VETERINARY BEHAVIOR SYMPOSIUM PROCEEDINGS

JUNE 4, 2024

DEVELOPMENT AND VALIDATION OF OWNER-IMPLEMENTED PROTOCOLS FOR COMPANION DOGS

M. Waite*, T. Kodak, A. Whang

Carroll University, WI, USA; Marquette University, WI, USA;
Shorewood Animal Hospital, Shorewood, WI

*Corresponding author: mwaite@carrollu.edu

Abstract

Literature suggests that most companion dogs struggle with basic veterinary and husbandry care, including ear cleaning at the veterinary office or at home. This may result in owner avoidance of cleaning dogs' ears or even an inability to apply prescription ear medications when recommended by a veterinarian. Although many dogs struggle with ear cleaning at home, there are no published behavior protocols to address this issue, and thus owners may need to use force to provide medical care or use training protocols with unknown validity and owner fidelity to protocol, which can affect efficacy. The purpose of this study was to develop and test a cooperative care, owner-implemented protocol to train dogs to engage in ear cleaning. In total, fifteen dog owners enrolled with their dogs. Nine pairs completed the chin rest phase, where the dog learned to hold a chin rest while their ears were manipulated. Seven pairs completed ear wiping training, where the dog chin rested while the owner wiped a medicated cotton ball inside the ear. Four pairs completed ear drop training, where the dog chin rested while ear drops were applied into the ear canal. Maintenance testing indicated that behaviors maintained several weeks after the final training session, and owner videos demonstrated high fidelity to protocol by owners. Quantitative and qualitative assessments indicated high protocol social validity according to owners.

Introduction

Veterinary care is critical for the well-being of companion dogs, yet many dogs do not receive needed medical care because of their intense stress responses to medical procedures, both in the clinic and in the home setting (Edwards et al., 2022a, 2022b; Mariti et al., 2015, 2016). More specifically, more than half of owners said they were limited in the medical care they could provide their dogs at home due to stress reactions, and only 21% of owners said they could administer medicated ear drops to their dogs (Mariti et al., 2016). This is problematic, given that ear drops may be necessary for daily cleaning or for treating acute medical issues. Applied settings and previous studies suggest that animals can be trained using cooperative care methods to actively accept and engage in medical procedures. Specifically, these methods involve training the animal to engage in behaviors which allow the procedure to continue, reinforced by positive reinforcement (treat), and also to engage in behaviors which allow the animal to request a brief break (reinforcement as escape from procedure). Therefore, the purpose of this study was to experimentally test a protocol guiding owners in the autonomous training of their own dogs to engage in cooperative care for ear cleaning.

Materials and Methods

Dog owners were eligible to enroll if they were at least 18 years old and did not have experience as a professional dog trainer. Dogs had to have lived in the home for at least 6 months, had a history of consistently consuming treats, and were not perceived as a bite risk to their owner. Dogs were excluded if they were already successful at receiving ear cleaning, currently had any ear pain, had severe behavioral reactions to getting their ears cleaned, or were not naïve to ear cleaning (had > 5 historical ear cleaning sessions). Enrollees were provided access to the online ear cleaning training plan, which included videos and written components for every training step, as well as criteria for when to switch between training steps.

Owners engaged in all training autonomously and recorded all training sessions. Nevertheless, owners were encouraged to connect with the study team if they had questions about how to proceed at any time. The protocol involved owners training their dogs to first engage in a chin rest behavior while allowing ear manipulation, then holding the chin rest while owners wiped the inside of the ears, then holding the chin rest while owners placed ear drops in the ears. Successful trials resulted in the presentation of a treat to the dog, and dogs could request a break from handling by lifting their heads from the chin rest.

The study was approved by the University of Wisconsin-Milwaukee Institutional Review Board (IRB; protocol 20.122) and Institutional Animal Care & Use Committee (IACUC; protocols 19-20 #21 and 22-23 #27).

Results

Fifteen dog owners enrolled with their dogs, and nine pairs completed at least one training phase. Nine pairs completed a chin rest, seven completed training for ear wipes, and four completed training for ear drops. Maintenance testing across an additional 3 weeks indicated that the trained behaviors maintained beyond the training stages. Video analyses showed that owners were able to engage in the training with very high fidelity to protocol (>98%) and train relatively autonomously. Specifically, five owners required little or no assistance, three owners required moderate assistance, and one owner/dog pair required more intensive assistance throughout the training. After completion of training, owners gave high scores for protocol social validity and were qualitatively satisfied with the training. Further, scoring of dog behavior from training videos showed that behaviors indicative of fear, anxiety, and/or stress were uncommon in most sessions.

Discussion

Although medical procedures may be stressful for dogs and their owners, medical care is a necessity for companion animal quality of life. One option to improve welfare is to train dogs to engage cooperatively in their own care such that the dogs are slowly exposed to the medical stimuli and are offered choice about participation. This study suggests that a cooperative care ear cleaning protocol can be successfully trained and implemented relatively independently by owners, but that some dogs and owners may require targeted professional assistance at particularly challenging training steps. Maintenance data indicate that the behavior can maintain several weeks after final training. Overall, these data suggest the ear cleaning training protocol could be disseminated and utilized across the dog owner population such that many owners could train their dogs in preparation for future ear cleaning needs. Future studies could build upon this protocol by addressing further breaking down training steps which were consistently challenging across owners.

Acknowledgements
This work was supported by a grant from Fear Free awarded to the University of Wisconsin-Milwaukee. The authors are grateful to the many dog owners who provided their data for the study and to Kara Burrows for assistance with data collection.

References
Edwards PT, Smith BP, McArthur ML, & Hazel SJ, 2022a. At the heart of a dog's veterinary experience: Heart rate responses in dogs vary across a standard physical examination. *Journal of Veterinary Behavior* 51: 23–34.

Edwards PT, Smith BP, McArthur ML, & Hazel SJ, 2022b. Puppy pedicures: Exploring the experiences of Australian dogs to nail trims. *Applied Animal Behaviour Science* 255: 105730.

Mariti C, Pierantoni L, Sighieri C, & Gazzano A, 2016. Guardians' perceptions of dogs' welfare and behaviors related to visiting the veterinary clinic. *Journal of Applied Animal Welfare Science* 20(1): 24–33.

Mariti C, Raspanti E, Zilocchi M, Carlone B, & Gazzano A, 2015. The assessment of dog welfare in the waiting room of a veterinary clinic. *Animal Welfare* 24(3): 299–305.

Keywords
choice; dog; cooperative; husbandry; reinforcement; veterinary