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Relating the Big Five Personality Factors and the Method of Dog Obtainment in Female Dog Owners

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RELATING THE BIG FIVE PERSONALITY FACTORS AND
THE METHOD OF DOG OBTAINMENT IN FEMALE DOG
OWNERS

by

JULIA RIFENBERG

A thesis submitted in partial fulfillment of the requirements
for the Honors Undergraduate Thesis Program for Psychology
in the College of Sciences
and in the Burnett Honors College
at the University of Central Florida
Orlando, Florida

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Thesis Chair: Valerie Sims, Ph.D.

ABSTRACT

Dog ownership is highly common in the United States and has a large impact on the U.S. economy due to dogs' required expenses. Thus, it is important to assess dog owners' method of dog obtainment, as it is the first step to canine companionship. Dog owner personality traits and their relationship with where dogs are obtained has not yet been studied. To assess this relationship, we reached current dog owners through an online survey containing the Donnellan et al. (2006) Mini-International Personality Item Pool (IPIP) scale and asked participants where they obtained their dog. Results indicated 90% of participants were female ($N = 411$); consequently, we limited our analysis to only female dog owners. Female dog owners' personality scores were related to their dog obtainment location (i.e., *Breeder, Pet Store or Online, Rescue or Shelter, and Informal*). Female dog owners who obtained their dog from a *Rescue or Shelter* had significantly higher scores of Agreeableness than female dog owners who obtained their dog from a *Breeder*. Female dog owners who obtained their dog from a *Breeder* had significantly higher scores of Conscientiousness than those who obtained their dog *Informally* or from a *Rescue or Shelter*. Additional exploratory Likert scale questions were posed to participants, asking why they chose their obtainment location and why they chose their dog specifically. Our study revealed there is a relationship between dog owner personality and method of dog obtainment. This information is useful for rescues and shelters looking to increase adoption because they can develop methods to attract less Agreeable and highly Conscientious women. We hope our findings can make future and current dog owners aware of how their personality relates to their choice of dog obtainment location and that they will take all methods of dog obtainment into consideration.

ACKNOWLEDGEMENTS

I would like to give sincere thanks to my thesis chair, Dr. Valerie Sims, who provided me with this incredible research opportunity. I am grateful I was blessed with such an excitable and encouraging mentor, who provided ceaseless support throughout the research process. I also would like to thank my committee members, Dr. Matthew Chin and Dr. Mason Cash, for their supervision and guidance of my thesis project.

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INTRODUCTION

Background

Dog ownership is highly prevalent throughout the United States. 63.4 million U.S. households own a dog, which translates to approximately 50% of all U.S. households owning a dog (APPA, 2019). Dogs are a popular human companion, likely for their numerous benefits to human wellbeing. Some of these benefits include reducing stress (i.e., decreasing blood pressure), inducing feelings of warm social attachment (i.e., increasing oxytocin levels) and decreasing minor health related issues (Allen, 2003; Odendaal, 2000; Headey, 1999). Dogs serve as a social catalyst for dog owners by initiating conversation and generating interest between people; dog owners also gain exercise as a result of walking their dogs (McNicholas & Collis, 2000; Brown & Rhodes, 2006). Additionally, dog ownership has a large impact on the U.S. economy. Dogs require various annual expenses, including but not limited to, routine and surgical veterinary visits, food, treats, boarding, vitamins, grooming, and toys (APPA, 2019).

Being that so many homes in the U.S. own dogs, and dog ownership has such a large impact on the U.S. economy, it is important to assess dog owners' method of dog obtainment as it is the first step to canine companionship. The American Society for the Prevention of Cruelty to Animals (n.d.) cites that 34% of dogs in the United States are obtained from a breeder, 23% of dogs from an animal shelter or humane society, and 20% from a friend or relative. Research has focused on the characteristics dog owners search for in their canine companion, with the goal of better understanding human-animal interactions. Dog appearance has been found to be the most consistent determining factor in adopting a dog (Weiss et al., 2012; Bir et al., 2017). Social behavior with the owner and dog personality also have been found to be highly important in the dog adoption process (Weiss et al., 2012). Past research has also explored factors that lead a

person to obtain a dog, such as prior dog ownership, household structure, socioeconomic status, and ethnic variation (Holland, 2019). The relationship between a dog owner and their dog have been found to be the strongest when the dog owner chose how the dog was obtained and how cute the dog owner perceives the dog to be (Lane et al., 1998; Thorn et al., 2015).

There are many ways to acquire a dog; ASPCA (n.d.) cites that the most common method is a dog breeder. However, adopting dogs from shelters has been found to be perceived as the most ethical method of dog obtainment (Sinski, 2016). Dog overpopulation within U.S. shelters is a problematic issue due to the large number of strays and dogs surrendered to shelters (Reese et al., 2017). It is difficult to pinpoint the exact number of annual intakes in shelters because not all organizations and control agencies keep these statistics (American Humane, 2016). However, the Shelter Animals Count National Database reports that in 2016 there was a gross intake of nearly 1.8 million dogs in the United States. Of these dogs, over 160,000 were euthanized. In 2020, the Shelter Animals Count National Database reports that 1.6 million dogs were admitted to U.S. shelters and over 85,000 of these dogs were euthanized. Fortunately, ASPCA (n.d.) cites that the number of dogs euthanized has drastically decreased and is likely due to the increase of strays returned to owners and an increase in adoption rates. The view that dog adoption is the most ethical method of obtainment has become increasingly predominant (Bir et al., 2017). ASPCA (n.d.) cites that the increase in dog adoption has likely contributed to the decline of dogs entering shelters each year. Prior studies have investigated factors that affect dog owners' decision when choosing a specific dog in shelters. For example, dogs seen at the front of their kennels rather than the back, and are directly interacted with, are more likely to be adopted (Wells & Hepper, 1992; Weiss et al., 2012). Although, the relationship between dog owner personality traits and their chosen dog obtainment location should be explored. This is vital

information because it will allow us to understand how personality may come into play when a dog owner is choosing a method to obtain their dog.

