

Factors Influencing Shelter Dog Retention and Return

Hallie Anselmi (hallieanselmi@spu.edu)
Seattle Pacific University 2024

Introduction

Background:

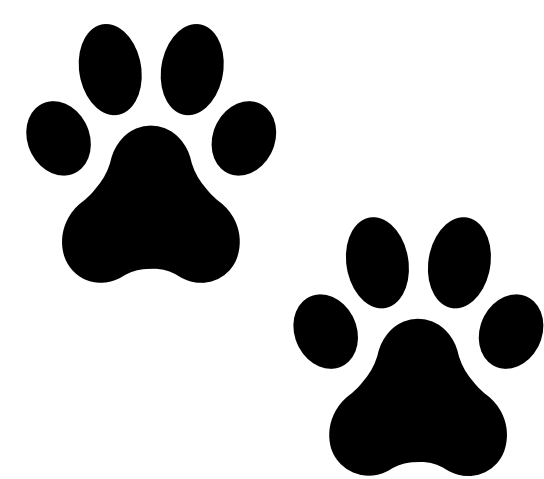
A dog's life in a shelter environment is stressful and becomes more stressful over time (van der Laan et al., 2022). Minimizing the length of stay (LOS) in the shelter environment is important for the well-being of dogs. Foster Care is a temporary solution to the stress of the shelter. Studies have found that cortisol levels decreased when dogs spent just one day out of the shelter and in foster care (Gunter et al., 2019). Foster care also helps boost adoption rates and has been shown to decrease returns (Mohan-Gibbons et al., 2014). Returns oftentimes occur because of animal behavior reasons deemed unwanted by the adopter.

Purpose:

To add to the narrative of shelter dog research, as well as provide shelters with valuable information, such as how to increase adoptions and decrease returns.

Hypotheses:

- A dog's age, time spent in the shelter, and time in foster care will influence a person's decision to keep or return a dog
- There will be a positive correlation between age and time in shelter
- There will be a negative correlation between age and time in foster



