

## IMPROVEMENT OF THE HUMAN-ANIMAL RELATIONSHIP IN SHELTERED DOGS

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### RESEARCH ARTICLE

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#### Abstract

Recent researches into the welfare of shelter dogs underscores the importance of socializing programs. The aim of this work was to improve the welfare of sheltered dogs by increasing interaction with humans. In order to carry out this study, 63 dogs from a private dog shelter in Cluj county were selected. The intensive socialization program was carried on during eight weeks. Dogs were individually stimulated for 10 minutes and their reaction was assessed in three different situations: playing with a toy ball, back massage and grooming using a brush. After the implementation of the social enrichment program, 71.43% of the studied dogs had a positive reaction to the ball game, none of the dogs exhibited a negative response to back massaging and 88.89% were accepting the grooming. Offering opportunities for social interactions, both with other dogs and humans, is vital and should be regarded as the primary and most important way to enrich the environment for captive canids.

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### INTRODUCTION

There is evidence to suggest that human interaction may have a more significant impact on the well-being of dogs compared to interactions with other dogs (Fox, 1986; Wolfle, 1987, 1990). Research consistently indicates that the behavior and physiology of dogs can be influenced by the presence of humans. For instance, when a person suddenly appears, dogs in kennels tend to become more active and spend more time near the front of their enclosures. This behavior is likely an attempt to reduce the distance between humans and animals, promoting interaction (Campbell et al, 1988; Hughes et al, 1989; Wells &Hepper, 2000; Wells, 2004).

Regular grooming sessions conducted by kennel staff on a daily basis can serve as an effective method for offering dogs human interaction and, in turn, reducing stress levels (Tuber et al, 1999). Additionally, increased handling through grooming can promote socialization among the dogs. Some studies found that dogs housed in rescue shelters had limited opportunities for human interaction, accounting for only a small fraction of their observed time, ranging between 0.3% and 2.5% (Hubrecht et al, 1992).

Dogs in kennels need interaction not only with other dogs and humans but also a rich and stimulating inanimate environment. Toys are commonly used for inanimate enrichment and are regularly given to domestic captive animals to promote play and alleviate boredom. The effectiveness of toys as enrichment depends on various factors, such as the dog's age, prior experience with toys (as some dogs, especially younger ones, may be frightened if they're not familiar with these objects), the mental and physical condition of the dog (depressed, stressed, or ill dogs are usually less inclined to play with toys), the characteristics of the toys, the presence of other dogs in the vicinity, and habituation (as most animals lose interest in a toy after a day or so) (Sampaio et al, 2019).

### MATERIAL AND METHOD

The study was performed in a private dog shelter in Cluj county, Romania. In order to carry out this study, 63 dogs were selected and, according to the shelter's register, did not appear with health problems at the start of the study. Old animals and those showing aggressiveness toward the assessors were excluded. One assessor performed both the initial assessment (before the beginning of the socialization program) and the final one in similar conditions.

The intensive socialization program was performed during eight weeks. In the first five weeks, the program was performed in three days per week, and in the following three weeks in four days per week.

This program was carried out in the morning, between 8 a.m. and 11 a.m. and it involved direct human interaction with the animals. Dogs were individually stimulated for 10 minutes as follows:

- ✓ plastic toys were used (ball, bone, circle, empty bottles);
- ✓ in the absence of an answer, gradual approach and socialization with the dogs were attempted;
- ✓ depending on the situation, the dogs were brushed, stroked/ caressed and massaged along the spine;
- ✓ if fear or a defensive behavior was noticed, the subjects in question were approached closely, while socializing with them;
- ✓ the dogs that showed indifference towards the assessor for one reason or another, were left alone during the examination days (especially those that did not want to leave the cage);
- ✓ at the end of the 10 minutes, the dogs were rewarded with a snack.

This way of approach, interaction and socialization (with a dog in a box) positively stimulated the other dog housed in the same box. Before the start of the socialization program, each box was sanitized.

