



Assessing In-Kennel Behavior of Dogs as a Predictor of Length of Shelter Stay



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Introduction

Approximately 3.9 million canines reside in animal shelters in the United States. Close to a fifth of these dogs will be euthanized due to a variety of reasons; some of these reasons are related to the dog’s behavior (e.g., aggression).

Behavior modification programs have been shown to improve canine behavior while at the shelter and simultaneously increase adoptability and long-term placement potential (Bollen, 2012). However, few studies have investigated what behavioral traits or skills significantly improve chances of adoption.

The current study systematically replicates Protopopova and colleague’s (2014) research examining how certain canine behaviors can lead to faster or slower times to adoption. In doing so, we plan to address several perceived limitations in their original study by using novel adopters for each dog interaction and including male adopters for dog interactions. This study will also establish whether the results will generalize to a new shelter and population, specifically the canines at the Eau Claire County Humane Association (ECCHA).

Results

53 canines housed at the ECCHA have been recorded to date. Dogs must have at least two videos to be included in the study, and are also excluded if they are removed from public viewing (e.g., for long-term veterinary care or foster placement) or if we have yet to acquire complete descriptive data from the ECCHA. The current analyses include complete data from 17 dogs and 38 videos.

Descriptive Statistics

The majority of the sample (47.6%) was aged 1.5 – 4 years, and the most frequent size was medium (M=1.2381). Most breeds appeared only once, however some dogs appeared multiple times (American Stafford = 2, Doberman = 2, Lab Mix = 2). The average length of stay for all dogs was 26.38 days (SD = 16.67; See Figure 1). No factor in particular has yet been shown to correlate with length of shelter stay, including age, sex, or coat length (see Figures 2-4).

Length of Stay due to Kennel Behavior

Researchers have begun preliminary analyses, but due to the study’s correlational nature we do not yet have a large enough sample size to draw conclusions about which behaviors increase or decrease adoptability. Using Pearson’s R, we found no significant correlations ($\alpha = 0.05$) between the canine behavior and length of stay. In order to reach a goal of 140 canine videos, this research project will continue into the 2017-18 year.

Behavior Change due to Time in Shelter

Researchers are interested in developing a logistical regression model to understand whether the dog’s behavior changes as a function of the length of time they stay housed at the ECCHA. We plan to do this by coding behaviors into the categories “more active” or “less active” based on increases or decreases in the dog’s behaviors as they remain at the shelter.

We would like to thank the Office of Research and Sponsored Programs at the University of Wisconsin – Eau Claire for their support of this research.

Data Collection

When a dog arrives at the ECCHA, one novel “potential adopter” (PA) interacts with the dog while a student researcher videotapes the interaction. PAs are instructed to behave as though they are considering adopting the dog. Both individuals remain outside of the kennel for the entire interaction, but the PA may place their hands through the cage to pet the dog. PA and dog interactions are recorded for 30 – 60s. Each dog is recorded at least once a week for the duration of their stay at the ECCHA. Overall, this method is attempting to best observe what behaviors a dog is likely to be performing when they are ultimately adopted.

Data Analysis

At least one student researcher views the video and records data in 5s intervals. Researchers recorded all behaviors the dog exhibited according to a predetermined list of possible behaviors and their definitions (Protopopova et al., 2014b). All separate possible behaviors were assessed for their occurrence or nonoccurrence during these 5s intervals throughout the observation period. Primary analyses aim to assess (a) whether the dog behaves similarly when faced with different people, (b) whether the dog behaves similarly over time, and (c) whether any behaviors significantly predict a shorter or longer stay at the ECCHA. Data analyses include analysis of and controls for morphological factors that have demonstrated to impact time to adoption, including breed, size, coat length, color, age, neuter status, and mode of intake (e.g., Gunter et al., 2016; Brown et al., 2013; Lum et al., 2013).