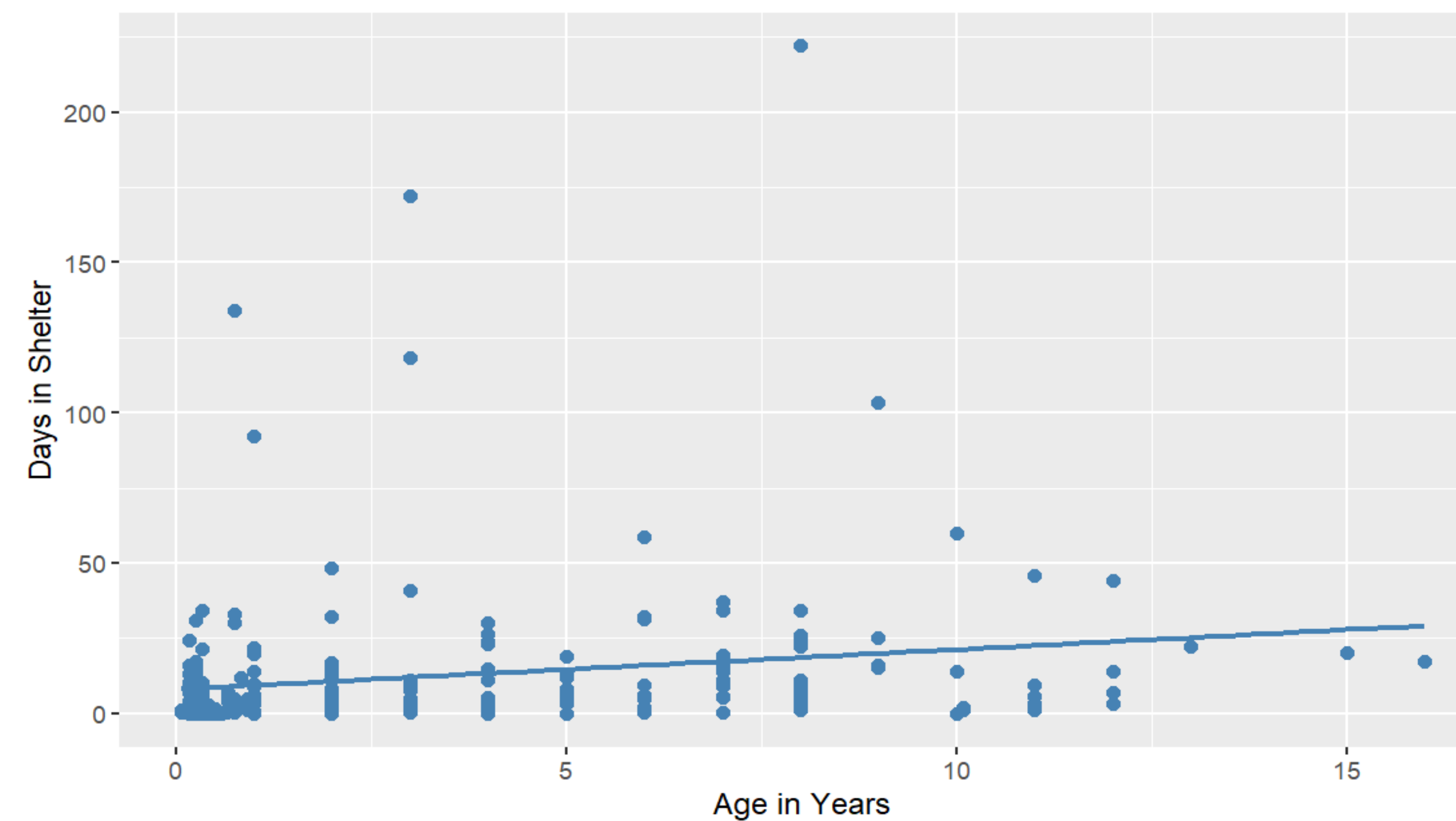
Methods

- Collected in 2022 at an animal shelter in Washington
- 224 dogs
- Spreadsheet of information about each dog
- No information about adopter
- Variable measurements:
 - Age: years
 - LOS in shelter and foster: days
 - Return: yes or no
 - All dogs brought back to the shelter after adoption within the 2022 year