Personality

Many researchers have studied personality and have attempted to define “personality.” One recent definition being that personality is “the enduring set of traits and styles that he or she exhibits, which characteristics represent (a) dispositions (i.e., natural tendencies or personal inclinations) of this person, and (b) ways in which this person differs from the “standard normal person” in his or her society” (Bergner, 2020). However, there is yet to be an agreed upon definition due to the dynamic nature of personality. Thus, various personality theories and models have been developed to study personality (Bergner, 2020). The Five-Factor Model, or the “Big Five” (Goldberg, 1993) is a model that is widely accepted to study personality (Digman, 1990). This model consists of five broad traits of personality found in a stable individual and assessed through a series of 50 Likert scale items. The traits range from high to low and vary from individual to individual; the traits represent an individual's thoughts, feelings, and behaviors. The five traits are Extraversion, Imagination/Intellect, Neuroticism, Agreeableness, and Conscientiousness. The Five-Factor Model (FFM) has been utilized for numerous purposes, such as studying the relationship between the FFM and personality disorders (Widiger et al., 2016). The FFM has also been used to study the association between dog owner personality and the prevalence of behavioral problems in dogs (Dodman et al., 2018).

Mini-IPIP

The Mini-International Personality Item Pool (IPIP) (Donnellan et al., 2006) is a Likert scale model commonly used to assess the Big Five measures. The Mini-IPIP is a condensed version of the 50-item IPIP, containing only 20-items. The Mini-IPIP is advantageous due to its

short nature; longer questionnaires have been found to increase the likelihood that participants drop out of the study or will refuse to participate in future studies (Donnellan et al., 2006). The Mini-IPIP is a psychometrically reliable scale that assists in measuring the Big Five measures.

Review of the Big Five Personality Factors

Extraversion is measured by traits of sociability, activity, assertiveness, and positive emotionality (John & Srivastava, 1999). Those who are Extraverted have been found to be more likely to return shelter dogs after adoption than those high in Imagination/Intellect (Walker, 2014). This finding could suggest that those who are Extraverted will be more likely to seek other forms of dog obtainment (such as a breeder or a pet store) rather than a rescue or shelter.

Agreeableness is defined by traits of altruism, tendermindedness, trust, and modesty (John & Srivastava, 1999). The literature does not provide a basis for the relationship between Agreeableness and dog obtainment location. Although, people high in Agreeableness may be likely to adopt a dog from a shelter or rescue, rather than a breeder or pet store. This could be because of their kindness and empathy for dogs in rescues and shelters, but also due to the growing perception that dog adoption is the most ethical method of dog obtainment (Bir et al., 2017).

Conscientiousness involves goal-directed behavior, planning, organization, and task prioritization and facilitation (John & Srivastava, 1999). Research does not indicate the relationship between those who are highly Conscientious and their chosen dog obtainment location. Those who are highly Conscientious may limit their dog search to a specific breed or size. Therefore, those high in Conscientiousness may be more likely to obtain a dog from a breeder or pet store, due to the inability to find the specific dog of their choice at a rescue or shelter.

Neuroticism represents negative emotionality and can be measured by anxiety, nervousness, and sadness (John & Srivastava, 1999). There is little guidance from prior studies regarding the relationship between human Neuroticism and dog obtainment location. However, those who are highly Neurotic and suffer from anxiety may be easily upset knowing there are dogs without homes at rescues and shelters. This could make them feel more inclined to adopt a dog from a rescue or shelter.

Imagination/Intellect (also known as Openness) measures traits related to openness to experience and ideas, curiosity, and intelligence (John & Srivastava, 1999). Walker (2014) found that dog owners high in Imagination/Intellect did not return shelter dogs after adoption. This could suggest that people high in Imagination/Intellect are more likely to adopt a dog from a rescue or shelter rather than a breeder or pet store due to their Openness to any type of dog found at a rescue or shelter.

Past Research on Dog Owner Personality & Dog Ownership

Various studies have examined the relationship between dog owner personality traits and dog ownership. For example, dog owner personality and the prevalence of behavioral problems in dogs were found to have a weak correlation (Dodman et al., 2018). Dog owners have been found to be higher in Extraversion, Agreeableness, and Conscientiousness than cat owners; conversely, dog owners were found to be lower in Neuroticism and Imagination/Intellect in comparison to cat owners (Gosling et al., 2010). Dog owner personality traits have been linked to the number of dogs returned to shelters; owners high in Extraversion were more likely to relinquish their dog than those high in Imagination/Intellect (Walker, 2014). Dog owners high in Neuroticism have been found to be more attached to and pay more attention to their dog (Kotrschal et al., 2009).

Dog owner personality and its relationship with where dog owners get their dog has not yet been studied. Though there is a growing appeal that dog adoption is the most ethical way to obtain a dog, we need to know if dog owner personality has a relationship with where they obtain their dog. This will allow us to figure out how to attract people of different personalities to reach rescues and shelters in the first place. Rescues and shelters could then develop marketing methods to increase dog adoption. In turn, we hope this will assist with the overpopulation issue in shelters and as a result, reduce the number of dogs euthanized annually in the U.S.

Purpose of Study

This study aimed to determine the relationship (if any) between dog owners' personality and their method of dog obtainment. This was completed by comparing dog owners' personality scores to their method of dog obtainment. The following hypotheses were generated using the minimal literature regarding the relationship between dog owner personality and method of dog obtainment and basic knowledge of the Big Five personality traits:

Hypothesis 1: *There will be a relationship between participants with high scores of Extraversion and dogs obtained from a dog breeder or a pet store.*

Hypothesis 2: *There will be a relationship between participants with high scores of Agreeableness and dogs obtained from a rescue or shelter.*

Hypothesis 3: *There will be a relationship between participants with high scores of Conscientiousness and dogs obtained from a dog breeder or pet store.*

Hypothesis 4: *There will be a relationship between participants with high scores of Neuroticism and dogs obtained from a rescue or shelter.*

Hypothesis 5: *There will be a relationship between participants with high scores of Imagination/Intellect and dogs obtained from a rescue or shelter.*

METHOD

Data Collection

For the purpose of this study, we generated a survey in Qualtrics, the online survey software. After the survey was approved by the University of Central Florida's Institutional Review Board, it was published to SONA (University of Central Florida's online Psychology Research Participation System) in exchange for 0.5 course credit. The survey was also posted on social media platforms Facebook and Instagram in personal posts made by the researchers. Many Facebook users shared the survey post to reach other Facebook users, resulting in a domino effect. This was the primary source for gathering participants. Within the survey, participants were required to provide consent, be a current dog owner, be 18 years or older, and be the only person in their household to complete the survey. Only one person per household was permitted to participate to reduce the occurrence of multiple data for the same dog. Those who did not fit the eligibility requirements were immediately exited out of the survey. Participants were presented with an "Explanation of Research" page at the beginning of the survey, indicating the purpose of the study and that participation is voluntary. The survey included general demographic questions, the Mini-International Personality Item Pool (IPIP) scale, questions regarding the participant's dog ownership, and Likert scale questions involving the participant's experience with dogs and their opinion on dog related ethical matters. No identifiable data was collected from participants and the survey was voluntary.

