

**Research Plan: Attitudes and Behaviors of Dog Owners**

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**Attitudes and Behaviors of Dog Owners**

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Dogs are a beloved companion animal. According to ASPCA, 44% of U.S. households have pet dogs (*Pet Statistics*, n.d.). There is controversy around the ways dog owners obtain their pets. Most dogs that are purchased in stores or online come from puppy mills. ASPCA describes puppy mills as “commercial breeders that want to maximize profit by producing the highest number of puppies at the lowest possible cost.” The result is unhealthy conditions for breeding dogs and puppies that are poorly cared for that have congenital health problems. Some of the health problems occurring in these dogs are caused by extreme physical features. Breed standards set by kennel clubs do not always result in what is healthiest for the animal. Raising popularity of breeds with extreme features perpetuates unhealthy genes being passed down through the gene pool. As demand increases, more dogs are bred, mostly in puppy mills. This study aims to understand the attitudes and behaviors of people who acquire companion dogs. With multiple problems occurring in the puppy industry, a market that is driven by the consumer, public education is needed. This preliminary research in this study is intended to inform plans for public education and engagement about these topics.

### **Literature Review**

Research shows a correlation between past experience and the choice of what kind of dog is chosen. 43% of dog owners who have shelter dogs said that their decision is based on experience. 57% of owners of pure-bred dogs reported that experience was the most influential factor regarding their chosen breed (Holland, 2019). Movies may also be a factor that raises interest in a particular breed. “For instance, in the eight years following the 1985 re-release of 101

Dalmatians, the annual number of new AKC Dalmatian registrations increased from 8170 puppies to 42,816.” This supports research from Packer et al (2017b) that says, “social influence (fashion) is the primary influence on the popularity of companion dog breeds, which is often related to media exposure, e.g. featuring in movies.” So, dog owners seem to make choices based on familiarity, whether that is through personal experience or media exposure. Encouraging films and other media to portray animals with healthy statures is an opportunity for public awareness. It would be interesting to explore how influential social media is on the raising popularity of dog breeds. Social media could be used to influence what is fashionable in terms of dog ownership. Healthy statures, ethical breeding and pet adoption could become the next social influencers.

Research from Holland (2019) indicates that appearance has a stronger influence on pet selection than health. The definition of appearance is unclear. Appearance could refer to how appealing a dog is or could be associated with factors that affect the lifestyle of the pet owner, such as size, grooming needs, or how much shedding. It would be interesting to understand the reasons behind why dog owners place a high value on appearance. Knowing what is important to dog owners would create an opportunity to educate the public about healthy breeds that have the desired characteristics.

Prioritizing appearance over health is problematic because some extreme features interfere with the well-being of the animal. As dogs are bred, excessive traits are passed down through the gene pool, along with congenital health problems. The increase in popularity of brachiocephalic dogs is an example of animal health not being prioritized and brings criticism to the pure-bred market. Brachiocephalic dogs have short noses and flat faces, including bulldogs, pugs and boxers.

Brachiocephalic dogs are prone to breathing problems and have a shorter lifespan than other breeds. A survey from Packer et al found that “owners of brachycephalic breeds were commonly found to be younger, buying their chosen breed for the first time and had no history of childhood ownership.” This might suggest that lack of knowledge contributes to the growing popularity of these breeds.

Breeding to the ideal standards set by kennel clubs encourages extreme features to be passed down to future generations. Kennel clubs are organizations that preserve pedigree standards; however, some standards compromise animal health. There may be a need for encouraging kennel clubs to change pedigree standards that compromise health. These breed standards raise ethical concerns. Bovenkerk and Nijland (2017) asked the question “How far are we allowed to interfere in the genetic make-up of dogs, through breeding and genetic modification?” Their research indicates that some level of interference is deemed acceptable, however where the line should be drawn is unclear. They present that if there were absolutely no interference, all dogs would be wolves. On the other hand, consider the idea of creating a dog that only lives for two years. This could satisfy the desires of a dog owner who does not want to commit to the typical lifespan of a dog. Engineering nature to that extreme may go too far. A balance needs to be found that allows for differentiation in dog breeds while supporting healthy genetics. Public discussions about how much interference in dog breeding is acceptable are needed to establish clear rules that protect the interests of the animals. It would be interesting to explore the temperature of that discussion, beginning with whether people are willing to discuss breeding ethics.

