Survey on the Status of Abandoned Animals in Seoul City, 2013

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Abstract

In Seoul City, the rate of households with a cat or dog was 17.9

2012, unpublished data). Based on a survey of 1000 households in Seoul City, it was estimated that approximately 640,000 households (1 to 6) had a cat or dog. When we included the households that were willing to raise a companion animal, this number climbed to 800,000 households (1 in 5) [1].

In 2013, the total number of abandoned animals was 97,197 in Seoul City, of which, 62,119 (63.9%) were dogs and 34,103 (35.1%) were cats, and the cost to manage abandoned animals climbed to 1 billion Korean Won (KW) per year. Lately, conflicts between residents, who have companion animals and those who do not, are very frequent. Additionally, intentional abandonment of animals is an increasing phenomenon in Korea and worldwide [2,3,4,5,6,7].

Abandoned animals raise social issues, because of the frequent incidents of infectious diseases, such as dog ascaris (Toxacara canis) and rabies [8, ??,10], which are transmissible to humans from bite injuries by abandoned animals, or contaminated drinking water from the dead bodies of abandoned animals. Moreover, necessary financial and human resources have been continuously increasing, since the implementation of the Animal Protection Law, which regulates the management of abandoned animals from capture to care.

According to the Animal Protection Law, the abandonment of an animal can be reported to a district office. District officers go to the place of abandonment, capture the animal, take it to a shelter within the district, and place an announcement for at least 7 days, in order the owner to get informed and be able to take the animal back (Animal Care Management System, http://www.animal.go.kr). If the owner does not appear within 10 days from the day of the announcement, the District Government takes ownership of the animal and a post-management plan is applied, which includes adoption, natural death, or euthanasia. By 2013, 19 out of 25 District Governments in Seoul City had made trust agreements with the Korean Animal Rescue and Management Association (KARMA) and 6 District Governments had entrusted local veterinary clinics and the Veterinary Association with the care of abandoned animals (Seoul City Metropolitan Animal Protection 2013, unpublished data).

The rate of abandoned dogs and cats had been increasing in Korea, thus in 2004 a rescue program for I. Introduction n the past few year, the standard of living increased in Korea along with the number of one-person households, which led to an increase in the number of companion animals that attracted increasingly more public attention (Korean Statistical Information Service, http://kosis.kr/). In Seoul City, the rate of households with a cat or dog was 17.9%, and the number of households with a companion animal was estimated to 3,590,000 in 2013. In the same year, the number of companion dogs was 4,400,000 and of companion cats was 1,160,000 in Korea (Korea Social Economic Institute I (www.animal.go.kr).

abandoned animals was implemented in 25 districts of Seoul City. The initial rate of abandoned animals was estimated at 13,000 per year, which increased significantly in 2010 at 18,624 and thereafter it decreased slowly at 15,229 in 2011 and at 13,556 in 2012 (Seoul City Metropolitan Animal Protection 2013, unpublished data).

Approximately 50% of the abandonments occur due to the problematic animal behavior, such as loud barking, improper urination, and excessive behaviors that offend their owners and destroy emotional bonds between humans and animals [11]. Nevertheless, the problem goes even deeper; many people buy companion animals imprudently just for their attractive look, do not train them and abandon them, when their behavior becomes problematic or their care is harder than expected, especially within a residential environment. Sympathy and responsibility for animals are two essential tools to tackle the problem of abandonment [12].

The objective of this study was to inform the public and to obtain necessary data for developing a policy to manage abandoned animals. We conducted a survey and data analysis on the occurrence, monthly population change, breed, sex, age, and health condition (normal or abnormal) of abandoned dogs and cats that were rescued and managed by KARMA, local veterinary clinics and the Veterinary Association in each district.

1   II. Methods

In this study, the occurrence, monthly population change, breed, sex, age, and health condition (normal or abnormal) of abandoned dogs and cats in each district of Seoul City in 2013 were surveyed based on data obtained from the website of the Animal Protection Management System, Animal and Plant Quarantine Agency (www.animal.go.kr). Health condition was divided into two categories, normal and abnormal. As abnormal was characterized any irreversible or critical condition, such as serious external injury (fracture or bleeding), virus infection, skin disease or when the animal was moribund.