Survey Contents

Each participant was asked to respond with their age, sex, ethnicity, education level, and current zip code. The Mini-IPIP, a condensed version of the 50-item International Personality

Item Pool-Five-Factor Model measure, only includes 20 scaled items. The shortened version was used in this study for the purpose of avoiding overburdening participants. The Mini-IPIP has been validated across five studies (Donnellan et al., 2006) and contains 4 items per Big Five measure: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Intellect/Imagination. The participant rated each item on the 5-point Likert scale from 1-Strongly Disagree to 5-Strongly Agree. The Mini-IPIP scale and the scoring guide is provided in Appendix A. Each participant was asked where they obtained their dog, as well as general questions about their prior experience with dogs. The questions used for this study were part of a larger data set; Appendix B provides the full list of questions. Each participant was asked Likert scale questions on a 5-point scale ranging from 1-Strongly Disagree to 5-Strongly Agree. The questions were based on their experience with dogs, dog obtainment, and ethics of dog ownership. Appendix C contains the Likert scale questions, including questions that were not utilized in this study, but will be used in a larger data set.

RESULTS

Groups Removed

After collecting the data, dog obtainment locations were re-categorized into the following categories: *Breeder*, *Pet Store or Online*, *Rescue or Shelter*, and *Informal*. Dogs obtained from a *Breeder* came from a location where dogs were intentionally mated for the sole purpose of selling puppies. Dogs from a *Pet Store or Online* (e.g., craigslist, eBay) were grouped together because dogs from these modes of obtainment generally come from an unknown origin. Although, the majority of dogs sold in pet stores and online come from puppy mills (The Humane Society, n.d.). Puppy mills are dog breeding facilities of high-volume with inhumane conditions, such as tight cages with minimal attention, leaving most of the dogs ill and unsocialized. Once adult dogs can no longer produce puppies, they are usually neglected or killed (Humane Society, n.d.). Puppies purchased from pet stores have been linked to many negative health issues, such as internal parasites and insect infestations (Ruble & Hird, 1993; Roesli et al., 2003; Stehr-Green et al., 1987). Additionally, dogs obtained from pet stores and non-commercial breeders have been reported to have worse separation anxiety, aggression, and have more accidents in the house (McMillan et al., 2013). Dogs from a *Rescue or Shelter* were grouped together because rescues and shelters are both ways of adopting a dog that either is homeless or has been surrendered. Lastly, dogs that were obtained through informal means were grouped together as *Informal*. The *Informal* category included situational circumstances, such as the dog was found, the dog was picked up at the participant's work, or the dog was obtained through the participant's family or friend. Any participant whose method of dog obtainment did not fit into the four defined categories were excluded from the analysis.

Results indicated there were a total of 653 participants: 589 females, 56 males, and 8 who identified as “other” gender. Being that 90% of the participants were female, all genders other than “female” were excluded as they were not large enough samples to conduct an analysis. Lastly, participants were asked their level of control when obtaining their dog. Only participants who had full control, in other words, they chose where their dog was obtained, were included in the analysis. Those who did not have full control over where their dog was obtained did not assist in answering our question of how personality relates to where dogs are obtained.

Demographics

After the groups were removed, there were a total of 411 female participants ranging from age 18 to 79 ($M = 37.85$, $SD = 13.12$). Participants’ ethnicities were predominantly white ($n = 356$), but also included Hispanic or Latino ($n = 39$), Asian/Pacific Islander ($n = 10$), Black or African American ($n = 10$), and “Other” ($n = 13$). Education levels varied from High school diploma ($n = 14$), some college ($n = 55$), Associate degree ($n = 35$), Bachelor’s degree ($n = 142$), Master’s degree ($n = 112$), to Doctorate degree ($n = 53$). Participants were widespread throughout the United States, residing in 37 different states. Most of the participants currently reside in Florida ($n = 202$), North Carolina ($n = 20$), California ($n = 19$), Pennsylvania ($n = 18$), and Georgia ($n = 17$).

keyed item and three negatively keyed items. Appendix A lists the scale and denotes which items were keyed positively or negatively. For positively keyed items, the response "Strongly Disagree" was assigned a value of 1, "Disagree" a value of 2, "Neither Agree nor Disagree" a 3, "Agree" a 4, and "Strongly Agree" a value of 5. The negatively keyed items were reverse coded; the response "Strongly Disagree" was assigned a value of 5, "Disagree" a value of 4, "Neither Agree nor Disagree" a 3, "Agree" a 2, and "Strongly Agree" a value of 1. After each item on the scale was assigned a number, the values were summed to calculate the total score per personality trait out of 20, with a minimum of 4.

Dog Obtainment Locations

Most participants obtained their dog from a *Rescue or Shelter* ($n = 241$), followed by *Breeder* ($n = 94$), then *Informally* ($n = 51$), and then a *Pet Store or Online* ($n = 25$). A one-way between-subjects ANOVA was run on the ages of female dog owners and their method of dog obtainment ($F(3,407)=3.06; p = .03$). Dog owners that got their dog from a *Breeder* ($M = 40.26, SD = 14.59$) were significantly older than dog owners that got their dog from a *Pet Store or Online* ($M = 31.68, SD = 14.03; p < .01$). Dog owners that got their dog from a *Rescue or Shelter* ($M = 37.78, SD = 12.05$) were significantly older than dog owners that got their dog from a *Pet Store or Online* ($p = .03$).

