with romantic relationships, in a non-assessing context.

References:

Bennett, P. C., & Rohlf, V. I. (2007). Owner-companion dog interactions: Relationships between demographic variables, potentially problematic behaviours, training engagement and shared activities. *Applied Animal Behaviour Science*, *102*(1), 65-84.

Boya, U. O., Dotson, M. J., & Hyatt, E. M. (2012). Dimensions of the dog–human relationship: A segmentation approach. *Journal of Targeting, Measurement and Analysis for Marketing*, *20*(2), 133-143.

Clutton-Brock, J. (1995). Origins of the dog: domestication and early history. In J. Serpell (Eds.), *The domestic dog: Its evolution, behaviour and interactions with people*. (pp. 7-20). Cambridge: Cambridge University Press.

Coppinger, R., & Schneider, R. (1995). Evolution of working dogs. In J. Serpell (Eds.), *The domestic dog: Its evolution, behaviour and interactions with people*. (pp. 21-47). Cambridge: Cambridge University Press.

Díaz Videla, M. (2016). *La relación humano-perro de compañía: Estudio descriptivo en Ciudad Autónoma de Buenos Aires* (Unpublished doctoral dissertation. University of Flores. Ciudad Autónoma de Buenos Aires).

Díaz Videla, M., & Olarte, M. A. (2016). Animales de compañía, personalidad humana y los beneficios percibidos por los custodios. *PSIENCIA. Revista Latinoamericana de Ciencia Psicológica*, *8*(2).

Dwyer, F., Bennett, P. C., & Coleman, G. J. (2006). Development of the Monash Dog Owner Relationship Scale (MDORS). *Anthrozoös: A Multidisciplinary Journal of The Interactions of People & Animals*, *19*(3), 243-256.

Green, J. D., Mathews, M. A., & Foster, C. A. (2009). Another kind of "interpersonal" relationship: humans, companion animals, and attachment theory. In E. Cuyler& M. Ackhart (Eds.), *Relationships and Psychology: A Practical Guide* (pp. 87-108). New York: Novo Science Publishers.

Hart, L. A. (1995). Dogs as human companions: a review of the relationship. In J. Serpell (Eds.), *The domestic dog: Its evolution, behaviour and interactions with people* (pp. 161-178). Cambridge: Cambridge University Press.

Hinde, R. A. (1976). On describing relationships. *Journal of Child Psychology and Psychiatry*, *17*(1), 1-19.

Hinde, R. A. (1987). *Individuals, relationships and culture: Links between ethology and the social sciences*. Cambridge University Press

Ley N° 5346. Se declara a la CABA "Ciudad de Tenencia Responsable de animales domésticos de compañía". *Boletín Oficial de Ciudad Autónoma de Buenos Aires, República Argentina*, 25 de Septiembre de 2015.

Menache, S. (2000). Hunting and attachment to dogs in the Pre-Modern Period. In A. L. Podberscek, E. S. Paul & J. A. Serpell (Eds.), *Companion animals and us: Exploring the relationships between people and pets* (pp. 42-60). Cambridge: Cambridge University Press.

Meyer, I., & Forkman, B. (2014). Dog and owner characteristics affecting the dog-owner relationship. *Journal of Veterinary Behavior: Clinical Applications and Research*, *9*(4), 143-150.

Nagasawa, M., Mogi, K., &Kikusui, T. (2009). Attachment between humans and dogs. *JapanesePsychologicalResearch*, *51*(3), 209-221.

Ordenanza N° 41831. *Boletín Municipal de Capital Federal, República Argentina*, 19 de Junio de 1987.

Payne, E., Bennett, P. C., & McGreevy, P. D. (2015). Current perspectives on attachment and bonding in the dog-human dyad. *Psychology research and behavior management*, *8*, 71.

Sanders, C. R. (1999). *Understanding dogs: Living and working with canine companions*. Philadelphia: Temple University Press.

Serpell, J. (1995). From paragon to pariah: Some reflections on human attitudes to dogs. In J. Serpell (Eds.), *The domestic dog: Its evolution, behaviour and interactions with people* (pp. 245-256). Cambridge: Cambridge University Press.

Serpell, J. A. (1996). Evidence for an association between pet behavior and owner attachment levels. Applied Animal Behaviour Science, 47(1), 49-60.

Serpell, J., &Jagoe, J. A. (1995). Early experience and the development of behaviour. In J. Serpell (Eds.), *The domestic dog: Its evolution, behaviour and interactions with people*. (pp. 79-102). Cambridge: Cambridge University Press.

Thorn, P., Howell, T. J., Brown, C., & Bennett, P. C. (2015). The canine cuteness effect: Owner-perceived cuteness as a predictor of human–dog relationship quality. *Anthrozoös: A Multidisciplinary Journal of The Interactions of People & Animals*, *28*(4), 569-585.