

## REASONS FOR RELINQUISHMENT OF OWNED DOGS IN A MUNICIPAL SHELTER IN BELGRADE

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*It seems that the dog overpopulation in Belgrade is similar to that of many other cities in the world. However, Belgrade does not have problems with inhumane stray dogs' population control methods, nor with their malnutrition, nor with inadequate veterinary care. Moreover, Belgrade has a problem with irresponsible and uneducated dog owners, stray and abandoned dogs on the streets and many unlicensed private animal shelters. The next problem is the existence of only one municipal shelter for abandoned, relinquished pets and stray dogs and cats in Belgrade. The first aim of the study was to estimate the total number and the ratio of dogs that were relinquished to the municipal shelter for adoption and for euthanasia in the period from 1<sup>st</sup> January 2004 to 31<sup>st</sup> December 2007. The second aim of the study was to estimate the main reasons for relinquishment of owned dogs for adoption and reasons for euthanasia in the municipal shelter in Belgrade. The most owned dogs were relinquished for euthanasia (N=1005; 86.563%). Only 156 dogs (13.437%) were relinquished for adoption. Therefore, the number of relinquished dogs for euthanasia was significantly higher than the number of relinquished dogs for adoption (P<0.001). Financial problems were the most frequently given reasons for relinquishment of dogs to the municipal shelter for adoption (26.92%). The leading cause of relinquishment of dogs to the municipal shelter for euthanasia was incurable illness of aged dogs (25.77%).*

*Key words: dog, relinquishment, adoption, euthanasia*

### INTRODUCTION

As Hummer (1975) cited since the beginning of recorded history, man has demonstrated his desire for the companionship of some animals, most frequently, but not always, dogs. Reasons for acquiring a companion animal were studied by Endenburg *et al.* (1994). The investigation showed that people kept animals mainly for social reasons. The principal social reason was companionship. These authors also estimated that it was not only the case for people who were living alone, but also for people living in families. Marston and Bennett (2003) cited that

while most human–canine relationships are very fulfilling others fail, thus resulting in a large number of animals being abandoned or relinquished to animal shelters each year. According to Arkow (1991) successful management of companion animal populations involves three distinct components: legislation, animal control, and education. However, annually, welfare shelters admit many dogs, including those whose caregivers surrender them (Marston *et al.*, 2004, 2005). According to Notaro (2004) sheltered companion animals normally come from three main sources: (a) stray or lost companion animals impounded by animal control field officers or animals impounded for violations of humane care regulations; (b) stray companion animals brought to the shelter by a resident who happens across, and catches, a lost companion animal and delivers the animal to the shelter; and (c) companion animals relinquished by their caregivers. There are many risk factors for relinquishment of dogs to an animal shelter. Mainly, owners relinquish dogs to animal shelters for a combination of reasons such as characteristics, knowledge, experience and expectations of owners and physical and behavioural characteristics of dogs (New *et al.*, 2000; Scarlett *et al.*, 2002). Patronek *et al.* (1996) estimated that potentially modifiable factors that explained the highest proportion of relinquishment were owners not participating in dog obedience classes after acquisition, lack of veterinary care, owning a sexually intact dog, and inappropriate care expectations. Also, dogs obtained from shelters, kept in crates, or acquired at  $\geq 6$  months of age were at increased risk of relinquishment. Dogs with behavioural problems and little veterinary care were at greater risk of relinquishment than were dogs with regular veterinary care, and behavioural problems were associated with inappropriate care expectations (Patronek *et al.*, 1996). A group of authors from the United States (Salman *et al.*, 1998) studied human and animal factors related to the relinquishment of dogs and cats in animal shelters. They reported 71 reasons for relinquishment of dogs, cats or both. Dogs had been most relinquished either because of owners lifestyle changes, such as moving, or because of behavioural problems. Moving was the most common reason for relinquishment of dogs in the study of New *et al.* (1999), Shore *et al.* (2003) and Nemcova and Novak (2003). Health and personal issues were studied by Scarlett *et al.* (1999). The top 3 reasons for relinquishment of dogs were lack of time for the dog, owner's personal problems and allergies. Kass *et al.* (2001) examined the companion animals that were relinquished by their owners to shelters for adoption and those relinquished for euthanasia. They estimated that the median age of dogs relinquished for adoption was 1,2 years and the median age of dogs relinquished for euthanasia was 10,4 years. Disclosed reasons for euthanasia of dogs were: old age, illness behavioural reasons (aggression toward people or other animals, biting either people or other animals, disobedience, excessive vocalization, escape, unfriendliness toward or fear of people, destructiveness inside or outside the home, house soiling, hyperactivity or jumping on people, mistreatment by other pets). Similar results were obtained by Salman *et al.* (2000), Mondelli *et al.* (2004), Shore (2005), Peterson (2005) and Fatjo' *et al.* (2006).