Big Five Factors & Method of Dog Obtainment

Participants' personality was assessed using the Mini-IPIP. Personality scores for Agreeableness had the highest mean ($M = 16.44$), followed by Imagination/Intellect ($M = 15.10$),

followed by Conscientiousness ($M = 13.29$), followed by Neuroticism ($M = 12.18$), and lastly, Extraversion ($M = 12.01$).

Table 1: Personality Scores

| Factor | <i>N</i> | Observed Minimum | Observed Maximum | Mean | Standard Deviation |
|-----------------------|-----------------|-------------------------|-------------------------|-------------|---------------------------|
| Extraversion | 411 | 4 | 20 | 12.01 | 3.71 |
| Agreeableness | 411 | 5 | 20 | 16.44 | 2.63 |
| Conscientiousness | 411 | 5 | 20 | 13.29 | 2.98 |
| Neuroticism | 411 | 4 | 19 | 12.18 | 3.17 |
| Imagination/Intellect | 411 | 4 | 20 | 15.10 | 2.92 |

A one-way between-subject ANOVA was run on the participants' personality scores and their method of obtainment. Results indicated that participants with the highest mean scores of Extraversion obtained their dog from a *Pet Store or Online* ($M = 12.44$, $SD = 4.00$), followed by

Breeder ($M = 12.27, SD = 3.63$). However, the differences in Extraversion scores was not significant ($F(3,407) = 0.41; p = .75; n^2p < .01$).

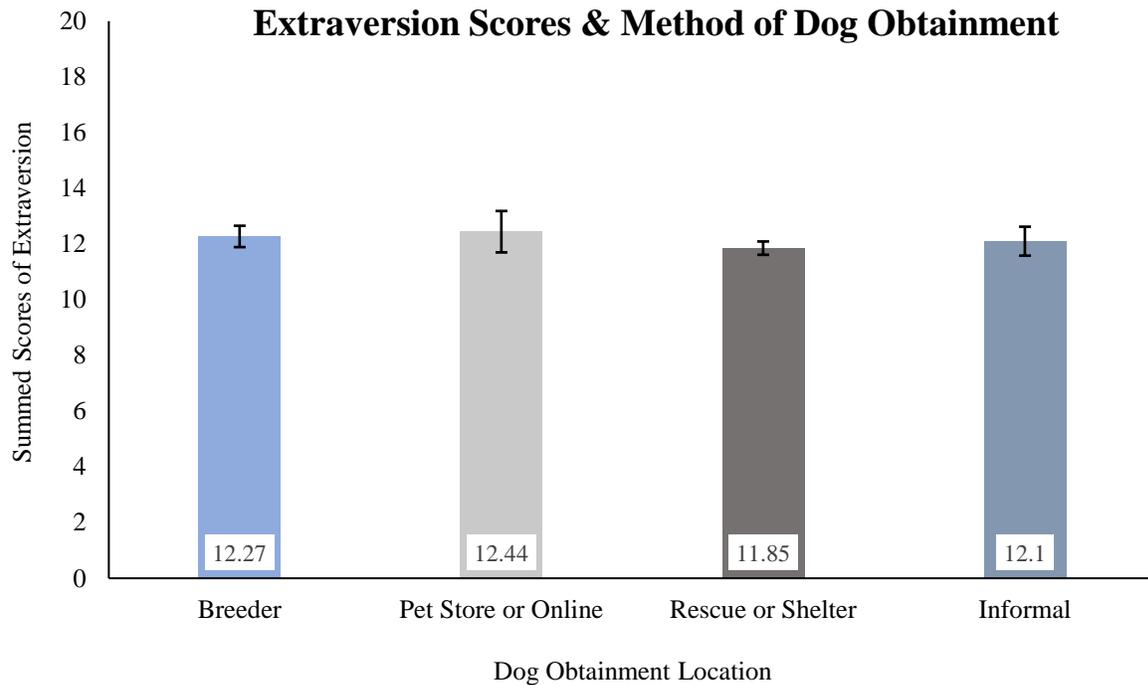


Figure 2: Results from a one-way between-subjects ANOVA describing the relationship between female dog owners' summed scores of Extraversion and their method of dog obtainment. Error bars refer to standard error and mean summed scores of Extraversion are located at the bottom of each bar.

There was a significant difference in Agreeableness scores between female dog owners with different methods of dog obtainment ($F(3,407) = 2.90, p = .04, n^2p = .02$). LSD Post Hoc tests indicated that female dog owners who got their dog from a *Rescue or Shelter* had significantly higher Agreeableness scores ($M = 16.75, SD = 2.55$) than female dog owners that got their dog from a *Breeder* ($M = 15.94, SD = 2.61; p = .01$). No other pairs of Agreeableness scores and dog obtainment locations were found to be significantly different.