Results

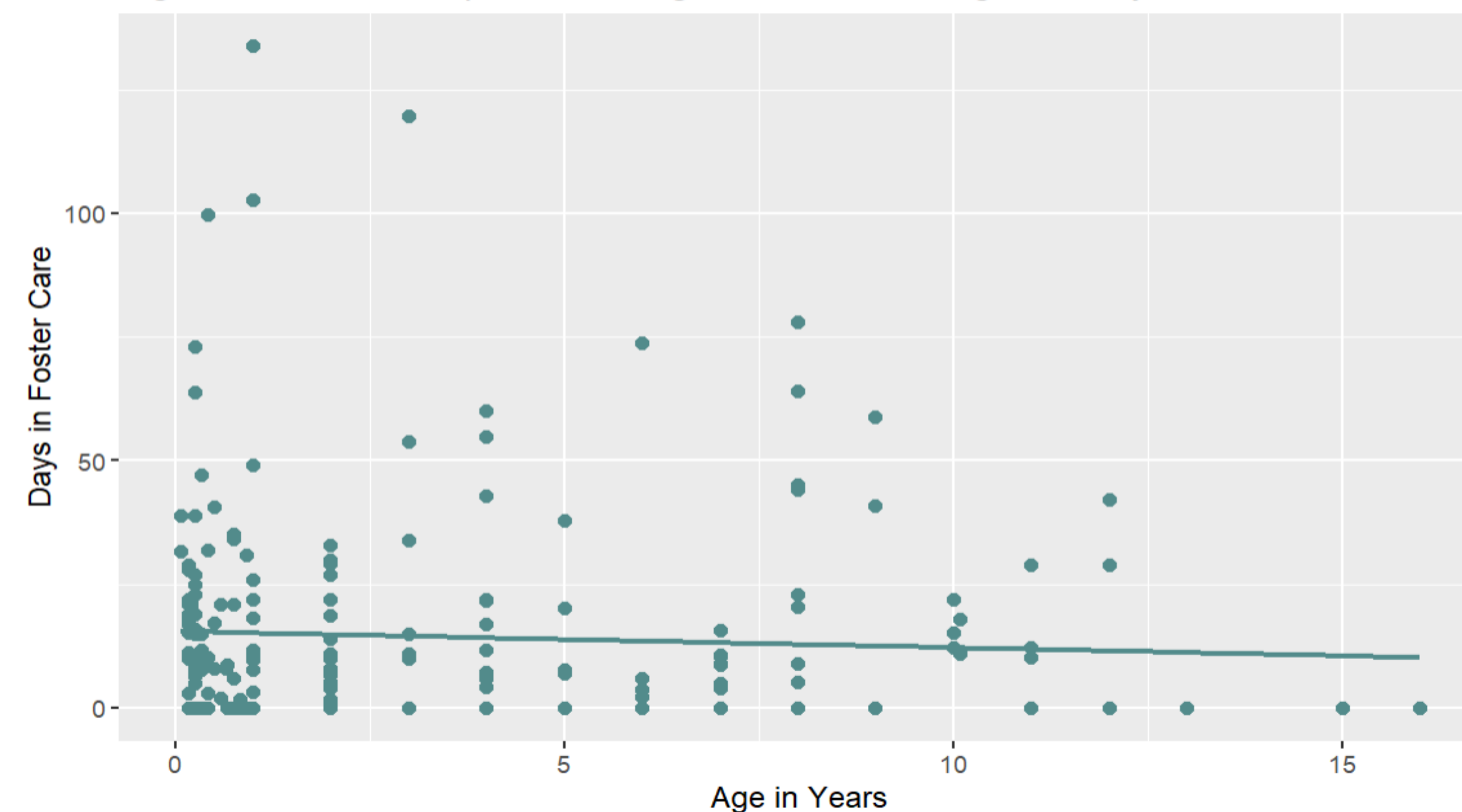
Logistic Regression: A logistic regression analysis was run to determine the impact that a dog's age, LOS in shelter and LOS in foster care have on whether they were returned after adoption. The analysis revealed no significant result, Foster: $b = 0.003$, $p = .77$, Shelter: $b = -0.01$, $p = .65$, Age: $b = 0.10$, $p = .12$.

Figure 1. Relationship between Age and Shelter Length of Stay



Age and Shelter: A correlation was run to determine the relationship between a dog's age and LOS in the shelter. Results indicated a weak, but significant correlation, $r = 0.19$, $p = .01$. (Fig. 1).

