

Canine Research

Analysis of correlations between early social exposure and reported aggression in the dog

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Abstract

A retrospective questionnaire completed by 783 Australian participants was used to quantify the amount and age of early social exposure experience of pet dogs with varying levels of reported interdog aggression. All dogs were currently between 1 and 3 years of age at the time of the survey, and acquired as puppies at 10 weeks old or younger, and were from a variety of breeds. Participants reported the age at which they first took their puppy into public areas such as the sidewalk, beach, and parks. They then quantified the number of unfamiliar dogs their puppy met and time spent with them per week. They also reported whether they restricted the social exposure of their puppy due to its own fearful or aggressive behavior. Finally, owners answered whether their dog ever displayed aggressive behavior to unfamiliar dogs. The average age of beginning public social exposure was 13.2 weeks (standard deviation $\frac{1}{4}$ 4.7), with 51.6% (N $\frac{1}{4}$ 404, 95% CI $\frac{1}{4}$ 48.0-55.1) of puppies beginning public social exposure before the final vaccination of their primary immunization course. In 34.1% (N $\frac{1}{4}$ 267, 95% CI $\frac{1}{4}$ 30.8-37.5) of responses, participants reported that they had previously seen their dog display aggression toward an unfamiliar dog. Restriction of the amount of social exposure that puppies received was imposed by owners for 32.6% (n $\frac{1}{4}$ 87) of the aggressive dogs (irrespective of timing of beginning public social exposure) because of their puppy's own behavior during its first 8 weeks of public social exposure. This was significantly more than in nonaggressive dogs at 9.1% (N $\frac{1}{4}$ 47, percentage difference $\frac{1}{4}$ 23.5%, 95% CI 17-30, $P < 0.001$). Binary logistic regression modeling found that every week that an owner waited to begin public social exposure reduced the odds of their dog becoming aggressive to other dogs as an adult by 4.2% (95% CI 0.2-7.9, $P \frac{1}{4}$ 0.041). There was no significant change in odds of dogs becoming aggressive to other dogs with increasing time spent with unfamiliar dogs ($P > 0.2$) or increasing numbers of dogs met per week ($P \frac{1}{4}$ 0.064) in public areas during the first 8 weeks of public social exposure. These results suggest that negative experiences occurring with young puppies in public may predispose them to later aggression. Furthermore, early exposure of puppies in public areas is not correlated with reduced odds of interdog aggression in adult dogs.