Agreeableness Scores & Method of Dog Obtainment

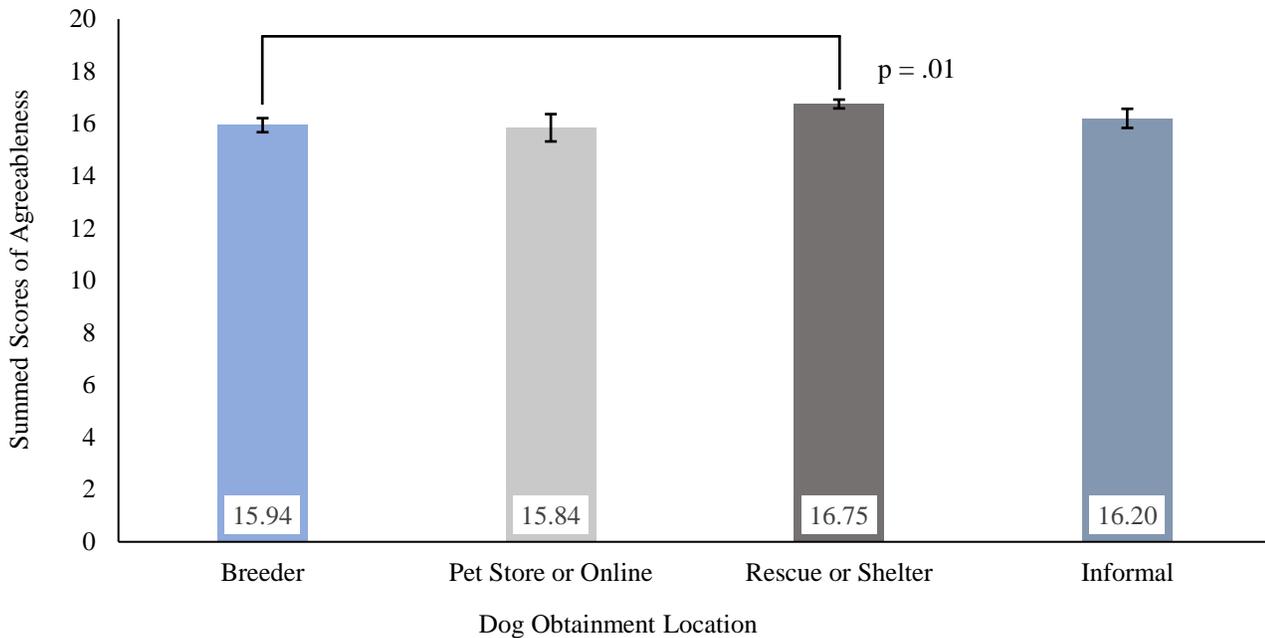


Figure 3: Results from a one-way between-subjects ANOVA describing the relationship between female dog owners’ summed scores of Agreeableness and their method of dog obtainment. Error bars refer to standard error and mean summed scores of Agreeableness are located at the bottom of each bar.

There were also significant differences in female dog owners’ Conscientiousness scores and where they got their dog from ($F(3,407) = 2.90, p = .04, \eta^2 p = .02$). LSD Post Hoc tests indicated that female dog owners that got their dog from a *Breeder* had significantly higher scores of Conscientiousness ($M = 14.07, SD = 2.04$) than those who got their dog from *Rescue or Shelter* ($M = 13.17, SD = 3.07; p = .01$) and *Informally* ($M = 12.63, SD = 2.80; p = .01$). No other pairs of Conscientiousness scores and dog obtainment locations were found to be significantly different, although the difference in Conscientiousness scores between those who got their dog from a *Breeder* and those that got their dog from a *Pet Store or Online* reached marginal significance ($M = 12.80, SD = 3.28; p = 0.056$).

Conscientiousness Scores & Method of Dog Obtainment

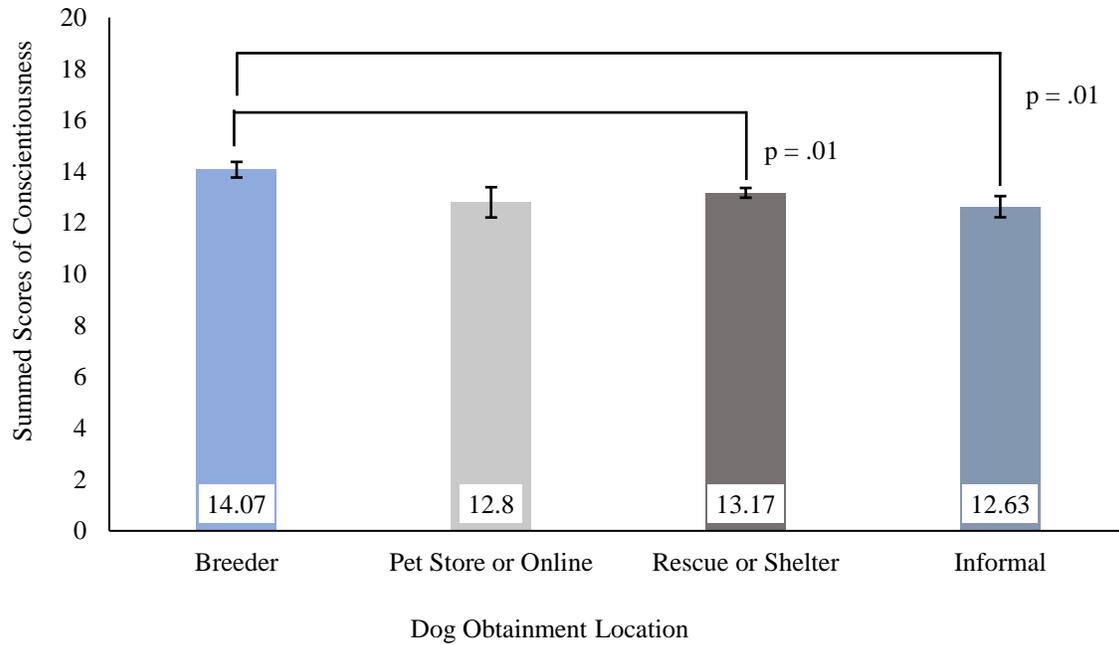


Figure 4: Results from a one-way between-subjects ANOVA describing the relationship between female dog owners' summed scores of Conscientiousness and their method of dog obtainment. Error bars refer to standard error and mean summed scores of Conscientiousness are located at the bottom of each.

Female dog owners with the highest scores of Neuroticism obtained their dog from a *Pet Store or Online* ($M = 12.44$, $SD = 3.44$). Although, the differences in Neuroticism scores were not significant ($F(3,407) = 0.28$, $p = .84$, $n^2p < .01$).