2   III. Results

In 2013, out of 11,320 abandoned animals in total, 7,772 (68.66%) were dogs and 3,548 (31.34%) were cats. The occurrence of abandoned cats and dogs in each district was also analyzed and results are shown in Figure 1. The districts that had the highest occurrence of abandoned dogs were Gwanak-gu (528 dogs), Yangcheon-gu (460 dogs), and Eunpyeong-gu (448 dogs), while abandoned cats appeared more frequently in Yongsan-gu (606 cats), Mapo-gu (463 cats), and Gwanak-gu (412 cats). On the contrary, the districts that had the lowest occurrence of abandoned dogs were Jongno-gu (145 dogs), Jung-gu (148 dogs), and Seongdong-gu (192 dogs), while abandoned cats appeared less frequently in Gangdong-gu (17 cats), Dongjak-gu (19 cats), and Yangcheon-gu (28 cats).

The occurrence of abandoned cats and dogs per 1,000 households in each district was also analyzed and results are shown in Figure 2. The districts that had the highest occurrence of abandoned dogs per 1,000 households were Yongsan-gu (4.61 dogs), Gangbuk (3.43 dogs), and Jung-gu (3.24 dogs), while abandoned cats appeared more frequently per 1,000 households in Yongsan-gu (7.01 cats), Mapo-gu (3.27 cats), and Junggu (3.11 cats).). On the contrary, the districts that had the lowest occurrence of abandoned dogs per 1,000 households were Gangnam-gu (0.98 dogs), Songpa-gu (1.49 dogs), and Nowon-gu (1.53 dogs), while abandoned cats appeared less frequently per 1,000 households in Gangdong-gu (0.11 cats), Dongjak-gu (0.13 cats), and Yangcheon-gu (0.18 cats).

According to the Animal Protection Law and post-management plan of abandoned animals, out of 7,772 abandoned dogs 3,428 (44.11%) were euthanized, 2,044 (26.30%) were returned to their owners, 1679 (21.60%) were adopted, and 431 (5.80%) died naturally (Figure 3). The districts that had a higher rate of adoption compare to that of euthanasia were Gwanak-gu, Mapo-gu, and Yongsan-gu (Figure **??**). Additionally, out of 3,351 abandoned cats, 837 (23.59%) were euthanized, 60 (1.69%) were returned to their owners, 897 (25.28%) were adopted, and 1,557 (43.88%) died naturally (Figure 3). The districts that had a higher rate of adoption compared to the rate of natural death were Gwanak-gu, Yongsan-gu, Dongjak-gu, Yangcheon-gu, and Gangnam-gu (Figure **??**). It is noteworthy that the rate of dogs that returned to their owners was higher by 24.61% that that of cats (Figure 3).

The monthly occurrence of abandoned cats and dogs was analyzed and results are shown in Figure 6. The months that had the highest occurrence of abandoned dogs were August (11.34%), July (10.87%), and May (10.36%), abandoned cats appeared more frequently in May (16.91%), June (14.88%), and July (14.15%).

A summary of data on breed, sex and health condition of abandoned dogs are presented in Table 1. Out of 7,772 abandoned dogs, 5,450 (70.12%) were purebreds and 2,322 (29.88%) were crossbreds took up of 7,772 abandoned dogs, while 3,446 (44.34%) were female and 4,326 (55.66%) were male. The number of male dogs was higher than that of female dogs. Normal dogs were 5,279 (67.92%) and abnormal dogs were 2,493 (32.08%). The number of normal dogs was double than that of abnormal dogs. Regarding the age of abandoned dogs, 3,473 (44.69%) were 0-2 years old, 1,999 (25.72%) were 3-5 years old, 1,214 (15.62%) were 6-8 years old, and 1086 (13.97%) were older than 9

Volume XVI Issue I Version I G years. Results showed that younger dogs were more likely to be abandoned than older dogs.

Out of 5,450 purebred dogs, 4,252 (78.02%) were small-sized dogs were, 1021 (18.73%) were middle-sized dogs, and 177 (3.25%) were big-sized dog. Out of 4,252 small-sized dogs, 1,454 (26.68%) were Maltese, 888 (16.29%) were Shih Tzu, 724 (13.28%) were Poodle, and 598 (10.97%) were Yorkshire Terrier (Table 2).

A summary of data on breed, sex and health condition of abandoned cats are presented in Table 3. Out of 3,548 abandoned cats, 308 (8.68%) were purebreds, 119 (3.35%) were crossbreds, and 3,121 (87.97%) were Korean Shorthair, while 1,748 (49.27%) were female and 1800 (50.73%) were male. The number of female cats did not differ significantly from the number of male cats. Normal cats were 1,990 (56.09%) and abnormal were 1,558 (43.91%). The number of normal cats was higher than that of abnormal cats. Regarding the age of abandoned cats, 3,325 (93.71%) were 0-2 years old, 183 (5.16%) were 3-5 years old, 38 (1.07%) were 6-8 years old and 2 (0.06%) were older than 9 years. Results showed that the majority of abandoned cats were infant cats. Out of 308 purebred cats, 126 (40.91%) were Persian and 88 (28.57%) were Turkish Angora (Table 4).

