

The Effects of Different Social Enrichment Methods on Hyperactivity in Shelter Dogs

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Introduction

Dogs that are restricted for prolonged times, such as at shelters, are often reported to suffer from behavioral degeneration which may include high-activity behaviors, such as jumping on the kennel doors and barking. In order to maximize adoptions, modifying the dog's behavior to appear attractive to potential adopters is highly important. Whereas social enrichment, such as supplemental exercise and calm out-of-kennel visits, have been utilized by shelters to increase the chances of adoption for their dogs, no research has been done to confirm their efficacy.

Hypothesis

We hypothesized that shelter dogs that display hyperactive behavior in their kennels will benefit from social enrichment through calm out-of-kennel visits to decrease jumping and barking; alternatively, dogs may benefit more from supplemental exercise.



A researcher performing the exercise treatment with a dog in the study.



A researcher reading to a dog in the study as part of the calm treatment.

Materials and Methods

- Consecutive dogs entering the humane society in Alachua County, Florida were recruited upon entrance to the shelter.
- Each dog received 2 wks of baseline and 2 wks of treatment in a counter-balanced within-subject design.
- 6 dogs experienced a daily calm treatment, which consisted of reading to the dog for 15 min in a quiet room with no interaction.
- 6 dogs received daily supplemental exercise, which consisted of 15 min of toy play or light running in an indoor playpen with interaction encouraged.
- Hyperactivity was measured by videotaping each dog daily over 30 s during the baseline period, before a treatment, and after a treatment.
- Hyperactive behavior was assessed as percent of time jumping on the kennel door, percent of time barking, percent of time locomoting, and number of barks in 30 s.
- Within-subject two-way ANOVAs were performed on each behavior to evaluate differences between the effects of treatments and the two time points.
- Values are presented as means +/- SEM.
- P<0.05 was considered statistically significant.

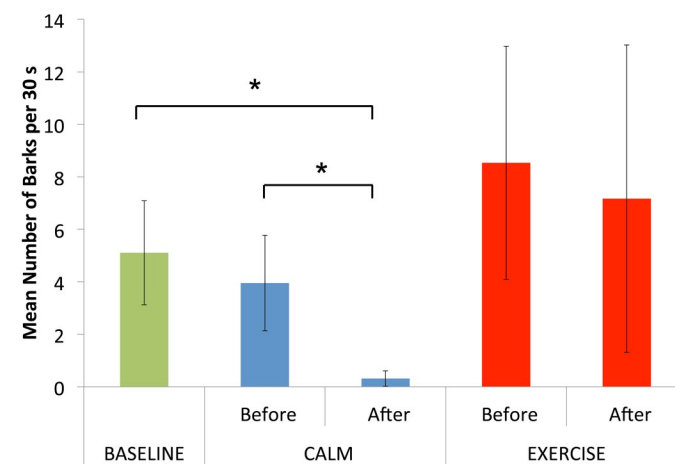


Fig.1. Mean frequency of barks per 30 s at baseline, before treatment, and after treatment observations.

*P = 0.03 vs. both baseline and before calm treatment

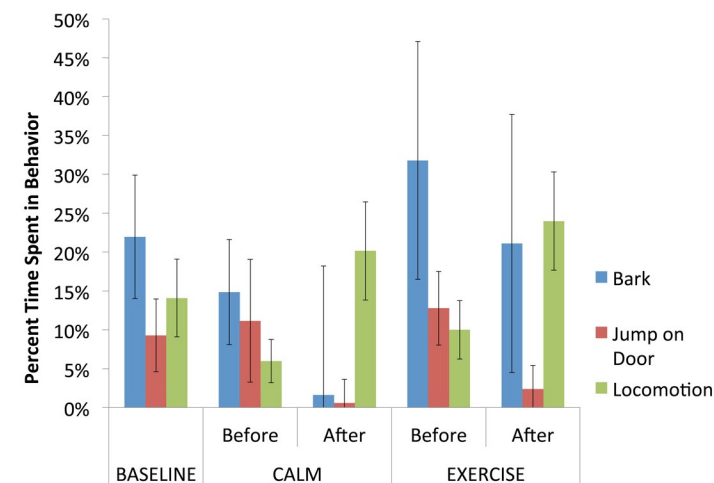


Fig. 2. Comparison of the mean percent time spent in a behavior during the baseline, before treatment, and after treatment observations.

Results

Overall, there were no negative effects associated with either treatment. The barking frequency decreased significantly after the calm treatment, as compared to both the baseline and before treatment ($F(1) = 6.3, p = 0.03$ and $F(1) = 6.3, p = 0.03$ respectively, Figure 1). Mean percent of time spent jumping on the kennel door showed a downward trend after both treatments. Mean percent time spent barking showed a downward trend after the calm treatment. In addition, mean percent of time spent locomoting showed an upward trend after both treatments. However, all of these changes did not reach statistical significance (Figure 2).

Conclusions

- Calm treatment for 15 min a day reduced barking frequency after treatment.
- Dogs spent less time jumping on the kennel door after both exercise and calm treatments.*
- Dogs spent less time barking after the calm treatment.*
- There was a slight increase in mean percent time spent locomoting after both treatments.*
- Social enrichment methods reduce hyperactivity in shelter dogs and can potentially increase adoptability.

*These results did not reach statistical significance due to a small sample size; we plan to add additional dogs to each group in the future.

Further Reading

Griffin, B., 2007. No more homeless pets. Maddie's Shelter Medicine Program at Cornell. Available at: <http://www.sheltermedicine.vet.cornell.edu/spayNeuter/noHomeless.htm>. Accessed 06.01.13.

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