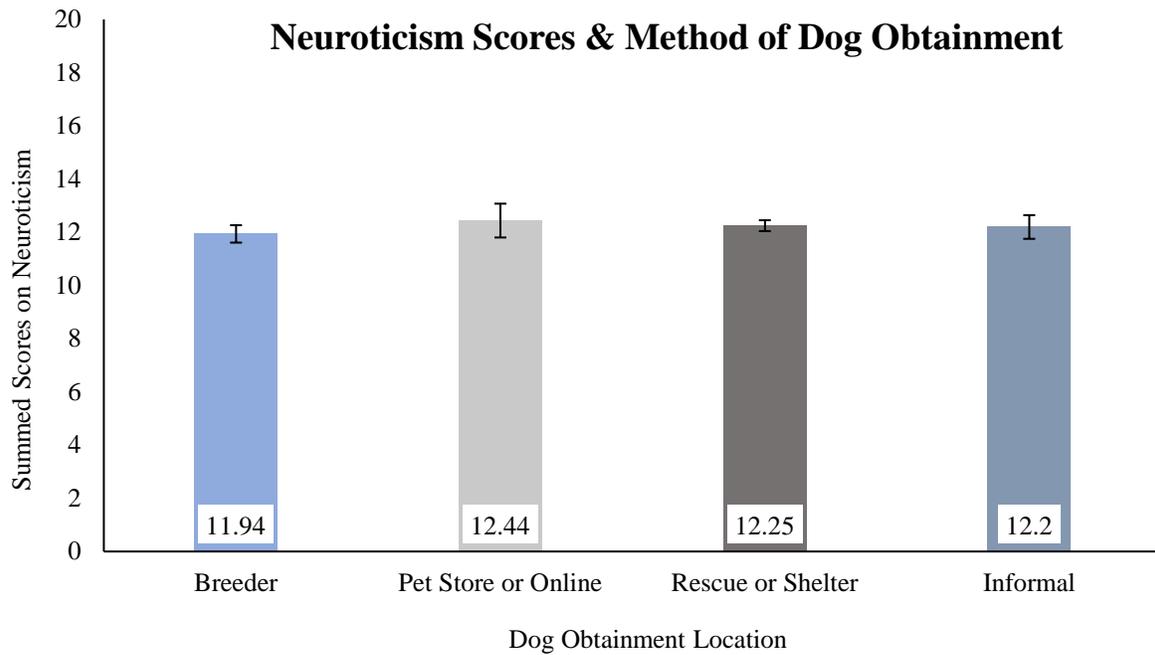


Figure 5: Results from a one-way between-subjects ANOVA describing the relationship between female dog owners' summed scores of Neuroticism and their method of dog obtainment. Error bars refer to standard error and mean summed scores of Neuroticism are located at the bottom of each bar.

Female dog owners that got their dog from a *Rescue or Shelter* had the highest mean scores of Imagination/Intellect ($M = 15.29, SD = 2.93$), although there was no significant relationship between Imagination/Intellect scores and female dog owners method of dog obtainment ($F(3,407) = 1.44; p = .23; \eta^2 p = .01$).

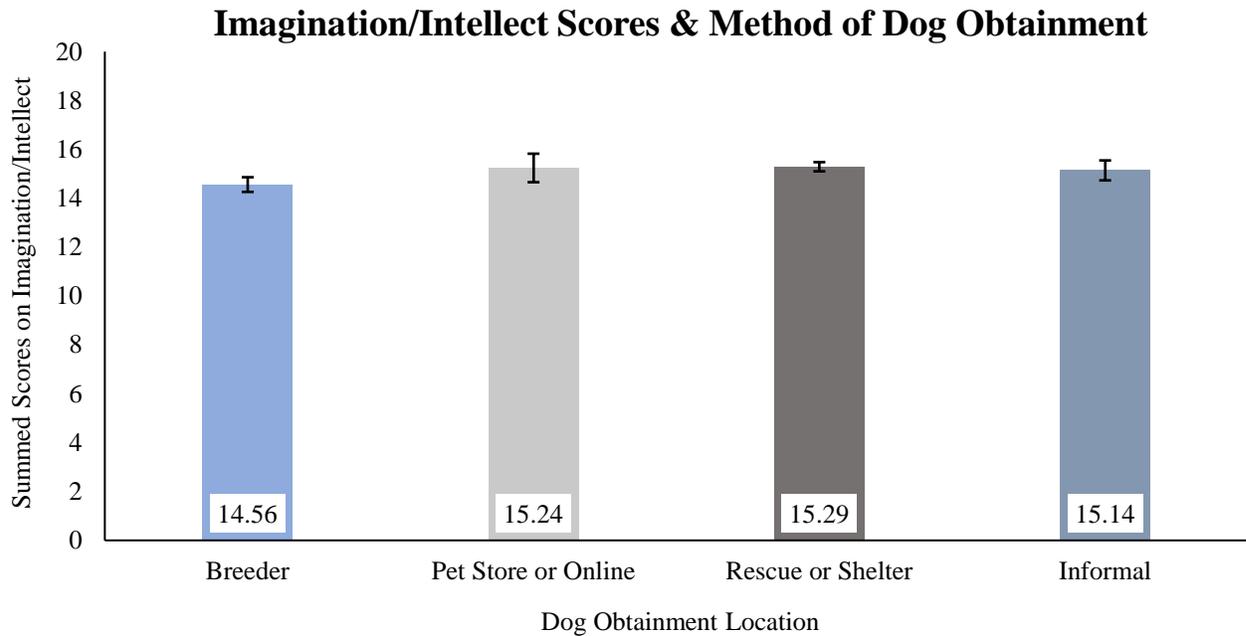


Figure 6: Results from a one-way between-subjects ANOVA describing the relationship between female dog owners’ summed scores of Imagination/Intellect and their method of dog obtainment. Error bars refer to standard error and mean summed scores of Imagination/Intellect are located at the bottom of each bar.

Likert Scale Questions

Why Dog Owners Chose Their Method of Obtainment

This study included Likert scale questions that asked participants how much they agreed with statements regarding why they chose their dog obtainment location. The scale ranged from 1-Strongly Disagree to 5-Strongly Agree. A one-way between-subjects ANOVA was run on their responses. There was a significant relationship between female dog owners Likert scores and the statement “I obtained my dog from its location because it was the easiest option for me” ($F(3,407) = 10.91; p < .001; \eta^2 p = .07$). LSD Post Hoc tests indicated that female dog owners that got their dog from a *Pet Store or Online* ($M = 3.64, SD = 1.15$) had significantly higher scores on the Likert scale than those who got their dog from a *Breeder* ($M = 2.59, SD = 1.29; p < .001$) or from a *Rescue or Shelter* ($M = 2.58, SD = 1.04; p < .001$). Female dog owners that got

their dog *Informally* ($M = 3.22$, $SD = 1.00$) had significantly higher scores on the Likert scale than those who get their dog from a *Breeder* ($p = .001$) or from a *Rescue or Shelter* ($p < .001$).