The purpose of the study was to estimate the main reasons for relinquishment of dogs to a municipal shelter in Belgrade. Therefore, in the paper

only data related to the total number of relinquished dogs, the number of relinquished dogs for adoption, for euthanasia and reasons for relinquishment of owned dogs are present.

#### MATERIAL AND METHODS

The study was conducted from 1<sup>st</sup> January 2004 to 31<sup>st</sup> December 2007 in a municipal shelter of the city of Belgrade. Reasons for a total of 1161 relinquished dogs were studied.

In the city of Belgrade there is only one public shelter for dogs (capacity up to 62 dogs) for all of Belgrade's 17 municipalities. The municipal shelter is situated in Ovča, a small village in a rural area near the center of Belgrade. Quarantine capacity is 16% of the shelter housing capacity, and quarantine is 14 days. The shelter also has a cat housing area for about 15 cats. Visiting hours are six days or 40 hours per week. Individual housing for dogs is provided. The shelter is run by 10 employees. Veterinarians from The Central Veterinary Clinic of The City of Belgrade are responsible for the health status, welfare and spaying/neutering of stray dogs in the shelter. The primary purposes of the municipal shelter are: sheltering of stray dogs and cats, sheltering of surrendered, abandoned and vicious dogs and cats, control of stray dogs, rabies control and quarantine and animal adoptions. Admitted dogs stay in the shelter from seven to ten days. Euthanasia of dogs for which no owners or homes can be found is performed once a week.

Each owner who relinquished his/her dog was asked to fill a questionnaire with three groups of questions. The first group of questions related on owners characteristics such as age, gender, education level and monthly income level. The second group of questions related on dogs' characteristics such as age, sex, neuter status, breed, source of dog, length of ownership, purchase). The third group of questions related to reasons for relinquishment of dogs. The first questions in that group asked owners if they were relinquishing dogs to the municipal shelter for adoption or euthanasia. If owners were relinquishing dogs for adoption they were asked by the questionnaire to mark one of the following reasons: lifestyle change such as moving, no time for the dog, financial problems, inadequate housing conditions for the dog, owner illness, new member in a household such as a baby, husband, wife, daughter-in-law or son-in-law, incapable to walk dog outdoor, any other reason or refuse to answer. If owners were relinquishing dogs for euthanasia they were asked by the questionnaire to mark one of the following reasons: old age of dogs, old age and illness of dogs, only incurable illness of dogs, curable trauma or illness but have not enough money to pay the veterinary treatment, behavioural problems, do not want to answer). We based our questionnaire on similar questions such as those in interviews or questionnaires used by Gorodetsky (1997), Edney (1998), Salman *et al.* (1998), Scarlett *et al.* (1999), New *et al.* (2000) and Kass *et al.* (2001).

Only dogs relinquished by actual owner or other family members were included in the study.

Statistical analysis of data was performed using the statistical software package VassarStats (Lowry Richard, 1998-2007, Vassar College, US) and Smith's Statistical Package (SSP version 2.80, September 26, 2005, copyright© 1995-2005 by Gary Smith, Pomona College, Claremont, California).

In the paper only results that related to the number of relinquished dog for adoption or for euthanasia and reasons for these two solutions were presented.

## RESULTS

In the period from 1<sup>st</sup> January 2004 to 31<sup>st</sup> December 2007 owners relinquished 1161 dogs to the municipal shelter of Belgrade (Table 1). The most dogs were relinquished for euthanasia (N=1005; 86.563%). Only 156 dogs (13.437%) were relinquished for adoption. An average value of dogs relinquished for adoption in the observed period was  $39.00 \pm 8.60$ /year and of dogs relinquished for euthanasia was  $251.25 \pm 40.80$  per year. An average value of dogs relinquished for both reasons mentioned above was  $290.25 \pm 35.57$ /year. The minimum number of dogs relinquished for adoption was estimated in the year 2005 (N=29). The maximum number of dogs relinquished for adoption was estimated in the year 2007 (N=48). The minimum number of dogs relinquished for euthanasia was estimated in the year 2006 (N=198). The maximum number of dogs relinquished for euthanasia was estimated in the year 2004 (N=292).