Others; American Curl, Balinese, Bengal, Ragdoll

3 IV. Discussion

The objective of this study was to obtain necessary data for effectively tackling the problem of abandoned animals in Seoul City. The occurrence, monthly population change, breed, sex, age, and health condition (normal or abnormal) of abandoned dogs and cats in each district of Seoul City in 2013 were surveyed based on data obtained from the website of the Animal Protection Management System, Animal and Plant Quarantine Agency (www.animal.go.kr). Overall, out of 11,320 abandoned animals, 7,772 (68.66%) were dogs and 3,548 (31.34%) were cats.

In 19 districts abandoned animals were rescued and managed by KARMA and in 6 districts (Gwanak-gu, Geumcheon-gu, Dongjak-gu, Mapo-gu, Yangcheon-gu, and Yongsan-gu) by local veterinary clinics and the local Veterinary Association. In these 6 districts, the occurrence of abandoned animals was higher, but at the same the rate of adoption was also higher, while the rates of euthanasia or of natural death were lower than in the other 19 districts, which shows that management of abandoned animals was more effective.

Out of 7,772 abandoned dogs, 4,252 (78.02%) were purebred, small-sized dogs, probably because they are more suitable for residential environment such as apartments or villas. Abandoned purebred dogs were Maltese, Shih Tzu, Poodle, Yorkshire Terrier, and Miniature Schnauzer, breeds that constitute 70% (210,000 dogs) of the total companion dog sales in Korea (Korea Industry and Economy Laboratory 2006).

Out of 7,772 abandoned dogs, 3,446 (44.34%) were female and 4,326 (55.66%) were male. The number of male dogs was higher than that of female dogs; because it is harder to toilet-train male dogs than female dogs, and also they are more loud and wander around in heat, characteristics that annoy both the owners and their neighbors [13].

Data showed that 5,279 (67.92%) dogs were normal, 2,385 (30.69%) dogs were under 1 year old, and most of them were abandoned in July and August. These results showed that dogs were abandoned during the summer vacation period, not because they were unhealthy, but possibly because their care was harder than expected.

Out of 3,548 abandoned cats, 308 (8.68%) were purebreds, 119 (3.35%) were crossbreds, and 3,121 (87.97%) were Korean Shorthair. In Korea, the rate of purebred cats has been increasing, but Korean Shorthair is still the most popular breed [14]. It is generally difficult to distinguish abandoned and feral Korean Shorthair, because the latter breed naturally and live independently in Seoul City. It is noteworthy that the rate of dogs that returned to their owners was higher by 24.61% that that of cats, which may suggest that most of Korean Shorthair were feral and not abandoned cats. Abandoned cats under 3 months old were 2,375 (71.43%) and cats that died naturally were 1557 (43.88%). March, May and June are the major reproduction moths in cats [15], so this explains the reason that Korean Shorthair occurred most often in May (16.91%), June (14.88%), and July (14.15%), and also the high probability of feral infant cats (except of those subjected to TNR) to be classified and managed as abandoned cats.

According to the Animal Protection Law (Article 13), cats that breed naturally and live independently are not subjects of protection, but of TNR to control their population and are excluded from rescue and care. But as a result feral cats are still treated as abandoned animals.

Animal registration system has been implemented in 53 cities and counties 2008 and 195,808 dogs were registered until 2011. As a result, the rate of abandoned animals that returned to their owners increased, return time shorted and the occurrence of abandoned dogs decreased. Animal registration system has been extended nationwide since January 1, 2013. Out of 1,273,563 dogs, 479,147 have been registered since then and the rate of registration has been continuously increasing.

In Taipei, Taiwan, the Bureau of Animal Protection tightened up animal care education and Federal Government supported neutralization of animals. As a result, 70% of companion animals were registered and the occurrence of abandoned animals decreased sharply (Taipei City Animal Protection Office, Ministry of Health and Welfare 2013, unpublished data).

In Tokyo, Japan, dog registration system has been implemented since 1985. As a result, more than 50% of dogs have been registered, and the occurrence of abandoned dogs decreased by 83% (Tokyo Animal Center 2012, unpublished data).