Despite problems associated with breeding, many people choose to buy dogs. They may have a certain affinity for a particular breed or preconceptions about adoptable dogs. Holland's research suggests that "perceptions about the perceived behavior of dogs from a shelter environment might discourage people from considering adoption" (2019). This belief shows that people who buy dogs desire predictable outcomes regarding their chosen pet.

Shelters provide temporary solutions for pets that do not have homes. ASPCA reports that 23% of dogs are adopted from shelters or humane societies, while 35% are bought from breeders (*Pet Statistics*, 2021). Approximately, 3.1 million dogs enter shelters each year, while about 2 million dogs are adopted. Animals may enter shelters as owner surrenders or strays. Some animals are transferred from one shelter to another. Animals leave shelters through adoptions, transfers, natural death, or are euthanized.

It would be interesting to accurately quantify the number of animals euthanized in shelters to understand the severity of the situation. Last Chance for Animals (LCA) claims that four to five million animals are killed in shelters each year (Carmody, n.d.). ASPCA reports declining numbers of euthanized shelter animals since 2011. The most recent amount reported is 920,000 animals euthanized in shelters each year (*Pet Statistics*, 2021). This inconsistency raises the question of the quality of the information. More information is needed to understand how the data was sourced. A third dataset, Shelter Animals Count, was referenced to attempt to confirm the quantities of animals that die in shelters each year. For the year 2020, the Shelter Animals Count dashboard shows reported gross intake data (3,131,546), gross live outcomes (2,828,033) and total other outcomes (340,434). An assumption can be made that "other outcomes" means not alive, though it is not

specific to whether the deaths were natural or euthanized. This dataset is limited because shelters self-report their own data and not every shelter participates. Only complete data sets from shelters are included; partial data are excluded. Knowing that the data is incomplete lowers confidence in the accuracy of numbers published by Shelter Animals Count. Inconsistencies between the three sources make it hard to draw conclusions about the severity of the number of animals killed in shelters each year.

According to research from Weiss et al. (2015), pet problems account for 47% of the reasons that pets are rehomed. The most common pet problems are described as aggression, destruction, and health problems. This aligns with Holland's (2019) research findings that indicate there could be a preconception that shelter dogs have behavior problems. If a dog displays a particular behavior in one home, how likely is it to display that same behavior in other environments? What other factors contribute to the success of a pet adoption? McGuire et al. (2020) researched the "abilities of canine shelter behavioral evaluations and owner surrender profiles to predict resource guarding in adoptive homes." They concluded that there was a strong connection between resource guarding in the owner surrender profile and the shelter behavioral test. However, in half or more cases, resource guarding did not show up in adoptive homes. This could indicate that the presumption that shelter animals have behavior problems is flawed and inaccurate.

Research does not support preconceived notions that shelter dogs are badly behaved. A study by Protopopova (2016) concluded that "no consistent changes in behavior or psychology seem to occur with prolonged periods of confinement." The study also found no reason to believe that most dogs in shelters behave abnormally. Most dogs show no signs of behavior changes, even

with longer stays at shelters. Protopopova's study could be used as a basis for education about shelter dog adoption.

Studies show that people who relinquish dogs are likely to lack pertinent knowledge about dog ownership, "for example, that different breeds tend to exhibit different behaviors" (Marder & Duxbury, 2008). Education about training and expectations of dog ownership could help reduce behavior problems in dogs. Marder and Duxbury (2008) suggest that pre-adoption counseling with a veterinarian is beneficial in reducing the odds that a pet would be relinquished. Education and correcting misconceptions would help prospective dog owners find the right pet. More people may choose to adopt if they understood that shelter dogs can make great pets. Extreme breed standards like brachiocephalic traits that cause inherent health problems are more likely to change when people stop supporting the market for such animals.

