

[Research Note]

A note on management and husbandry guidelines of a canine shelter

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1. Introduction

There are animal control centers run by 47 prefectural governments and 65 designated cities in Japan. The numbers of stray or relinquished dogs and cats that are euthanized in the centers have declined steadily over the last 40 years. In 1974, approximately 1,159,000 dogs and 63,000 cats were put to sleep according to the Ministry of the Environment (2013). In those days, the animal control centers were considered as a place to put to sleep those relinquished or stray animals. However, due to more public awareness of such situations supported by revisions of laws, they have turned themselves into animal shelters where administrators make various efforts to find new owners of the dogs and cats. Such efforts have contributed to the decline. The latest numbers of euthanized dogs and cats in 2013 were 28,570 and 99,671 respectively.

In addition to the public animal shelters, there are 215 private animal shelters¹⁾ that are notified to the municipal governments as of April 1st, 2014 according to the Ministry of the Environment (2014). Notification became mandatory in the Article 24-2 of the Act on the Welfare and Management of Animals (1973) revised in 2012.²⁾

It is often the case that welfare of animals in animal shelters is compromised. In many animal shelters, dogs do not have necessary exercise or interaction with other dogs or humans. Cats remain aggressive or fearful towards humans as they do not have enough opportunities to interact with humans. Poor welfare of the animals is likely to induce problematic behaviors which would reduce rehoming possibility. Therefore, improving welfare of the shelter animals is a key to reduce the numbers of unnecessary killing.

This note suggests management and husbandry guidelines based on recent findings for the purpose of improving welfare of dogs in canine shelters. Section 2 discusses issues surrounding the canine shelter management. Section 3 summarizes recommendations and suggestions for the canine shelter husbandry. Section 4 is a brief conclusion.

1) The term 'private animal shelter(s)' is used here to mean a non-governmental organization which basically provides relinquished and stray animals with a temporary shelter, food, and water for the purpose of rehoming them.

2) Animals subject to the article 24-2 are mammals, birds, and reptiles except for production and laboratory animals.

2. Management of a canine shelter

In order to operate an animal shelter properly, it is essential that the shelter should develop policies and protocols based on a clearly defined mission. 'Policies must address the resources and legal/contractual obligations of the organization. Protocols must be developed and documented in sufficient detail to achieve and maintain the standards' of a shelter (Association of Shelter Veterinarians, hereafter ASV, 2010, p. 12). The shelter should develop policies and protocols at least on the following items;

- The maximum number of dogs they can take care of
- Evaluation procedures of dogs as well as prospective owners
- Whether they euthanize dogs, and if so, in what conditions and how
- Daily routines
- Training of dogs
- Training and education of staff and prospective owners
- Sanitation procedures
- Health maintenance and medical treatments
- Emergency situations such as natural disasters and disease outbreaks
- Fund-raising and book-keeping

The shelter should develop these policies and protocols based on their financial resources as well as human resources available to them.

The first concern is the amount of funding available to the shelter. It is critical that the shelter gets enough funds to run the shelter. Although public shelters are funded by local governments, it does not necessarily mean that they are financially secure. No public shelter can afford to keep all accepted dogs and cats until they can rehome them. The situation of private shelters is the same or often worse as they have to fund-raise by themselves.

Another concern is how to evaluate dogs as well as prospective owners. It is possible that a high number of dogs will be returned from new owners if the shelter does not evaluate and match the dogs and the prospective owners appropriately. On the other hand, if the shelter makes the evaluations too strict, the number of dogs adopted may become small which in turn leads to a smaller number of new dogs accepted.

