

A Critical Review of ***“The influence of olfactory stimulation on the behaviour of dogs housed in a rescue shelter”***

Siri Egedahl
2006-05-04

In their research work “*The influence of olfactory stimulation on the behaviour housed in a rescue shelter*” [1], the authors have done an experiment on the behavioural effects of different types of odours on dogs living in a rescue shelter. Similar experiments done on humans and other animals have shown that special odours can make them more active or less active – and that is the main motivation for the research.

Five different types of odours were used: Chamomile, lavender, peppermint, rosemary and *control*, which means *no odour*. 55 dogs were tested, whereby 29 were *neutered* (castrated) males and the rest *spayed* (sterile) females. The majority of the dogs were crossbreeds.

The experiment went over five days, where the dogs were exposed to each type of olfactory stimulation by diffusion of oils. Each dog was studied for effects on eight different behaviours: *Position, standing, sitting, moving, resting, sleeping, stereotyping and vocalise*. All the dogs were exposed to the odours in the same order: Starting with *control*, followed by *lavender, peppermint, chamomile* and *rosemary*.

Each dog was tested on days one, three and five, with two days in between in which they were not exposed to any olfactory. The observations were done from the time the dogs were exposed to each odour, and the following 30 minutes. After the stimulation, the researchers recorded the dogs’ behaviour every ten minutes, totally 24 times per day. All eight behaviours were controlled each time. Each behaviour was repeatedly controlled to see if the olfactory stimulations or the exposure length influenced the dogs.

Past studies have shown that oils such as lavender and chamomile have a more sedative, tranquilizing effect, and work by altering the brainwaves into rhythms that produce calmness. Furthermore, peppermint and rosemary had the opposite effect.

In general, the study showed that out of the eight types of behaviours, lavender and chamomile had a high stress-reducing effect, especially lavender. The dogs spent more of their time resting, and the vocalisation decreased.

Rosemary and especially peppermint gave the dogs a significant increase in activity, spending more time moving and less time resting. The vocalisation increased as well.

On the other hand, the study showed that none of the olfactory stimulations had any important effects on either sitting, position, sleeping or stereotyping. In fact, sleeping and stereotyping were never even recorded. It also turned out that neither of the odours had a lasting or habituating effect on the dogs.

As soon as the experiment was over, the dogs’ behaviour went back to normal.

In conclusion, although relatively few dogs were tested, the results were very convincing. I do not know why only sterile dogs were used in the test. Especially, since male dogs generally become calmer after castration, then why not test on uncastrated dogs? It would also be interesting to see if the experiment would yield the same result by presenting the odours in random order to the dogs, and over more days.

When dogs are brought to a rescue shelter, one might expect them to become more stressed and anxious because of their new, noisy environment, and having unacquainted humans coming in to see them. Whether this affects the behaviour of the dogs is a disputed issue though, see [2] and [3]. Therefore, by using lavender and chamomile to calm the dogs, one can expect a higher chance of someone adopting the dog. However, since the stimulation did not have any permanent effect on the dogs, they will change back when brought to their new homes. This could give the potential owners a false impression of the dog. As shown in [4], a high number of adopted dogs were returned to the rescue shelter because of behavioural problems. On the other hand, it might also be because of the owners [5].

Bibliography

- [1] Graham L., Wells D.L., Hepper P.G. (2005) The influence of olfactory stimulation on the behaviour of dogs housed in a rescue shelter. *Applied Animal Behaviour Science*, 91: 143-153
- [2] Graham L., Wells D.L., Hepper P.G. (1992) The behaviour of dogs in a rescue shelter. *Animal Welfare*, Volume 1, Number 3: 171-186
- [3] Graham L., Wells D.L., Hepper P.G. (2002) The influence of length of time in a rescue shelter on the behaviour of kennelled dogs. *Animal Welfare*, Volume 11, Number 3: 317-325
- [4] Mondelli F., Previde E.P., Verga M., Levi D., Magistrelli S., Valsecchi P. (2004) The bond that never developed: Adoption and relinquishment of dogs in a rescue shelter. *Journal of Applied Animal Welfare Science*, Volume 7, Number 4: 253-266
- [5] Nemcová D., Novák P. (2003) Adoption of dogs in the Czech Republic. *Acta Vet. Brno.*, 72: 421-427