Methods

Figure 1

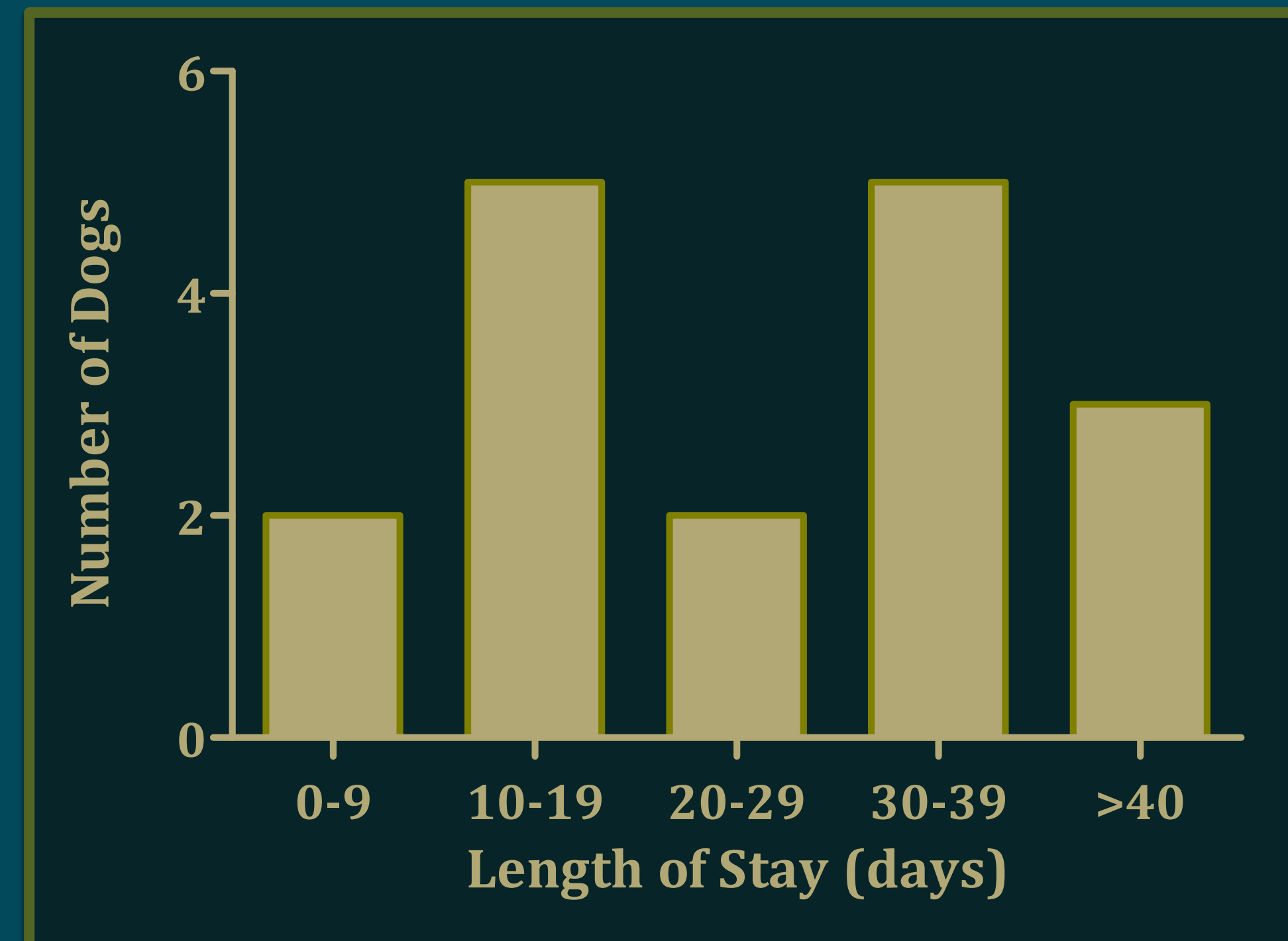


Figure 2

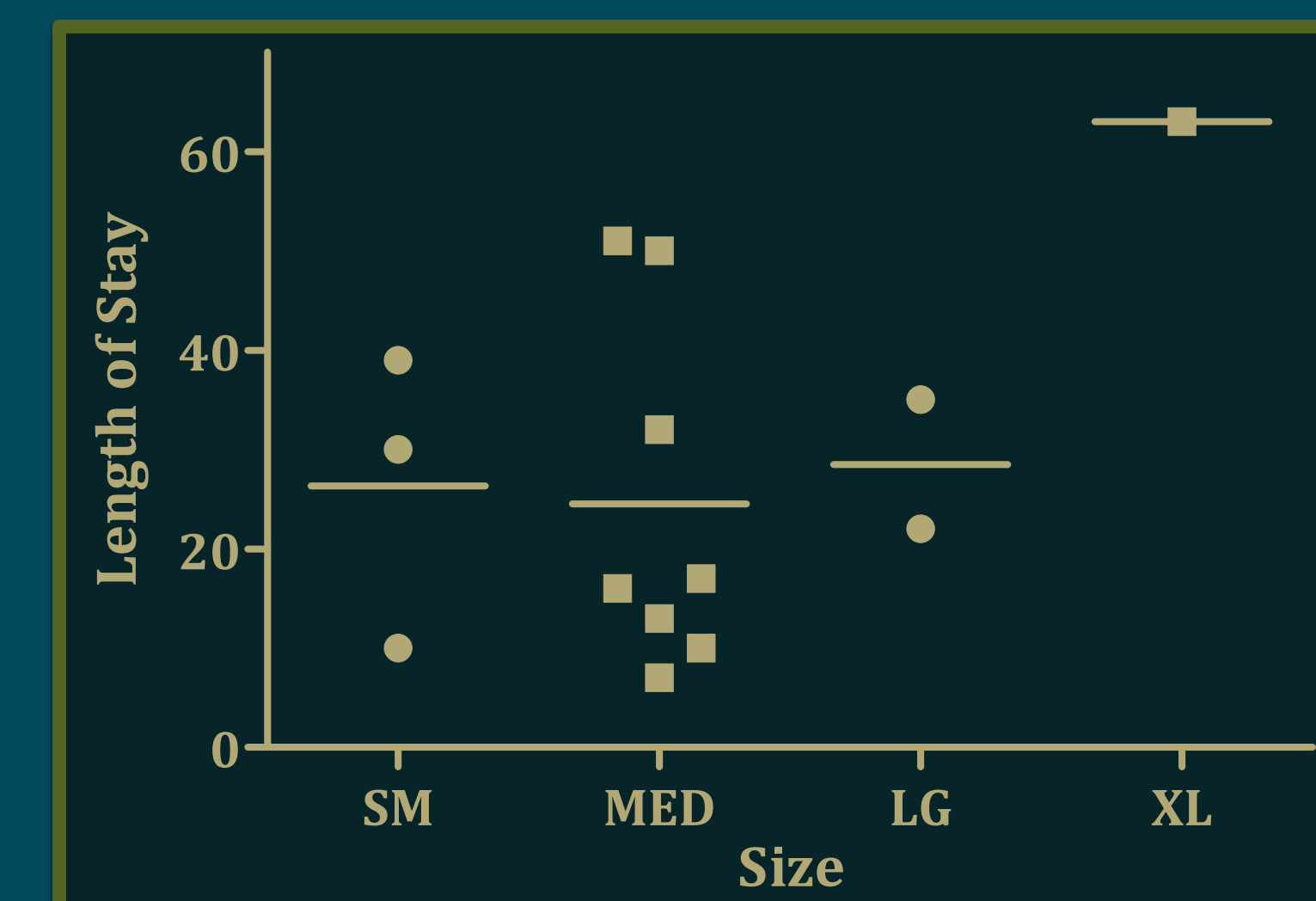


Figure 4

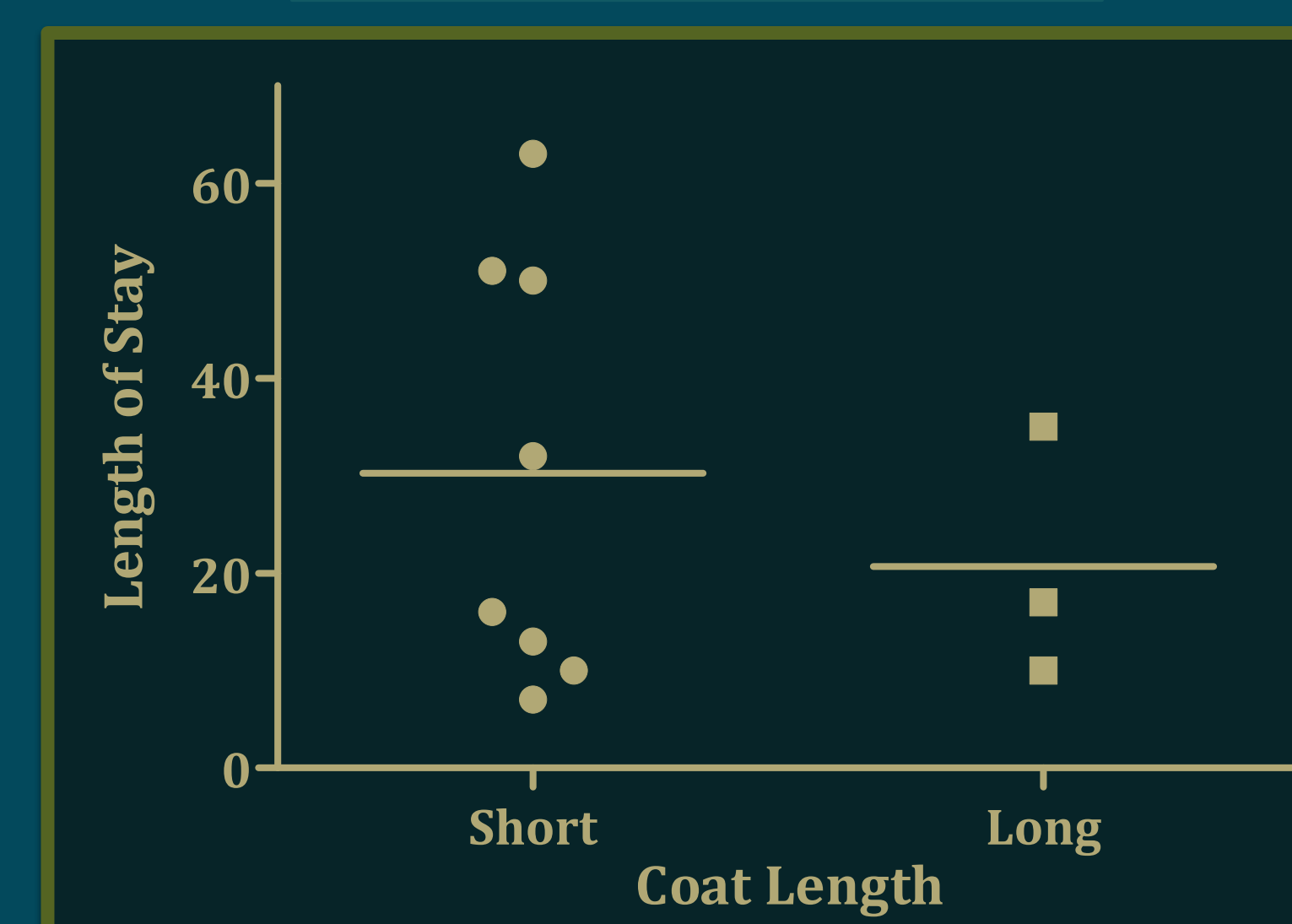
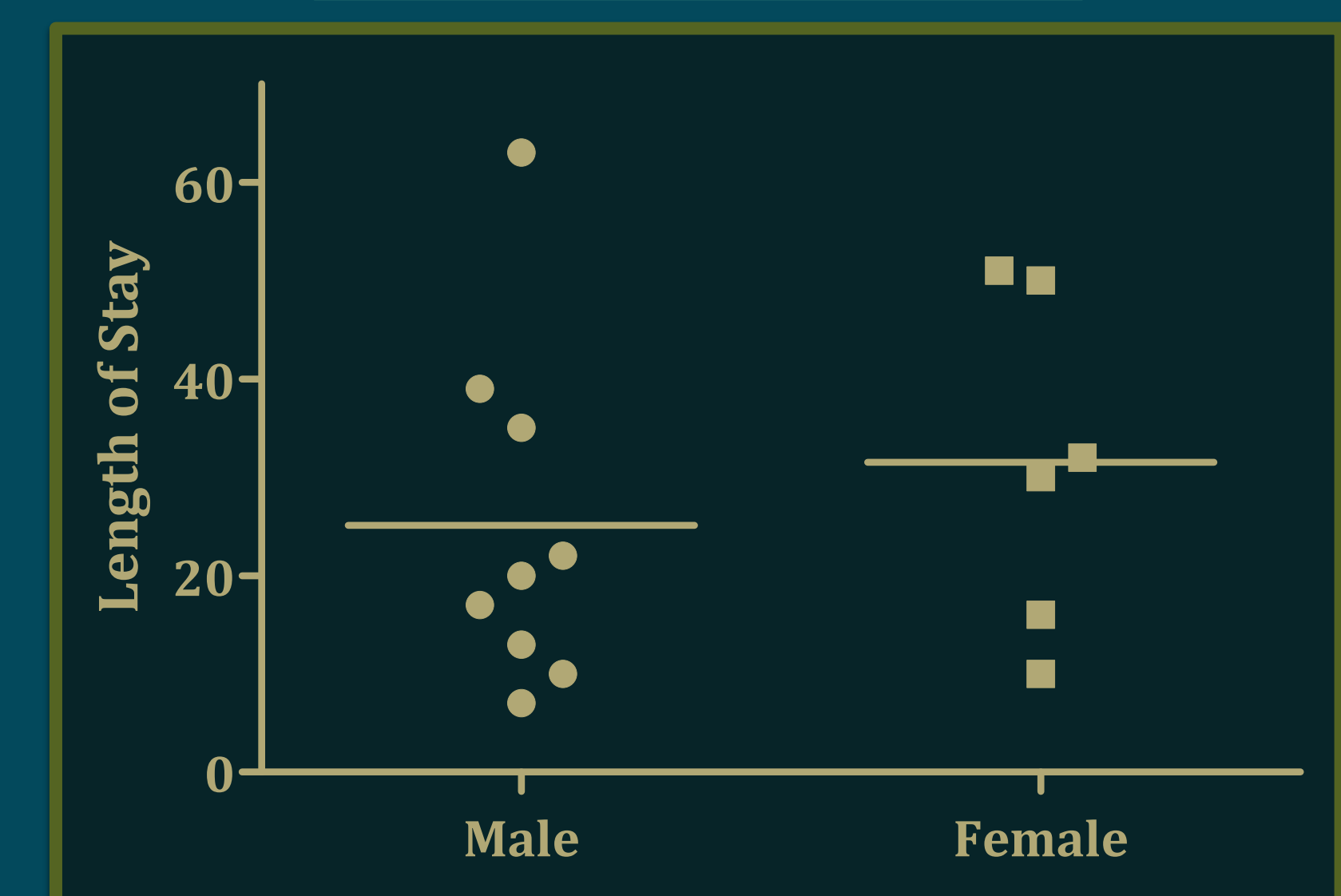


Figure 3



Potential Adopter with Dog



Discussion

The current study is ongoing, and due to our current sample size our ultimate research goals have yet to be realized. Further data collection and analyses can ideally inform which in-kennel behaviors will increase or decrease time to adoption. Knowing what behaviors increase the rate of adoptability can inform training programs, and help shelters across the US decrease the number of dogs being euthanized. Even with modest goals, scaling our training program to other shelters across the U.S. could have a sizeable impact. Given even a 10% decrease in the number of euthanized dogs, approximately 3.5 million dollars of taxpayer money could then be redistributed to other areas in need of funding.