Diesel, Pfeiffer and Brodbelt (2008) conducted a 1-year study in which they collected questionnaire responses from owners of 4500 dogs rehomed from 14 rehoming centers of Dogs Trust, the largest dog welfare charity in the UK, 6–8 weeks after rehoming. They then made 700 follow-up phone calls to the new owners at 6 months after rehoming. They found that 14.7% of dogs were returned to the centers and listed seven factors as playing important roles in the rate of the dogs being returned to the centers: (1) size of dogs, (2) behavioral problems of dogs, (3) owner expectations, (4) owner family structure, (5) places where dogs slept, (6) attending training classes, and (7) rehoming centers. First, large sized dogs were more likely to be returned than small-sized dogs. Second, dogs with behavioral problems had a higher rate of being returned. However, they reported that while the aggressive dogs with the owners not getting advice had 11.1 times higher rate of being returned to the centers than those with no behavioral problems, the aggressive dogs with the owners calling the rehoming centers for

advice had 5.6 times higher rate. This suggests that owners' efforts to deal with aggressive dogs are likely to reduce the risk of relinquishing the dogs. Thirdly, the owners who found that looking after their dogs required more work than they expected were 9.9 times more likely to return their dogs than those who expected the amount of care needed before adoption. Owners' family structure was another factor. Owners younger than 25 years as well as families with children younger than 13 years old were more likely to return their dogs. Another factor was whether owners allowed their dogs to sleep in a family member's bed. Those who allowed it were less likely to return the dogs. The sixth factor was owner's participation in training classes. The owners who attended training classes had the lower rate of returning their dogs. Finally, the efforts of rehoming centers played an important role in whether the dogs were returned to the centers or not. These results all suggest that careful evaluations of the dogs as well as prospective owners and matching of them are essential in successful rehoming.

Finally, whether the shelter euthanizes unadoptable dogs or not is an ethical issue as well as a financial issue. Once euthanasia is in their policy, a clear protocol for euthanasia should be made and shared by the staff.

3. Guidelines based on the five welfare needs

In this section, I will present suggestions for husbandry guidelines of a canine shelter based on the five welfare needs of animals under the Section 9 of the Animal Welfare Act (2006) in the UK as stated below.

- its need for a suitable environment;
- its need for a suitable diet;
- its need to be able to express normal behavior patterns;
- any need it has to be housed with, or apart from, other animals; and
- its need to be protected from pain, suffering, injury and disease.

These needs were developed from the Five Freedoms (Farm Animal Welfare Council 2009), which are basic principles accepted internationally as guidelines for welfare of all animals (ASV 2010, p. 10).

In the following sub-sections, I will discuss factors relevant to these needs, which are divided into three. Section 3.1 addresses factors relevant to the needs for a suitable environment, to be able to express normal behavior patterns, and to live with or apart from other animals. Section 3.2 discusses elements related to the need for a suitable diet and Section 3.3 to the need to be protected from pain, suffering, injury and disease.

3.1 The needs for a suitable environment, to be able to express normal behavior, and to live with or apart from other animals

3.1.1 The Kennel environment

In order to provide a suitable environment for shelter dogs, a canine shelter should have a safe and comfortable kennel where the dogs can eat, sleep, and spend most of their time. The kennel should have sufficient space to allow each dog 'to make normal postural adjustments, e.g., to turn freely and to easily stand, sit, stretch, move their head, without touching the top of the enclosure, lie in a comfortable position with limbs extended, move about and assume a

comfortable posture for feeding, drinking, urinating and defecating' (ASV, 2010, p. 13).

American Veterinary Medical Association (2008) recommends the adequate temperature, humidity and ventilation as below;

- Temperature: above 50 degrees Fahrenheit (10 degrees Celsius) and below 80 degrees Fahrenheit (26.6 degrees Celsius)
- The relative humidity: from 30 to 70%
- Ventilation: ten to twenty room air changes per hour are generally considered adequate ventilation for animal facilities.

The shelter should keep the kennel with adequate temperature, humidity, and airflow.

3.1.2 Kennel size

Kennel size varies depending on reports. For example, according to Taylor and Mills (2007), the reported cage sizes for shelter dogs are between 5 and 6 m² (Wells and Hepper 1992, among others) though the smallest is 1 m² (Hennessey, Voith, Young et al. 2002) and the largest 14 m² (Mertens and Unshelm 1996). New Zealand Ministry of Agriculture (1993) recommends minimum sizes for the dog accommodation as shown in Table 1.