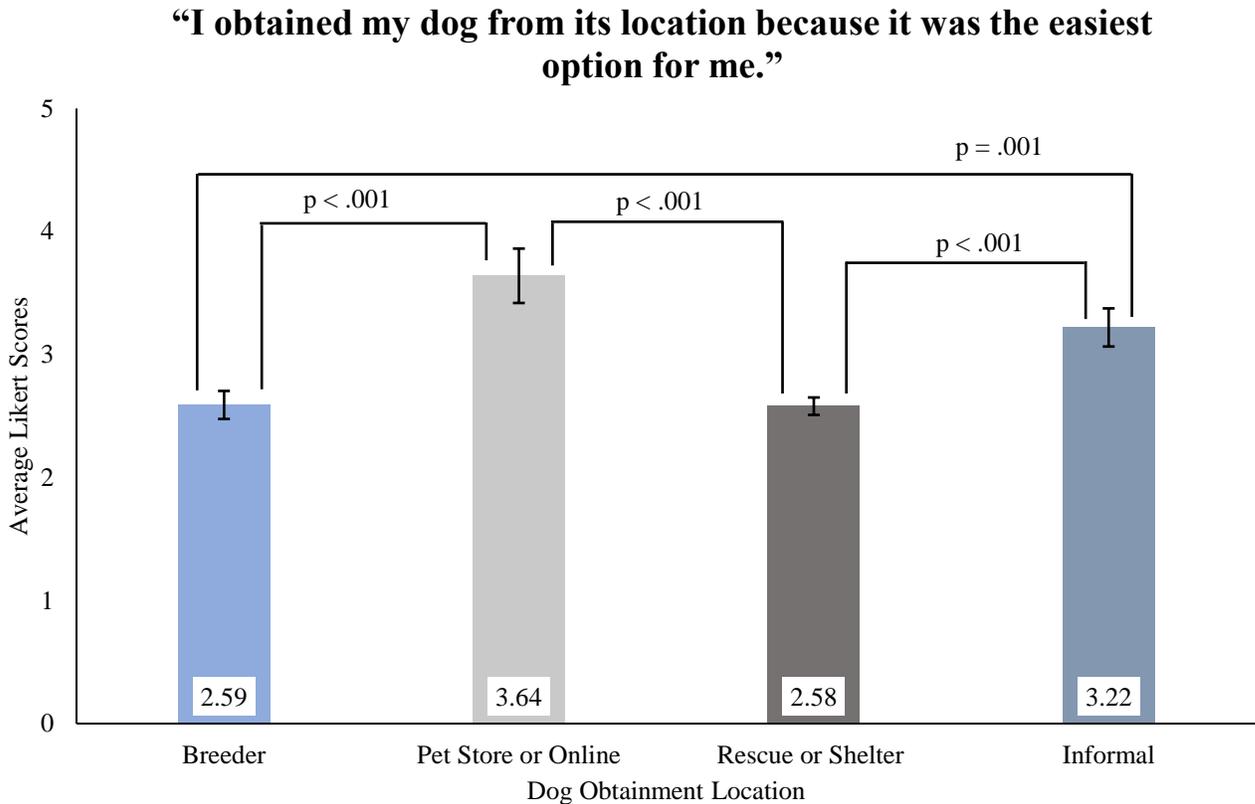


Figure 7: Results from a one-way between-subjects ANOVA describing the relationship between dog owners’ average Likert scores for the statement about choosing their obtainment location because it was the easiest option for the participant. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

There was a significant relationship between female dog owners’ Likert scores and the statement “I obtained my dog from its location because it was the most financially suitable for me” ($F(3,407) = 3.18$; $p = .02$; $\eta^2 p = .02$). LSD Post Hoc tests indicated that female dog owners who obtained their dog *Informally* ($M = 3.04$, $SD = 1.13$) had significantly higher scores on the Likert scale than those who got their dog from a *Breeder* ($M = 2.44$, $SD = 1.21$; $p = .003$) and the difference was marginally significant when compared to dog owners that got their dog from a *Rescue or Shelter* ($M = 2.44$; $SD = 1.21$; $p = .055$). Female dog owners that got their dog from a *Rescue or Shelter* nearly had significantly higher scores than dogs from a *Breeder* ($p = .057$)