In Ottawa, Canada and New South Wales, Australia, animal registration system has been implemented both for dogs and cats (Seoul Metropolitan Government 2013, unpublished data). If animal registration system for cats is enforced, it will help to distinguish domestic cats from feral cats, manage them more effectively and decrease the occurrence of feral cats.

In Conclusion, to tackle the problem of abandoned animals, first, a new regulation of companion animal sellers and owners should be included in the Animal Protection Law to strengthen their responsibility; second, education programs on animal rights should be implemented; third, potential owners should be informed on the basic physiological and ethological characteristics of companion animals before hey adopt them. Additionally, an effective management system should be imposed on every phase of animal production, distribution, and sale.

Abandoned animal management can be improved, if new animal care centers are developed and managed directly by Seoul City Metropolitan Government as happens in Taipei and Tokyo, and also volunteer work is encouraged for a more transparent and effective management. We suggest that new convenient animal care centers should be constructed, a positive animal protection policy should be established and education on animal rights should be promoted. This is the first report that surveyed the characteristics of abandoned animals that

171 rescued and managed by Seoul City Metropolitan Government, and results can be used to effectively tackle the problem of abandoned animals in Seoul City and hence in Korea. [1] [2]

Figure 1: G

172

[2]Survey on the Status of Abandoned Animals in Seoul City, 2013
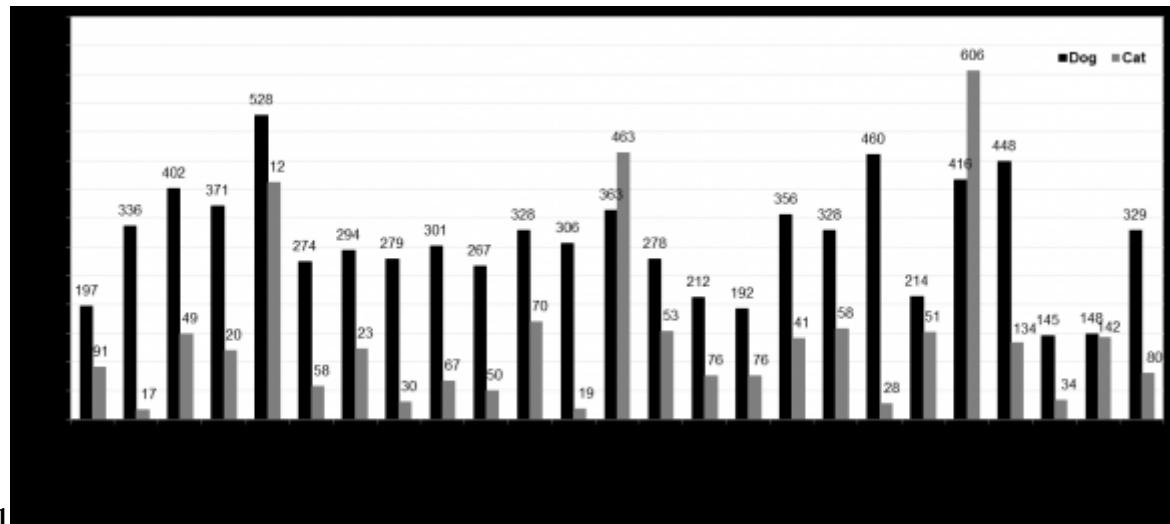
Figure 2: Figure 1 :
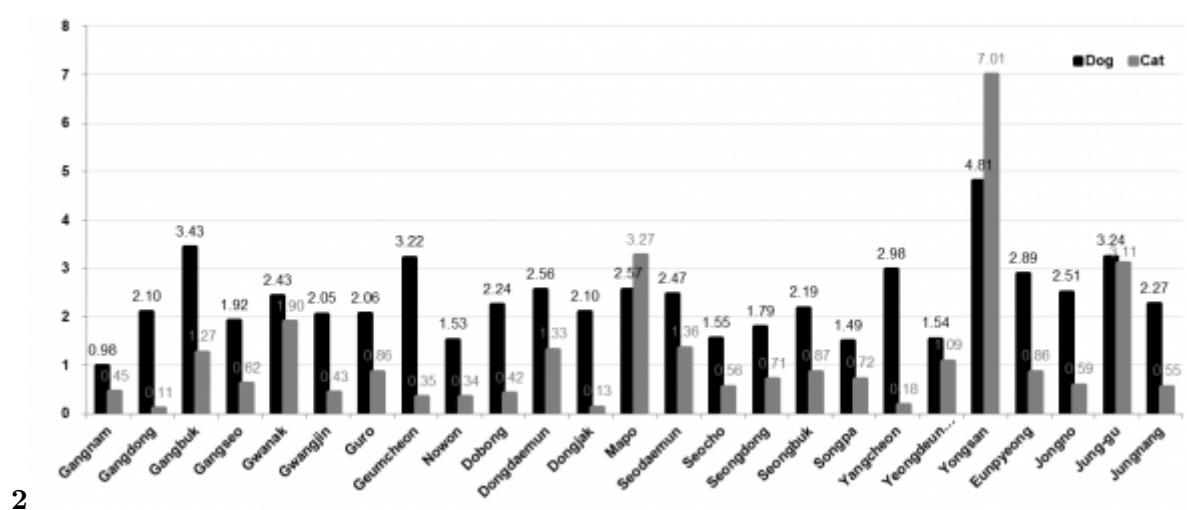
Figure 3: Figure 2 :G