Table 1. Reasons for relinquishments of owned dogs in a municipal shelter in Belgrade

Year	Relinquishment for adoption (rehoming)		Relinquishment for euthanasia		Total
	Number of dogs (N)	%	Number of dogs (N)	%	
2004	35	10.703	292	89.297	327
2005	29	9.635	272	90.365	301
2006	44	18.182	198	81.818	242
2007	48	16.495	243	83.505	291
Total	156	13.437	1005	86.563	1161
Mean	39.00		251.25		290.25
Standard Deviation	8.60		40.80		35.57
Standard Error	4.30		20.40		17.78
Range	19		94		85
Minimum	29		198		242
Maximum	44		292		327

T-test disclosed a significant difference between the means of relinquished dogs for adoption and for euthanasia (Table 2). The number of relinquished dogs

for euthanasia was significantly higher than the number of relinquished dogs for adoption ( $P < 0.001$ ).

Table 2. T-test between mean of dogs relinquished for adoption and mean of dogs relinquished for euthanasia

Statistical parameter	Relinquished dogs for adoption per year	Relinquished dogs for euthanasia per year
Mean $\pm$ Standard Deviation	39.00 $\pm$ 8.60	251.25 $\pm$ 40.80*
Difference	212.25	
95% Confidence Interval	161.236 to 263.264	
t value	10.181	
Degrees of Freedom	6	
Probability (P)	= 0.0001	

The most common reason marked by owners for relinquishing their dog to the municipal shelter for adoption was financial problems (26.92). The next reasons for relinquishing dog for adoption follow after this: lack of time (20.51%), inadequate housing conditions (12.18%), owner lifestyle change – moving (11.54%), new member in a household (7.05%), owner illness (5.13%) and owner was incapable to walk the dog outdoors (4.49%), respectively. Of 156 owners, 9 of them (5.77%) did not want to specify a reason for relinquishing their dogs for adoption and 10 of them (6.41%) marked offered answer as "other reason".

Table 3. Reasons for relinquishment of dogs to a municipal shelter for adoption

Reasons for adoption	Number	Percentage (100%)
Owner lifestyle change	18	11.54
New member in a household	11	7.05
Owner illness	8	5.13
Incapable to walk dog outdoor	7	4.49
Financial problem	42	26.92
Lack time for dog	32	20.51
Inadequate housing condition for dog	19	12.18
Other reason	10	6.41
Do not want to answer	9	5.77
Total	156	100.00

In the period of the four studied years owners relinquished 1005 dogs for euthanasia to the municipal shelter. The top 3 reasons for relinquished dogs for euthanasia were old age and illness (25.77%), incurable illness (21.19%), and behavioural problems (17.81%) of dogs. According to answers given by their owners, 127 dogs (12.64%) were relinquished for euthanasia due to old age, 82 dogs due to trauma (8.16%) and 47 dogs (4.68%) due to curable illness or trauma, but owners had not enough money to pay the veterinary treatment for their pets. Ninety-eight owners (9.75%) did not want to specify reasons for relinquishment their pets to the municipal shelter for euthanasia.

Table 4. Reasons for relinquishment of dogs to a municipal shelter for euthanasia from 1<sup>st</sup> January 2004 to 31<sup>st</sup> December 2007

Reasons for euthanasia	Number	Percentage (100%)
Only old age	127	12.64
Old age and illness	259	25.77
Only incurable illness	213	21.19
Trauma	82	8.16
Curable illness or trauma but have not enough money to pay veterinary treatment of dog	47	4.68
Behavioural problems	179	17.81
Do not want to answer	98	9.75
Total	1005	100.00

#### DISCUSSION

In our study we examined the ratio between relinquished dogs in the municipal shelter for adoption and for euthanasia, as well reasons for these decisions of dogs' owners. As Marston *et al.* (2005) cited although the characteristics of dogs admitted to animal welfare shelters have been described previously, few studies have compared the statistics of different welfare shelters. The existing studies compare shelters that differ operationally and philosophically on factors such as whether they perform euthanasia or whether the shelter receives both impounded and relinquished animals (Marston *et al.*, 2005). The municipal shelter of the city of Belgrade serves at the same time as the municipal pound, welfare shelter, and the main center for stray dogs' population control. Also, the municipal shelter in Belgrade performs euthanasia as required. In the municipal shelter euthanasia of dogs on requests of their owners, if it is ethically acceptable, is free of charge. This is the major difference that exists between the municipal shelter and many private veterinary clinics in which euthanasia of old dogs or dogs with an incurable illness, severe trauma or behavioral problems is