Figure 2. Relationship between Age and Foster Length of Stay

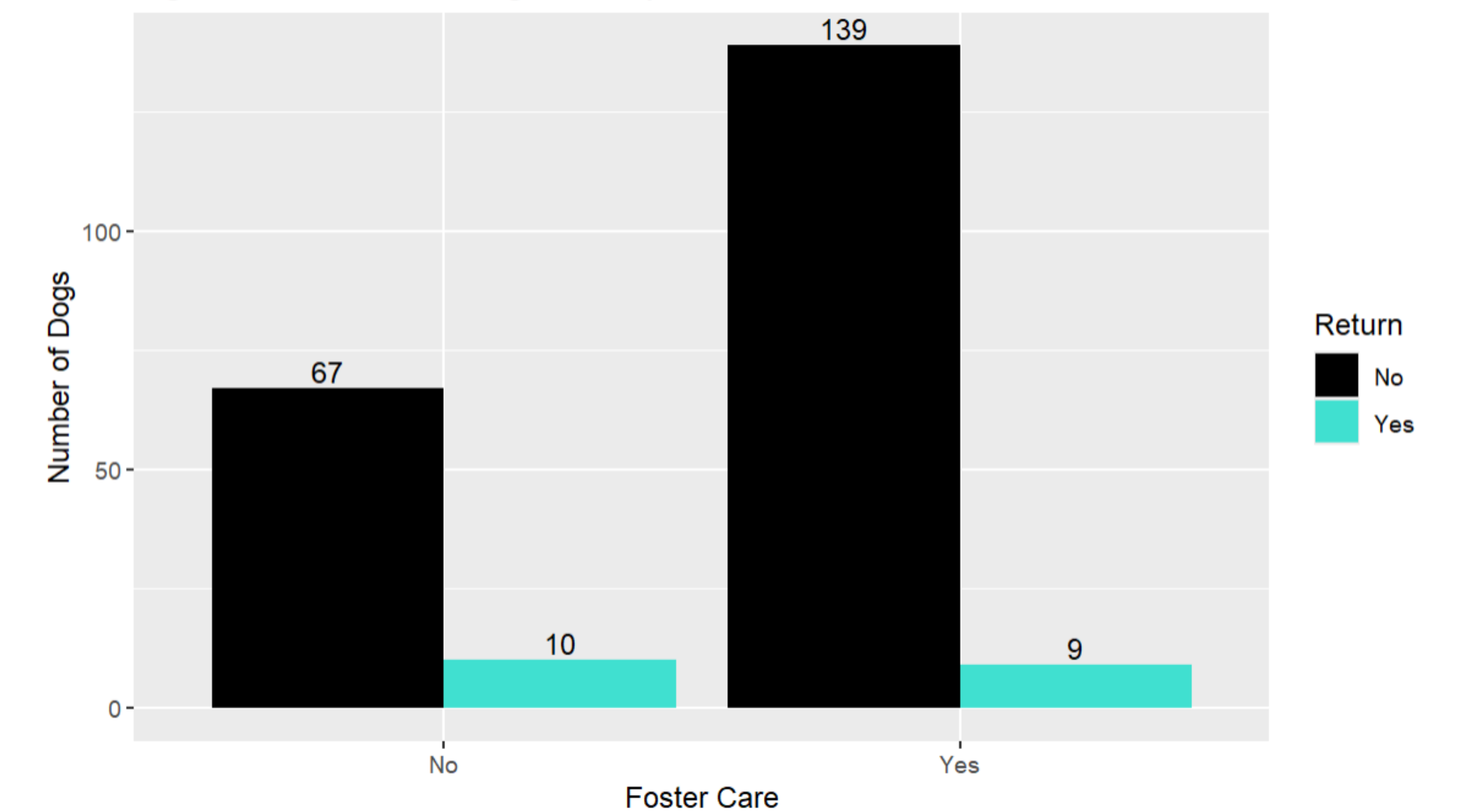


Age and Foster: A correlation was run to determine the relationship between a dog's age and LOS in foster care. Results indicated a weak and nonsignificant correlation, $r = -0.06$, $p = .40$. (Fig. 2).

*All analyses were run using R (version 4.3.0)