## RESULTS AND DISCUSSIONS

Following the initial assessment, a relatively high percentage of dogs showed limited receptivity to various environmental enrichment methods. As a result, 61.91% of the dogs showed no interest in the ball, mainly due to the fact that the majority of them had not been trained or conditioned to play with the

ball. According to some studies, training programs are essential in shelters to provide species-specific social stimulation for dogs (Wells, 2004). On the other hand, a 38.09% of the total dogs positively interacted with ball play. The response to back massage was negative in 57.14% of the population, indicating that attention was probably given only during cleaning their kennels or daily feeding times. A percentage of 42.86% of dogs responded positively to back massages, in most cases suggesting the animals' desire to spend more time with humans (table 1). The same percentage was recorded for the brushing test, with dogs responding positively. At the end of the study, the condition and response of the dogs to various environmental enrichment methods significantly improved due to an intensive socialization program (table 1).

The dogs became more open and friendly as a result of this socialization program, and their response to the ball increased to 71.43% compared to the 38.9% observed at the beginning of the study. Some dogs even began to obey the command to fetch the ball, which is a first step towards their training process. Only 18 dogs (28.57%) still responded negatively to the ball test (table 1). The response to petting/massaging on the back and socializing showed a significant increase among all the parameters studied. Some initially fearful and distant dogs gradually became more familiar with the intensive and frequent human presence, thereby gaining their trust. At the end of the study, none of the dogs exhibited a negative response to back massaging. Brushing showed an increase from 42.86% at the beginning of the study to 88.89% at the end. However, at the end of the study, there was still 11% of dogs that didn't tolerate brushing. We noted that these dogs were geriatric, anxious, and had coarse or long fur.

Table 1

Assessment of dogs' response to environmental enrichment methods							
Type of reaction		Type of interaction					
		Reaction to ball game		Back massage reaction		The reaction to grooming using a brush	
		%	No. of dogs	%	No. of dogs	%	No. of dogs
A1	positive	38.09	24	42.86	27	42.86	27
	negative	61.91	39	57.14	36	57.14	36
A2	positive	71.43	45	100	63	88.89	56
	negative	28.57	18	0	0	11.11	7

Interaction with humans and other dogs has a positive significance, allowing them

greater control over their surrounding environment, which, in turn, reduces the level of

cortisol (an indicator of physiological stress). It should be noted that among the most successful methods of human-animal interaction are petting, play, training, brushing, and regular walks outside the enclosure (Normando et al, 2009; Kiddie & Collins, 2014). Significant positive interaction with humans (petting, play, and training) allows dogs to have greater control over their environment, reduce their physiological stress response, and increase their adoption rates. As for the frequency of standing up this situation was much higher in the weeks when environmental enrichment in the shelter was employed compared to the first day of the program, as reported by Sampaio et al, 2019.

Today, there is a significant population of dogs living in shelters worldwide (Righi et al, 2019). Numerous studies have shown that environmental enrichment undoubtedly improves the welfare of animals in captivity, regardless of the species studied. For example, adding elevated platforms to dog kennels had a positive impact on dogs, significantly reducing their stress levels because these platforms provided dogs with a better view beyond the kennel (Kiddie & Collins, 2015). It was predicted that the quality of life score for shelter dogs would increase with an increase in the time spent by shelter staff, volunteers, or other categories of people with the dogs. This consideration aligns with various human-animal interaction programs that have substantially improved physiological and behavioral measures of the individuals involved, which can either affect or reflect the welfare of animals. In this study, both the duration and frequency of active stimulation predicted a significant increase in the quality of life score. This was anticipated because active stimulation of dogs (involving both mental and physical aspects) and close interaction with humans have led to an improvement in animal welfare (Kiddie & Collins, 2015). Another study highlighted that consistent positive and negative reinforcement in shelter dogs resulted in a higher adoption rate compared to the control group where positive and negative reinforcement were not used. This is primarily due to the improved behavior, reflecting better quality of life (Luescher & Medlock, 2009). Environmental enrichment for shelter dogs must be an integral part of an animal care plan, addressing both their physical and psychological well-being (Miller & Zawistowski, 2013).