### **Hypotheses**

H1: The rise in popularity of brachiocephalic breeds will be reflected in social media exposure of those types of dogs. Owners of brachiocephalic breeds see dogs that remind them of their own dog more times on social media than owners of non-brachiocephalic breeds.

H2: The more time prospective pet owners spend researching breeds, the more likely they are to choose a non-brachiocephalic breed than those who do not do research. A strong relationship between dog owners of non-brachiocephalic breeds and time spent researching prior to acquisition is predicted.

H3: People who choose to adopt shelter dogs are less concerned with cuteness than those who choose to purchase dogs. A strong relationship between the means of acquisition and the value placed on cuteness is expected.

H4: Appearance is important to dog owners and prospective dog owners because of factors that affect their lifestyle, not cuteness. A negative correlation between a participant's rating for the importance of cuteness and the importance of lifestyle factors related to appearance is predicted.

H5: Dog lovers in general want what is best for dogs. People who choose pure-bred/designer dogs are just as likely to believe that public discussions are needed to define parameters for ethical dog breeding as those who choose mixed-breed dogs or are unsure about what kind of dog they have.

### **Survey Draft**

Thank you for your willingness to participate in this survey. It should take less than 10 minutes to complete. You are encouraged to answer all questions. you can skip questions that you prefer not to answer or that you feel do not apply to you. This survey is anonymous. Your responses will not be shared with anyone except the research team. Your responses cannot be used to identify you in any way.

1. This survey asks about dog ownership. What is your current dog ownership status? (Drop down list)
  - a. I currently own one or more dogs.
  - b. I do not own a dog now, but I am planning to get a dog(s) in the near future.
  - c. I do not own a dog now but have owned one or more dogs in the past.
  - d. I have never owned a dog and do not plan to own one.



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2. What is your age? (Drop down list)
  - a. 17 years or younger
  - b. 18 years or older

*Q1 and Q2 are screening questions. To proceed, Q1 must **not** equal D. Q2 must **not** equal A. If one or both of these is selected, the responses will not be included in results. The person will be sent to the end of the survey. They will receive a message that says “thank you for your time. This survey is for adults who currently own, plan to own or have owned dogs in the past.”*

### **New Page**

3. How many dogs do you own? (Drop down list)
  - a. 0
  - b. 1
  - c. 2
  - d. 3+

*This question is only displayed if Q1 equals ‘a’, ‘b’, or ‘c’ and Q2 equals ‘b’.*

### **New Page**

These questions relate to a dog that you currently own or plan to own. If you have more than one dog, you will have the opportunity to answer questions about additional dogs.

4. What kind of dog is this? (Drop down list)
  - a. Pure-bred
  - b. Designer mixed breed

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- c. Mixed breed
  - d. Not sure
5. Does this dog have a flat face? For instance, like a bulldog, pug, boxer, or boston terrier?
- (Radio buttons)
- a. Yes
  - b. No
6. What size is this dog? (Drop down list)
- a. Extra small - less than 12 lbs
  - b. Small – 12-24 lbs
  - c. Medium - 25-57 lbs
  - d. Large - 58-99 lbs
  - e. Giant - 100+ lbs
7. What kind of coat (fur) does this dog have? (Drop down list)
- a. Short coat
  - b. Long coat
  - c. Medium coat
  - d. Double coat
  - e. Curly coat
  - f. Wire coat
  - g. Silky coat
  - h. Hairless coat
8. How did/will you acquire this dog? (Drop down list)

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- a. Purchase from a pet store
  - b. Purchase from a breeder
  - c. Purchase online
  - d. Adopt from shelter or other organization
  - e. Adopt from an individual seeking to rehome the dog
9. Have you owned or personally known a dog that was similar? (Radio buttons)
- a. Yes
  - b. No
10. Does this dog remind you of a dog that you know from a movie, TV, or social media?  
(Radio buttons)
- a. Yes
  - b. No