Table 1: The minimum sizes for the accommodation of dogs

	Night box ³⁾	Kennel ⁴⁾	Exercise area	Minimum fence height
Small dogs (less than 7 kg, e.g. toy breeds)	900 mm x 700 mm	500 mm x 500 mm plus Run: 600 mm x 1000 mm	3 m x 2 m for one dog ⁵⁾	1.2 m
Medium dogs (7-20 kg, e.g. Cocker spaniels, Shetland sheepdogs)	1.2 m x 800 mm	600 mm x 700 mm plus Run: 800 mm x 1000 mm	3 m x 3 m for one dog ⁵⁾	1.8 m
Large dogs (20-40 kg, e.g. Labradors, Dobermans)	1 m x 1.5 m	800 mm x 800 mm plus Run: 1 m x 800 mm	4 m x 4 m for one dog ⁵⁾	1.8 m
Extra large dogs (>40 kg, e.g. Great Danes, St Bernards)	1 m x 2 m	1.2 m x 1.2 m plus Run: 1.2 m x 2.4 m	5 m x 5 m for one dog ⁵⁾	1.8 m

Although some studies found no effect of cage size on dogs (Newton 1972 among others), Hubrecht and Turner (1998) state that a larger kennel with separate areas for sleeping and exercise provides a more complex and interesting environment for the dogs. Others report that the dogs in larger cages move more than those in smaller cages (Hetts, Clark, Calpin *et al.* 1992 and Huges and Campbell 1990). It seems reasonable to conclude that the kennel should 'provide adequate space for the dogs to walk for at least a few paces in a straight line' as suggested by Hubrecht and Turner (1998).

3) Night box is meant as a kennel with no run, designed principally for the animals to sleep in.

4) Kennel is meant as a night box with a run attached.

5) Add one meter each way for each additional dog allowed to exercise in that area.

3.1.3 Outdoor exercises

The canine shelter should also have an outdoor exercise area where the dogs can exercise off-lead (Rooney, Gaines, and Hiby 2009, Taylor and Mills 2007). As dogs have innate desire to explore their environment, it is important to allow the dogs to exercise freely and regularly. Dogs with more frequent and longer exercises tend to bark less (Gaines 2008, p. 435). It is reported that even a 25 minutes play with a friendly person, either a shelter staff or a volunteer, can reduce stress (Menor-Campos, Molleda-Carbonell and Lopez-Rodriguez 2011).

Unless they have problems interacting with other dogs, allow them to exercise in pairs or groups (Rooney, *et al.* 2009, p. 131). By exploring the outdoor environment in pairs or groups, the dogs can satisfy their desire to explore the environment as well as their need to live with other animals (see section 3.1.5).

3.1.4 A raised platform

Each kennel should have a raised platform with proper bedding materials. It not only provides comfort and warmth in resting and sleeping time but also adds physical complexity to the environment thereby making the dogs less bored.

In case the kennel is covered with flat boards halfway from the bottom, the dogs do not have enough visibility to satisfy their curiosity or to lower their fear. High walls or partitions cause dogs to spend relatively long time on hind legs or to jump repetitively (Hubrecht and Turner 1998). The raised platform allows the dogs more opportunity to investigate their surrounding visually. In a study by Hubrecht (1993), by adding a platform in the kennel, the dogs were rated as more approachable and being more confident, friendly and playful. Thus, the raised platform seems to improve the living environment of the dogs.

3.1.5 Pair or group housing

The canine shelter should consider either pairing or group housing of the dogs. Hebrecht and Turner (1998) point out that single housing of long-staying dogs may cause behavioral abnormalities (Hetts, 1991) and state that pair housing seems to be a reasonable compromise.

Taylor and Mills (2007) report many findings that group housing has better effects on welfare of shelter dogs than single housing (Hetts *et al.* 1992, Hubrecht, Serpell, and Poole 1992, and Mertens and Unshelm 1996 among others) concluding social housing might be more important than kennel size.