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Figure 4: Figure 3 :

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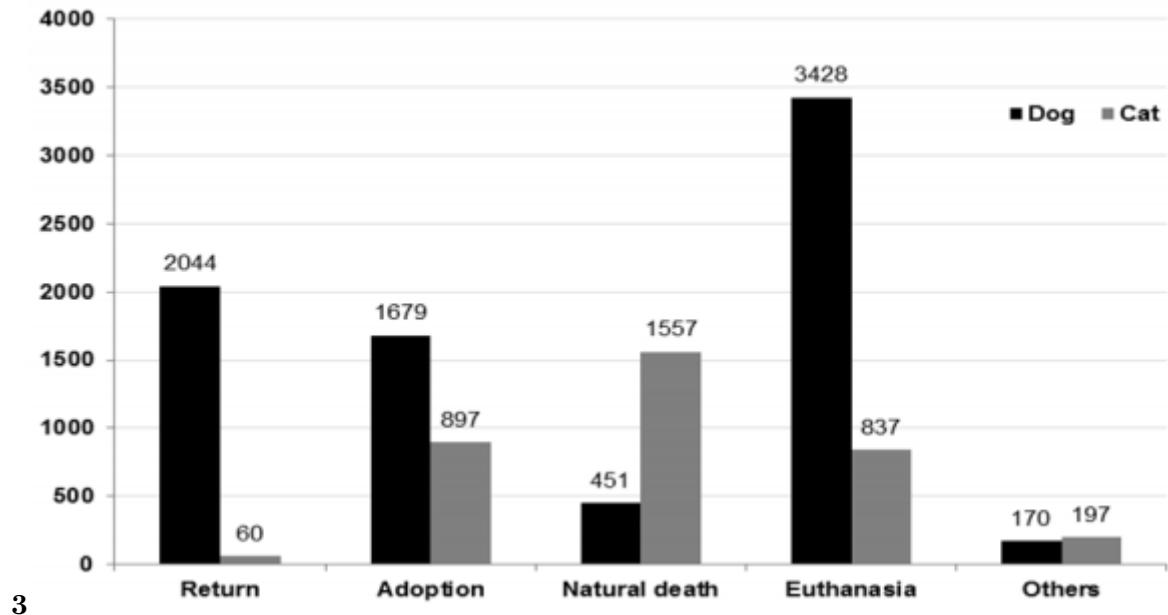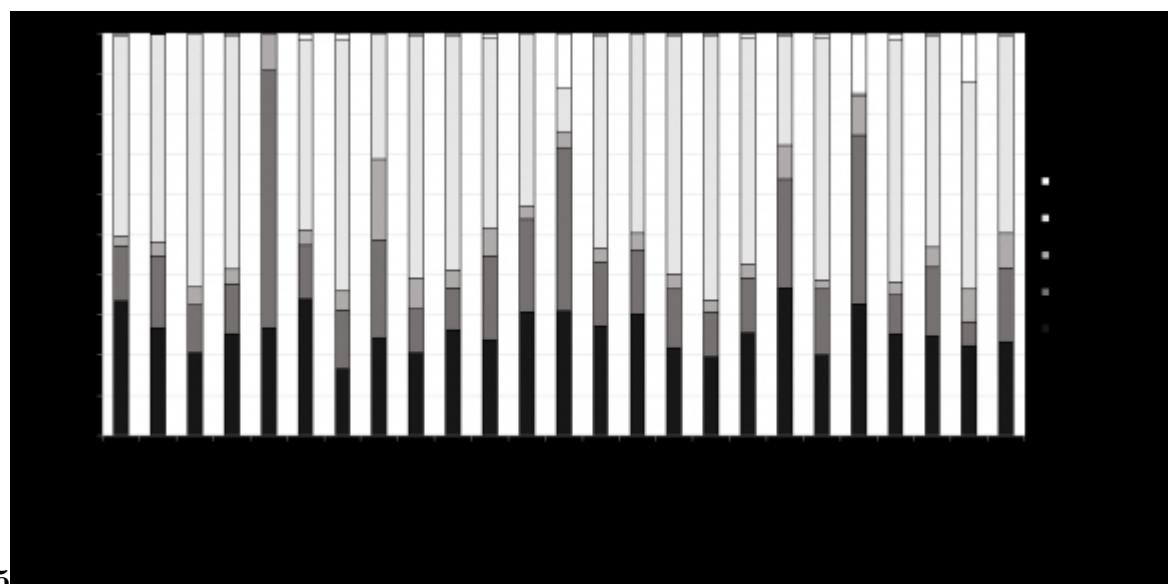
Figure 5: Figure 4 :Figure 5 :G
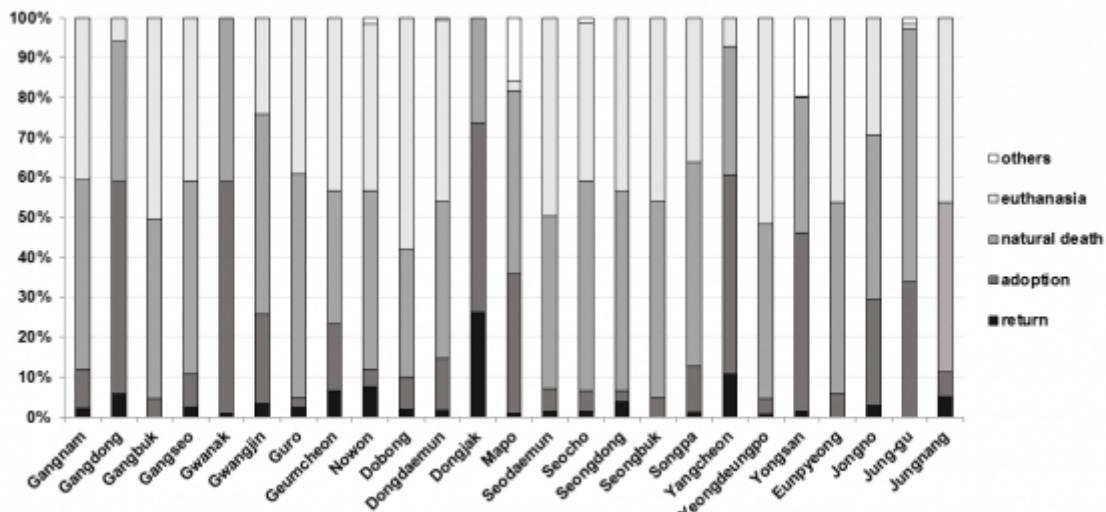
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Figure 6: Figure 6 :