*If A is answered, the respondent is shown questions 11 and 12.*

11. Where have you seen the dog that reminds you of this dog? (Check boxes)
- a. Movie
  - b. TV
  - c. You Tube
  - d. Instagram
  - e. Snap Chat
  - f. Facebook
  - g. TikTok

h. Other social media \_\_\_\_\_ (fill in blank)

*If 'only a' or 'b' are selected, skip question 12. If 'c', 'd', 'e', 'f', 'g', or 'h' are selected, proceed to question 12.*

12. How many times would you estimate that you have seen similar dogs on social media?

Estimate the number of times you have seen the dog on social media using the sliding scale.

(Sliding scale)

*The sliding scale ranges from 1 – 100. The slider does not snap in place. Labels for 1, 25, 50 and 100 are as follows:*

1 - One or two times; 25 – A handful of times; 50 – Many times; 100 – All the time

*Question 12 is only shown if the answer to question 11 includes 'c', 'd', 'e', 'f', 'g', or 'h'.*

13. How much time did/will you spend researching this type of dog before you acquire(d) it?

Rate the amount of time spent researching before acquiring this dog using the sliding scale.

(Sliding scale)

*The sliding scale ranges from 0 – 100. The slider does not snap in places. Labels for 0, 25, 50 and 100 are as follows:*

0 – none; 25 – Some; 50 – A lot; 100 – More than you would imagine

14. Think about what is/was important to you when you consider(ed) getting this dog. Rate the

importance of each of these qualities using the sliding scales. (Sliding scale)

*The sliding scale ranges from 0 – 6. The slider snaps in place. Labels for 0, 3 and 6 are as follows:*

0 - Not at all important; 3 – Not sure; 6 – Extremely important

- a. Cuteness
  - b. Breed health
  - c. Good family dog
  - d. Amount of exercise needed
  - e. Amount it sheds
  - f. Grooming needs
  - g. Size
  - h. Amount of barking
  - i. Trainability
  - j. Price
15. Is there another dog you would like to provide information about? (Drop down list)
- a. Yes
  - b. No

*If the answer is A, the questions on this page will be displayed again, allowing the respondent to describe another dog. If the answer is B, skip to question 16.*

**New Page**

These questions ask about your feelings about dog breeding.

16. What is your opinion of dog breeding in general? Use the slider to share your thoughts about dog breeding. (Sliding scale)

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The sliding scale ranges from 0 – 6. The slider does not snap in place. Labels for 0, 3 and 6 are as follows:

0 – Strongly against; 3 – Not sure; 6 – Strongly in favor

*This question is shown when the response to question 15 equals 'b'.*

17. What do you think about the following topics? Use the slider to share your thoughts about the following topics. (Sliding scale)

*The sliding scale ranges from 0 – 6. The slider does not snap in place. Labels for 0, 3, and 6 are as follows:*

0 – Absolutely problematic; 3 – Not sure; 6 – Absolutely no problem at all

- a. Dog shelters
- b. Small in-home breeders
- c. Puppy mills
- d. Large commercial breeders
- e. Pure-bred dogs
- f. Designer breeds
- g. Brachiocephalic dogs (short-nose breeds like bulldogs, boxers and pugs)
- h. Selling puppies
- i. Shipping puppies
- j. Euthanizing adoptable dogs

18. Rate how much you agree with the following statements using the slider. (Sliding scale)

*The sliding scale ranges from 0 – 6. The slider snaps in place. Labels for 0, 3, and 6 are as follows:*

0 – Strongly disagree; 3 – Not sure; 6 – Strongly agree

- a. Prospective dog owners should receive counseling from a qualified expert before acquiring a dog.
- b. Not all dog breeders are bad.
- c. Public discussions are needed to define parameters for ethical dog breeding.
- d. It is cool that there are so many kinds of dogs.
- e. People should be able to choose any dog that they want.
- f. Kennel clubs should consider changing breed standards that result in extreme features and compromise the well-being of the dog.