For example, Mertens and Unshelm (1996) reveal that 'there is a correlation between the animal shelter's type of housing and the dog's behavior.' They compared behaviors of 211 dogs in two Garman shelters, one keeping dogs individually all days and the other keeping dogs in groups during the day. They also compared the reports of the new owners after rehoming. Their main findings are given in Table 2. These results indicate that overall welfare of sheltered dogs is better for group housed dogs than individually housed dogs.

Some studies report high level of aggression (Feddersen-Petersen 2001, Bruno 2004), however. For example, Feddersen-Petersen's (2001) study found that breeds such as poodle, retriever, and pug were unsuccessful in socializing within a group. In Bruno's (2004) study, aggressive behaviors were observed among 100 dogs confined in small cages. Taylor and Mills

Table 2: Mertens and Unshelm's (1996) findings

	Group housing	Single housing
Frequency of barking	14 times	190 times
Friendly manner to the observer	80%	43%
Having behavioral problems	11%	31%
Developing stereotypies	not observed	10%
Average days to be placed	10 days	17 days
The rate of being returned	9%	25%
No behavioral problem reported by the new owners after rehoming	52%	11%

(2007, p. 438) suggest that there might be breed differences in dog's ability to socialize within a group based on Feddersen-Petersen's (2001) study and that aggression in Bruno's study was 'probably due to severe overcrowding' and 'an mixture of males and females and the removal of females in oestrus may help reduce aggression and excessive attention towards females (Mertens and Unshelm 1996; Sonderegger & Turner 1996).'

In order to mix males and females, spay and neuter should be operated before mixing. To achieve successful pair or group housing, careful planning and assessment of the dogs, appropriate kennel design, and adequate monitoring of the dogs are all important whether pair housing or group housing is chosen.

3.1.6 Social interaction with humans

In addition to social interaction with other dogs, the shelter should also provide human interaction for the dogs (Menor-Campos *et al.* 2011, Rooney *et al.* 2009, Taylor and Mills 2007). The caregivers should spend time with the dogs in various activities such as grooming, playing, exercising, petting, and training, but some dogs are afraid of people, so they should take enough time to introduce people to such dogs (Rooney *et al.* 2009, p. 131). The caregivers should provide adequate training employing positive reward methods as much as they can since studies have shown that punishment based training methods either did not result in more obedient dogs or increased problematic behaviors (Hiby, Rooney, and Bradshaw 2004; Roll and Unshelm 1997).

3.2 The need for a suitable diet

The shelter should provide fresh drinking water at all times. It should also provide a well-balanced food twice a day. The appropriate amount, frequency and nutritional needs depend on age, size, activity level, sex, breed and health status of each dog. Therefore, it is recommended that food should be prepared and provided for each dog separately in a clean individual dish. The caregivers should monitor the intake carefully so that any change in the intake of food and water should be treated appropriately. (ASV 2010, Department for Environment Food and rural Affairs 2009)

3.3 The need to be protected from pain, suffering, injury and disease

3.3.1 Sanitation

The shelter should have a daily cleaning and disinfection in order to prevent transmission of infectious diseases. Daily cleaning will also provide comfortable space for the dogs and give positive image of the shelter to prospective owners. (ASV 2010, p. 20)

3.3.2 Medical treatment and sterilization

ASV (2010, p. 24) recommends that the shelter should establish a healthcare protocol and a medical program which must be supervised by a veterinarian preferably who is familiar with the shelter animals. Medications and treatments should be provided based on the veterinarian's advice. The caregivers should monitor behaviors, food and water intake, and body conditions of the dogs, and arrange necessary treatments in case the dogs are sick. It is necessary to keep records of all medical treatments provided for the dogs. Regular vaccination should be provided as well.

4. Conclusion

There are some findings that produced conflicting results such as kennel size and group housing. However, most of the findings presented in this note suggest improvements in welfare of the dogs in canine shelters. Some of the suggestions may be difficult to implement immediately for the public and/or private shelters in Japan. However, improvement of the canine welfare in such shelters will lead to more successful adoptions which in turn lead to decline in unnecessary killings of dogs.

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