Social interaction of dogs with humans or other dogs represents positive physical and mental stimulation for the animals, thus encouraging species-specific behaviors and their interaction with humans or other dogs (Miller & Zawistowski, 2013). The use of toys is probably the most commonly used method of environmental enrichment in dog shelters. However, the utilization of toys depends on a multitude of factors such as age, experience with toy play, their characteristics, and the presence of other dogs in the kennel (Sampaio et al, 2019). For many geriatric dogs, regular rotation of toys is much more important than the introduction of new items into their kennel (Wells, 2004). Toys should be introduced gradually in the kennels where dogs display fear, anxiety, or shyness towards anything new (Sampaio et al, 2019).

## CONCLUSIONS

The welfare of the dogs was significantly improved following the implementation of an intensive socialization program. Offering opportunities for social interactions, both with other dogs and humans, is vital and should be regarded as the primary and most important way to enrich the environment for captive canids.

## REFERENCES

- Sampaio Avlade Guedes, R., Nascimento de Figueiredo Martins, Y., Barbosa Sousa, F.M., Franco Queiroz, C.I., Kobayashi Duarte, M. & Talieri Carmem, I., 2019. Behavioral assessment of shelter dogs submitted to different methods of environmental enrichment. *Ciência Rural*, Santa Maria, 49(1), 1-7.
- Wolfe, T.L., 1987. Control of stress using non-drug approaches. *J.A.V.M.A.* 191, 1219–1221.
- Wolfe, T.L., 1990. Policy, program and people: the three P's to well-being. In: Mench, J.A., Krulisch, L. (Eds.), *Canine Research Environment*. Scientists Center for Animal Welfare, Bethesda, pp. 41–47.
- Wells, D.L. & Hepper, P.G., 2000. The influence of environmental change on the behaviour of sheltered dogs. *Appl. Anim. Behav. Sci.* 68, 151–162.
- Tuber, D.S., Miller, D.D., Caris, K.A., Halter, R., Linden, F. & Hennessy, M.B., 1999. Dogs in animal shelters: problems suggestions and needed expertise. *Psychtr. Sci.* 10, 379–386.
- Hubrecht, R.C., Serpell, J.A. & Poole, T.B., 1992. Correlates of pen size and housing conditions on the behaviour of kennelled dogs. *Appl. Anim. Behav. Sci.* 34, 365–383.
- Hughes, H.C., Campbell, S. & Kenney, C., 1989. The effects of cage size and pair housing on exercise of Beagle dogs. *Lab. Anim. Sci.* 39, 302–305.

- Campbell, S.A., Hughes, H.C., Griffin, H.E., Landi, M.S. & Mallon, F.M., 1988. Some effects of limited exercise on purpose-bred Beagles. *Am. J. Vet. Res.* 49, 1298–1301.
- Normando, S., Corain, L., Salvadoretti, M., Meers, L. & Valsecchi, P., 2009. Effects of an enhanced human interaction program on shelter dogs' behavior analysed using a novel nonparametric test. *Applied Animal Behavior Science*, 116, 211–219.
- Kiddie, J.L. & Collins, L.M., 2014. Development and validation of a quality of life assessment tool for use in kennelled dogs (*Canis familiaris*). *Applied Animal Behaviour Science*, 158, 457–468.
- Kiddie J.,L. & Collins, L.M., 2015. Identifying environmental and management factors that may be associated with the quality of life of kennelled dogs (*Canis familiaris*). *Applied Animal Behavior Science*, 167, 43-55.
- Righi, C., Menchetti, L., Orlandi, R., Moscati, L., Mancini, S. & Diverio, S., 2019. Welfare Assessment in Shelter Dogs by Using Physiological and Immunological Parameters. *Animals*, 9(6), 340.
- Miller, L. & Zawistowski, S., 2013. *Shelter Medicine for Veterinarians and Staff*, 2<sup>nd</sup> Edition. publishing house Wiley-Blackwell, Hoboken, ISBN: 978-0-813-81993-8.
- Wells, D.L., 2004. A review of environmental enrichment for kennelled dogs, *Canis familiaris*. *Applied Animal Behaviour Science*, 85, 307-317.
- Luescher, U.A. & Medlock, R.T., 2009. The effects of training and environmental alterations on adoption success of shelter dogs. *Applied Animal Behaviour Science*, 117, 63-68.