### **Analysis Plan**

H1: Owners of brachiocephalic breeds (those with flat faces) will see dogs that remind them of their own dog more times on social media than owners of non-brachiocephalic breeds (those without flat faces). Q5 will identify the two target groups for this hypothesis. Answers that equal 'a' identify the 'brachiocephalic' group. Answers that equal 'b' identify the 'non-brachiocephalic' group. Q11 and Q12 will identify participants who have seen a dog similar to theirs on social media. Q11 is a filtering question. Answers must include checks in one or more of the following of the boxes: 'c', 'd', 'e', 'f', 'g' or 'h'. Q13 quantifies the number of times there was social media exposure to a similar dog. A t-test will be used to determine if there is a significant difference between these two groups on the dependent variable. For H1, the dependent variable will be how many times a similar dog was seen on social media.

H2: A strong relationship between dog owners of non-brachiocephalic breeds and time spent researching prior to acquisition is predicted. Q5 will identify the two target groups for this hypothesis. Answers that equal 'a' identify the 'brachiocephalic' group. Answers that equal 'b' identify the 'non-brachiocephalic' group. Question 12 quantifies the amount of time spent researching dog breeds. A t-test will be used to determine if there is a significant difference between these two groups on the dependent variable. For H2, the dependent variable will be how much time was spent researching.

H3: A strong relationship between the means of acquisition and the value placed on cuteness is expected. Q8 will be used to determine the two target groups for this hypothesis. Answers that equal 'a', 'b', or 'c' will belong to the 'purchase' group. Answers that equal 'd' or 'e' will belong to the 'adopt' group. Question 14 quantifies the importance of different qualities. Answers for 'a' will be included for analysis of the value placed on cuteness. A t-test will be used to determine if there is a significant difference between these two groups on the dependent variable. For H3, the dependent variable will be the rating of the importance of cuteness.

H4: A negative correlation between a participant's rating for the importance of cuteness and the importance of lifestyle factors related to appearance is predicted. Q8 will be used to test this hypothesis. Answers for 'a' will be used for analysis of the value placed on cuteness. Answers for 'e' and 'f' will be used for analysis of the lifestyle ratings. The more important they consider lifestyle factors to be, the less important cuteness is to them. A linear correlation analysis will be conducted to determine if a participant's rating for cuteness covaries with their rating for lifestyle factors.



H5: People who choose pure-bred/designer dogs are just as likely to believe that public discussions are needed to define parameters for ethical dog breeding as those who choose mixed breeds. Q4 will be used to determine the groups for this hypothesis. Answers that equal 'a' or 'b' will make up the pure-bred/designer group. Answers that equal 'c' or 'd' will make up the 'mixed-breed' group. Q18 will be used to test this hypothesis. Answers for 'c' will be used for analysis of the rating for how much they agree with the statement. A t-test will be used to determine if there is a significant difference between these two groups on the dependent variable. For H5, the dependent variable will be the rating of how much they agree with the statement.

### **Recruitment Plan**

This study aims to understand the attitudes and behaviors of people who acquire companion dogs. The purpose is to understand dog owners in order to create a plan of approach for a public engagement campaign about ethical dog breeding. The study seeks no fewer than 100 participants, so that when breaking groups down for study, there is adequate size for analysis. For the same reason, the study will seek to have a similar number of participants who purchased and adopted dogs.

Since about half of Americans own dogs, challenges recruiting participants for this study are not expected. Participants will be recruited at randomly selected pet stores in suburban cities during the months of April, May and June, until enough responses are collected. Researchers will spend time outside of pet stores, approaching guests who are leaving. The short survey will be available on iPads. Q1 and Q2 will screen for qualified participants.

A shortcoming of the survey is the length. It should take less than 10 minutes to complete. Respondents will be offered a seat at a table to take the survey. Since the survey asks about personal feelings, the researcher will step away from the participant to offer privacy. The survey asks for minimal personal information, as the study is intended to understand the thoughts and feelings of dog owners who may be of any gender or race. Age is only asked as a qualifying question.

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