Discussion

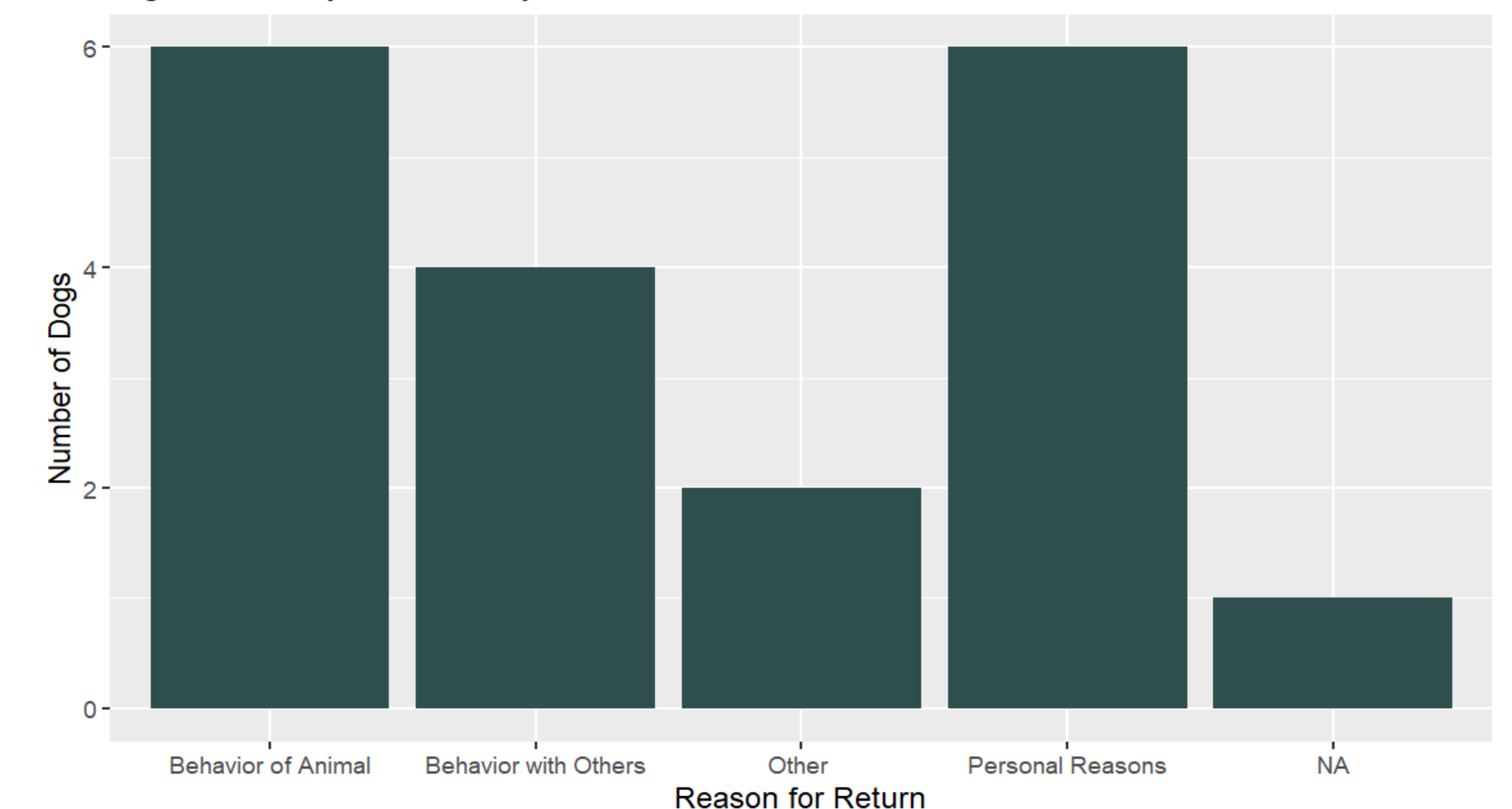
Figure 3. Number of Dogs that Spent Time in Foster Care



Takeaways:

- External factors may be more influential as to why a dog is kept or returned after adoption
- The older the dog, the more time they may spend in the shelter
- Majority of owners returned the dog because of either personal reasons or the behavior of the animal (Fig. 4)
- Returns might be a result of a poor fit or lack of attachment between pet and owner

Figure 4. Why Were They Returned?



Future Directions:

- Returning a dog for behavioral reasons may be influenced by one's attachment to the dog
- Does a person's attachment to the dog they adopt moderate the relationship between undesirable behavior and return?

References:
 Gunter, L. M., Feuerbacher, E. N., Gilchrist, R. J., & Wynne, C. D. L. (2019). Evaluating the effects of a temporary fostering program on shelter dog welfare. *PeerJ*, 7, e6620. <https://doi.org/10.7717/peerj.6620>
 Mohan-Gibbons, H., Weiss, E., Garrison, L., & Allison, M. (2014). Evaluation of a Novel Dog Adoption Program in Two US Communities. *PLOS ONE*, 9(3), e91959. <https://doi.org/10.1371/journal.pone.0091959>
 van der Laan, J. E., Vinke, C. M., & Arndt, S. S. (2022). Evaluation of hair cortisol as an indicator of long-term stress responses in dogs in an animal shelter and after subsequent adoption. *Scientific Reports*, 12(1), 1–10. <https://doi.org/10.1038/s41598-022-09140-w>