Reducing stress and increasing adoption success for shelter dogs

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Introduction

The ultimate aim of a dog re-homing shelter is the successful adoption of homeless canids. Entering a shelter is undeniably a stressful experience, so recent research has attempted to identify the main causes of this stress and to determine how it can be minimised. In Australia, 32.5% of dogs entering RSPCA shelters in 2005-2006 were euthanased (RSPCA). This highlights the need to devise strategies to increase adoption rates. This paper discusses contemporary research into stress encountered by dogs entering re-homing shelters.

Discussion

Hiby *et al.* (2006) identifies groups of dogs at particular risk of stress and attempts to link specific behaviours to urinary cortisol concentrations. These were used to measure stress over 10 days in 26 dogs entering a shelter in the UK. There are difficulties with using cortisol for measuring stress because of its association with all types of arousal – being naturally part of the fight-or-flight physiological function. Thus each dog's behaviour was also recorded to determine the nature of any arousal it was showing. Behavioural indicators, such as paw-lifting, grooming, oral behaviours, activity, play and resting, were all noted from a 30-minute video recorded after each urine collection.

All dogs showed a high concentration of cortisol initially, indicating that they were all exposed to stress when entering the shelter. Dogs from homes showed a further increase in cortisol over the 10-day study, whereas strays and returned dogs showed a decrease. This suggests that dogs not habituated to the shelter environment were less able to adapt and endured more stress. The strays and returns seemed to be better at adapting to the shelter environment, despite their initial high cortisol concentrations. This indicates a link between past history, an ability to adapt to the shelter, and the dog's stress levels. A long-term increase in cortisol can reduce immune functioning and possibly indicates psychological suffering, suggesting that dogs from homes are a particular welfare concern (Hiby *et al*., 2006). Behaviour changed significantly in all dogs over the 10 days, however, no significant relationship between behaviour and cortisol concentrations was found (except on Day 1). Hiby *et al.* (2006) suggest that behavioural indicators may be a reliable measure of short-term stress, and recommended further study.

A study by Coppola *et al.* (2006) looks at ways to reduce stress in shelter dogs by focusing on human interaction. The study compared cortisol concentrations in dogs randomly allocated into two groups: a group of 68 that engaged in a human contact session on their second day in the shelter; and a control group of 62 that had no contact session. The contact session significantly reduced cortisol concentrations for the following day. This is important because during the first three days in the shelter, dogs produce almost three times more cortisol than normal. These days are the most stressful, possibly because the dogs have not yet started adapting to the shelter environment. Human contact shortly after entering a shelter could be an important factor in improving the welfare of all shelter dogs, by reducing their initial stress levels. The human interaction session was suggested to help the dogs adapt to the shelter environment and prevent sensitisation to any novel stimulation. Coppola *et al.* (2006) suggest that this initial human contact session combined with environmental enrichment, training, exercise and routine social interactions with humans and conspecifics may greatly alleviate stresses in the shelter environment.

A third study by Normando *et al.* (2006) focused on factors that influence the adoption of dogs inside re-homing shelters. Around the world, many shelter dogs are euthanased or housed long-term, outcomes that pose ethical and welfare problems, and a substantial cost to society. It is therefore important for shelters to maximise adoption rates. Normando *et al.* (2006) suggest that the behaviour of shelter dogs contributes to their perceived desirability by the public. A decrease in stress and increase in overall welfare is thought to alter dogs' behaviour

and increase their perceived desirability. Normando *et al.* (2006) looked at 763 dogs over three years to determine the variables that characterise a successful adoption. They found that the most influential factors affecting the length of stay in shelters seemed to be age, with younger dogs being adopted sooner. It also found that dogs with behavioural problems tended to have a longer stay in the shelter.

In Italy, a Temporary Adoption Program (TAP) is commonly used as a way for people to spend time with a dog without the obligation to adopt it. Normando *et al.* (2006) examined the influence of these TAP programs on adoption rates. The use of TAP was considered to improve welfare through consistent human interaction, as well as social and physical enrichment. In this study, TAP animals had lower return rates and a reduced length of stay, with most being adopted by their temporary owners. This method should be further studied, and considered as a way to increase adoption from animal shelters around the world.

Conclusion

Decreasing the stress of dogs in a shelter environment is a major way of improving their overall welfare. From Hiby *et al.* (2006) we can conclude that attention should focus on those dogs that are more susceptible to stress, such as those that have come directly from a home. Coppola *et al.* (2006) provide us with a means of reducing this stress, and Normando *et al.* (2006) suggest ways we can increase adoption success. Programs such as TAP can be used to improve the dogs' welfare, and facilitate the adoption process by reducing stress and increasing social and physical enrichment. The three research projects discussed above suggest that dogs' stress levels can be measured using behavioural indicators, and that positive human interaction can play a major role in reducing stress and enhancing adoption success. Knowledge of scientific research in this area, if used correctly, may lead to a better quality of life for all shelter dogs.

References

Coppola, C.L., Grandin, T. & Enns, R.M. (2006) Human interaction and cortisol: Can human contact reduce stress for shelter dogs? *Physiology & behavior*. 87: 537-541.

Hiby, E.F., Rooney, N.J. & Bradshaw, J.W.S. (2006) Behavioural and physiological responses of dogs entering re-homing kennels. *Physiology & Behavior*. 89: 385-391.

Normando, S., Stefanini, C., Meerst, L., Adamelli, S., Coultist, D. & Bono, G. (2006) Some factors influencing adoption of sheltered dogs. *Anthrozoos*. 19(3): 211-224.

RSPCA For all creatures great and small. (2006) RSPCA Australia National Statistics 2005-2006. <http://www.rspca.org.au/resource/stats2006.pdf> Accessed 22/3/07