very expensive. It is one of many possible reasons which may explain why owners with low income level and many financial problems put their pets to the municipal shelters not only for euthanasia but for adoption, too. Moreover, admission of relinquished dogs for adoption to the municipal shelter in Belgrade is also free of cost. It is much better solution than abandoning pets in the public areas of the city. On the other hand, there are many private, so called "no-kill" shelters for pets in Belgrade. Only few of them are licensed. Owners of licensed and unlicensed shelters adopted relinquished dogs also for money. In private animal shelters euthanasia of pets is not performed. In our study, financial problems were the most frequently given reasons for relinquishment of dogs to the municipal shelter for adoption (26.92%). However, in the study conducted by Scarlett *et al.* (1999) health or personal issues represented the third most significant class for relinquished dogs. These authors estimated that 27.1% of all interviewed owners cited health or personal problems as the leading reason for relinquishing dogs. Our results of relinquishing dogs due to financial problems of owners expressed in percentages are very similar to the results obtained by Scarlett *et al.* (1999) for personal problems of owners who surrendered their dogs. Also, same authors (Scarlett *et al.*, 1999) estimated that lack of time for the dog, owners personal problems and allergies were the most common reasons for relinquishing dogs to animal shelters. We estimated that lack of time was the second most significant reason relinquishing dogs for adoption (20.51%). So, our results supports the findings obtained by authors cited in the above text. In our study, dogs' behavioural problems were the third most common marked reasons by owners who surrendered their dogs to the municipal shelter for euthanasia (17.81%). Many other authors estimated that behavioural problems were a leading cause of relinquishment of dogs to shelters (Salman *et al.*, 2000; Scarlett *et al.*, 2002; Serguson *et al.*, 2005). According to Scarlett *et al.* (2002) among many other risk factors associated with relinquishment of dogs to shelters, behavioural problems of dogs are best prevented or can be successfully treated or modified. In our study, we estimated that the leading cause of relinquishment of dogs to the municipal shelter for euthanasia was incurable illness of aged dogs (25.77%). Euthanasia of aged dogs with an incurable illness or dogs with terminal illness and severe trauma is ethically acceptable for veterinarians. However, euthanasia of healthy dogs or dogs with curable diseases or curable trauma due to financial problems of owners is not ethically acceptable (Passantino *et al.*, 2006) and present only one of all negative aspects of our relationship with companion animals (Podberscek, 2006). We estimated that in our study only 4.68% of owners requested euthanasia of their dogs with curable illness or trauma. We consider that this reason for relinquishment of dogs to shelters for euthanasia is not ethically acceptable, but it is a better solution for ill or injured dogs than to abandon them to the street.

Our results, as well as results of many cited authors in the papers point to the significant role of veterinarians in reducing relinquishment and euthanasia of owned dogs.



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### RAZLOZI OSTAVLJANJA PASA POZNATIH VLASNIKA U GRADSKOM PRIHVATILIŠTU U BEOGRADU

VUČINIĆ MARIJANA, ĐORĐEVIĆ M, TEODOROVIĆ RADISLAVA, JANKOVIĆ LJILJANA, RADENKOVIĆ-DAMNJANOVIĆ BRANA i RADISAVLJEVIĆ KATARINA

#### SADRŽAJ

Grad Beograd ima slične probleme sa velikim brojem pasa kao i svi ostali gradovi u svetu. Međutim, Beograd nema problem sa nehumanim načinom kontrole brojnosti pasa lualica, niti sa njihovim stanjem uhranjenosti, niti sa neodgovarajućim i nestručnim veterinarskim tretmanom pasa poznatih vlasnika i pasa lualica. Suprotno svemu navedenom, Beograd ima problem sa neodgovornim i needukovanim vlasnicima pasa, velikim brojem pasa bez vlasnika na javnim površinama kao i velikim brojem neregistrovanih privatnih prihvatilišta za pse. Sledeći problem je postojanje samo jednog javnog gradskog prihvatilišta koji zbrinjava napuštene, otuđene pse i pse i mačke lualice. Prvi cilj ovih istraživanja bio je utvrđivanje ukupnog broja i odnosa pasa poznatih vlasnika koje su vlasnici napustili i predali prihvatilištu radi zbrinjavanja ili eutanazije i to u periodu od 1. januara 2004. do 31. decembra 2007. godine. Drugi cilj ovog rada je bio utvrđivanje osnovnih razloga za otuđivanje pasa poznatih vlasnika i njihovu predaju gradskom prihvatilištu na dalje zbrinjavanje ili eutanaziju. Najveći broj pasa poznatih vlasnika je predat gradskom prihvatilištu radi eutanazije (N=1005; 86,563%). Samo 156 pasa (13,437%) je predato gradskom prihvatilištu radi daljeg zbrinjavanja. Upravo zato je broj pasa predatih prihvatilištu radi eutanazije bio značajno veći nego broj pasa predatih radi daljeg zbrinjavanja (P<0,001). Najčešći razlog koji su navodili vlasnici pasa predatih prihvatilištu radi daljeg zbrinjavanja bili su finansijski problemi (26,92%). Glavni uzrok napuštanja i predaje pasa gradskom prihvatilištu radi eutanazije bile su neizlečive bolesti starih pasa (25,77%).