

Independent Study 490A: Do Play Groups for Shelter Dogs Reduce In-Kennel Arousal and Excitability Levels?

A.S. Leaflet R2782

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Summary and Implications

The objective of this study was to determine if 5-dog and 3-dog play groups had observable effects on-kennel arousal behavioral levels. This study was performed at the Animal Rescue League (ARL) of Iowa, located in Des Moines. A total of 36 dogs of mixed sex, breed, and age were observed. Two treatments were compared (1) 3-dog groups (n = 24) and (2) 5-dog groups (n = 12). All dogs included in this study had never been exposed to a play group before at the ARL-IA. Each dog was observed before play group (**baseline**) at 9 am and after play group (**after**) at 11 am respectively. Play sessions were held between 9 and 10 am. Two dogs, one from each treatment, was removed for aggression issues and euthanized. Their data will not be presented. The observer watched one dog at a time, and stood in front of the kennel for 10 s, observing each dog and recording its behavior. Dogs allocated to both treatments during baseline all scored a recording level one, indicating a dog that was not displaying overt signs of behavioral anxiety in the kennel. When looking within categories, there were improvements within this category for in kennel behaviors between baseline and after. In the 5-dog play group, dogs displayed less barking (<30%) and jumping (<25%). The dogs in the 3-dog treatment showed improvements across all measures except for position in kennel, where no change was observed. In conclusion, both treatments showed improvement within recording level one for in-kennel behaviors and a decrease in in-kennel arousal levels post-play group. However, dogs displaying more severe in-kennel behavior(s) should be included in a future study to see if play groups improve in-kennel behavioral arousal levels resulting in improved adoptability and overall dog well-being.

Introduction

When dogs are placed in a shelter, they are often in an unfamiliar setting, without hierarchical position or familiar social contact. This change in circumstance may result in stress-related behavioral changes for example excessive barking, stereotypies and spending large amounts of their time at the back of the kennel. These behaviors may make a dog appear less stable and friendly to potential adopters, which in turn affect their adoptability. Dogs need regular

positive social contact, with humans and conspecifics. In most shelters, human contact is provided through interaction with shelter staff and volunteers. However, dogs housed singly often lack contact with other dogs. While there are many reasons for housing dogs singly i.e. preventing aggression, reducing risk of disease transmission, and making behavioral evaluation easier; contact with other dogs has the potential to improve the dog's well-being via social conspecific contact. Dog play groups may serve as a method to provide dog to dog social contact, while avoiding some of the challenges of group housing. Therefore, the objective of this study was to determine if 5-dog and 3-dog play groups had observable effects on kennel arousal behavioral levels.

Materials and Methods

The protocol for this experiment was approved by the Iowa State University Institutional Animal Care and Use Committee (8-11-7192-K). The experiment was conducted over September and October 2011.

Arrival: This study was performed at the Animal Rescue League (ARL) of Iowa, located in Des Moines. Upon arrival at the ARL dogs underwent a health check by the on-site veterinarian, that included a physical examination, a check of the relinquishment form for any owner-reported health issues, a blood draw, surgery (spayed/neutered), possible dental surgery, vaccinations for distemper, canine parainfluenza and bordetella; a dewormer, and treatment of any current health conditions. Dogs were allowed 72 h to acclimate to their new housing.

Animals, housing and feeding: A total of 36 dogs of mixed sex, breed, and age were observed. All dogs were at least five mo of age. All behavior evaluations were conducted by the staff/volunteers. Dogs were housed singly in kennels and fed twice a day. Each kennel had a bed, as well as one feed and water bowl. The kennels were 1.9 m high x 1.2 m wide x 3.1 m deep in the west wing, and 2.8 m high x 2.6 m wide by 2.6 m deep in the north wing. Dogs were assigned kennels in one of the areas, depending on space available. All kennels had glass fronts.

Treatments: Two treatments were compared (1) 3-dog groups (n = 24) and (2) 5-dog groups (n = 12). All dogs included in this study had never been exposed to a play group before at the ARL-IA. Each dog was observed before play group (**baseline**) at 9 am and after play group (**after**) at 11 am respectively. Play sessions were held between 9 and 10 am. Two dogs, one from each treatment, was removed

for aggression issues and euthanized. Their data will not be presented.

Observation Procedure: Each dog was identified according to name and kennel location. The observer watched one dog at a time, and stood in front of the kennel for 10 s, observing each dog and recording its behavior (Table 1).

Table 1. Dog behavioral ethogram.

Measure	Recording Levels
Barking	1. ≤ 2 barks in 10 s 2. 3 to 5 barks in 10 s 3. ≥ 6 barks in 10 s
Whining	1. Does not whine 2. Whines 5 s or less 3. Whines for more than 5 s
Jumping	1. Does not jump 2. Jumps once 3. Jumps more than once
Pacing	1. Does not pace 2. Paces 5 s or less 3. Paces for more than 5 s
Position in Kennel	1. In front of kennel for more than 5 s 2. In front of kennel for ≤ 5 s 3. Does not enter front of kennel

During the behavioral observation, no verbal or physical cues/reinforcement was directed toward the dog by the observer. Data will be presented descriptively.

Results and Discussion

Dogs allocated to both treatments during baseline all scored a recording level one, indicating a dog that was not displaying overt signs of behavioral anxiety in the kennel. When looking within categories, there were improvements within this category for in kennel behaviors between baseline and after. In the 5-dog play group, dogs displayed less barking ($<30\%$) and jumping ($<25\%$). The dogs in the 3-dog treatment showed improvements across all measures except for position in kennel, where no change was observed (Table 2).

Table 2. Baseline and after behavioral scores for dogs in 3 or 5-dog play groups.

Measure	Period			
	Baseline		After	
	3	5	3	5
Barking	1.69	2.09	1.30	1.45
Whining	1.35	1.09	1.09	1.09
Jumping	1.61	2.18	1.30	1.64
Packing	1.52	2.27	1.09	1.45
PIK	1.13	1.00	1.13	1.27

In conclusion, both treatments showed improvement within recording level one for in-kennel behaviors and a decrease in in-kennel arousal levels post-play group. However, dogs displaying more severe in-kennel behavior(s) should be included in a future study to see if play groups improve in-kennel behavioral arousal levels resulting in improved adoptability and overall dog well-being.

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