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	Breed		Sex		Physical Condition observed		Age(year)			
	Pure	Cross	Female	Male	normal	abnormal	0-2	3-5	6-8	over 9
(No.)	5,450	2,322	3,446	4,326	5,279	2,493	3,473	1,999	1,214	1,086
(%)	70.12	29.88	44.34	55.66	67.92	32.08	44.69	25.72	15.62	13.97

Figure 7: Table 1 :

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City in 2013

*[Note: ? *Standard for FCI (Federation Cynologique Internationale)]*

Figure 8: Table 2 :

3

	Breed			Sex		Physical Condition observed		Age(year)			
	Pure	Cross	Korean short hair	Female	Male	normal	abnormal	0-2	3-5	6-8	over 9
(No.)	308	119	3,121	1,748	1,800	1,990	1,558	3,325	183	38	2
(%)	8.68	3.35	87.97	49.27	50.73	56.09	43.91	93.71	5.16	1.07	0.06

Figure 9: Table 3 :

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Breed	No.	(%)
Persian	126	(40.91)
Turkish Angora	88	(28.57)
Russian Blue	39	(12.66)
Siamese	29	(9.42)
Scottish Fold	8	(2.60)
American Shorthair	7	(

Figure 10: Table 4 :

.1   V. Acknowledgments

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