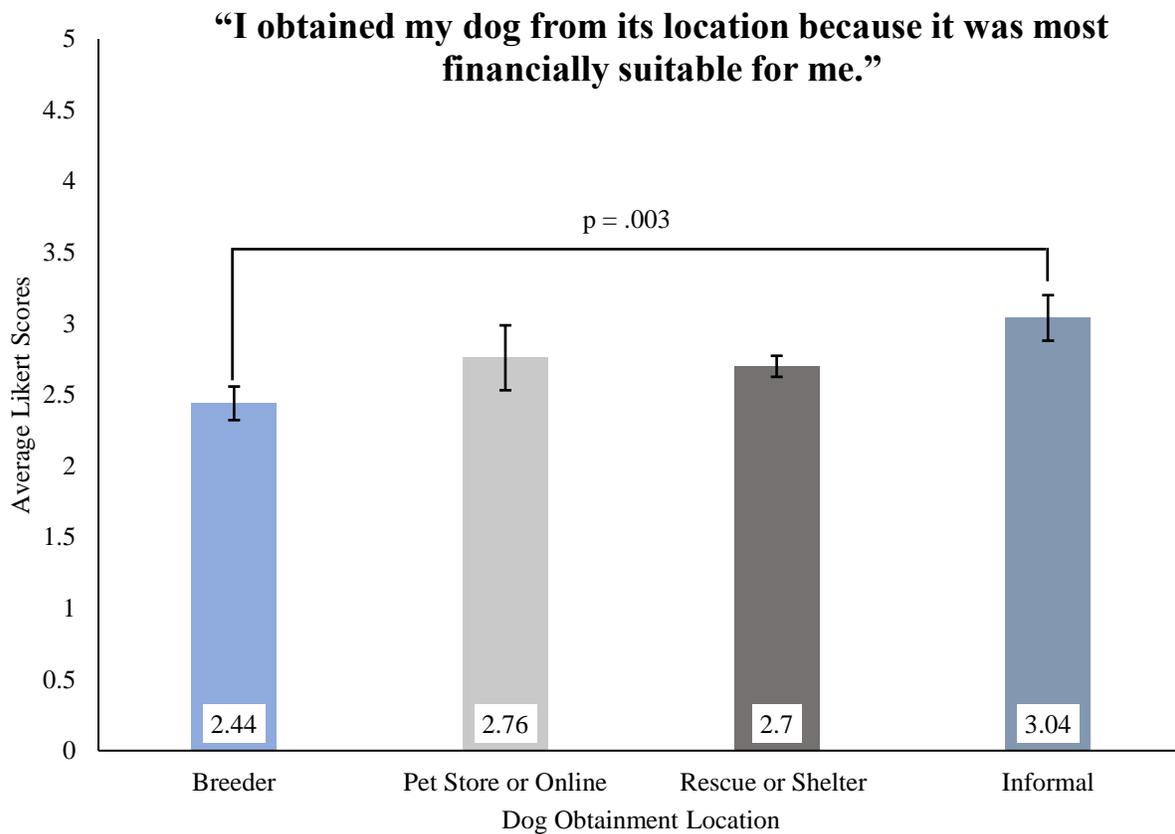


Figure 8: Results from a one-way between-subjects ANOVA describing the relationship between dog owners’ average Likert scores for the statement about choosing their obtainment location because it was most financially suitable for the participant. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

There was a significant relationship between female dog owners Likert scores and the statement “I obtained my dog from its location because it was the only way to get the breed I was looking for” ($F(3,407) = 57.38; p < .001; \eta^2 p = .30$). LSD Post Hoc tests revealed that female dog owners that got their dog from a *Breeder* ($M = 3.30, SD = 1.41$) scored significantly higher on the Likert scale than females who got their dog *Informally* ($M = 2.18, SD = .99; p < .001$), from a *Rescue or Shelter* ($M = 1.61, SD = .90; p < .001$) and from a *Pet Store or Online* ($M = 2.48, SD = 1.30; p = .001$). Females that got their dog *Informally* scored significantly higher on the scale than those that got their dog from a *Rescue or Shelter* ($p = .001$). Lastly, those who got

their dog from a *Pet Store or Online* scored significantly higher than those who got their dog from a *Rescue or Shelter* ($p < .001$).

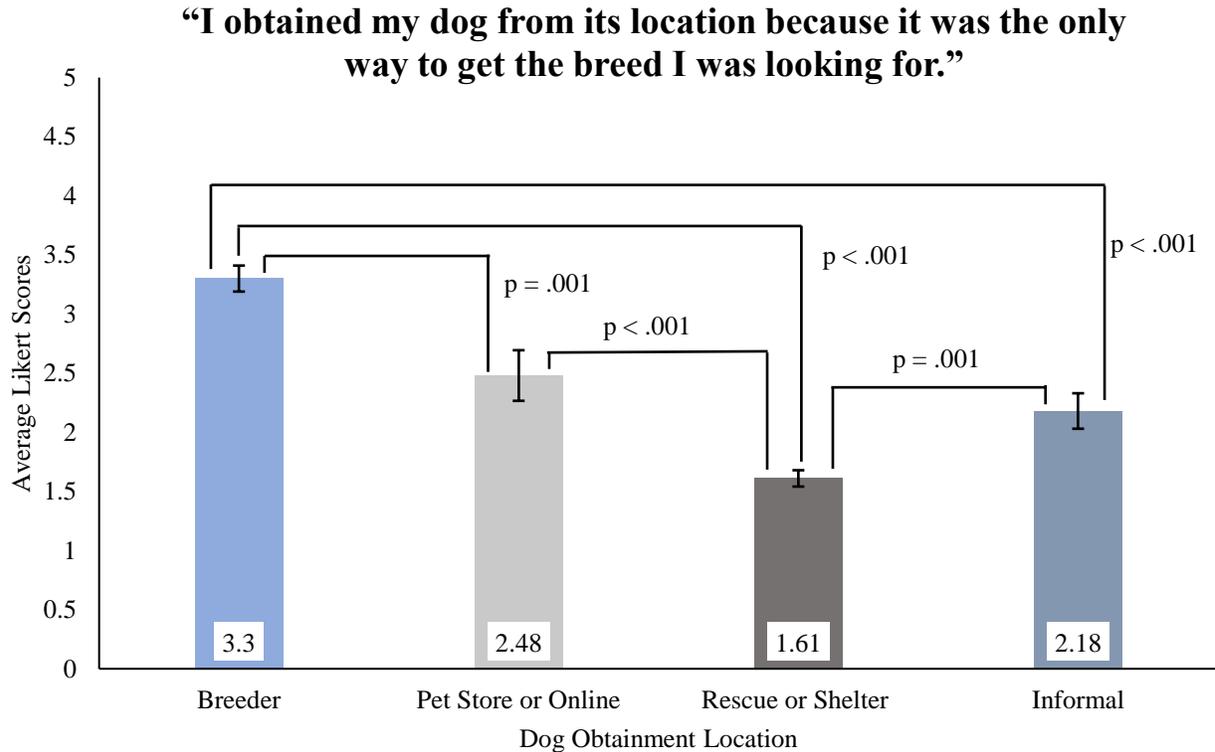


Figure 9: Results from a one-way between-subjects ANOVA describing the relationship between dog owners’ average Likert scores for the statement about choosing their obtainment location because it was the only way the participant could get the breed they were looking for. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

Female dog owners were asked to state how much they agreed with the statement “I obtained my dog from its location by chance because he/she was the perfect fit for me.” There was a significant relationship between Likert scores for this statement and female dog owners’ obtainment location ($F(3,407) = 14.32; p < .001; \eta^2 p = .10$). LSD Post Hoc tests showed that female dog owners who got their dog from a *Breeder* ($M = 3.37, SD = 1.52$) scored significantly lower on the Likert scale than dog owners who got their dog *Informally* ($M = 4.22, SD = .95; p <$

.001), from a *Rescue or Shelter* ($M = 4.18, SD = .92; p < .001$) and from a *Pet Store or Online* ($M = 4.40, SD = 1.00; p < .001$).

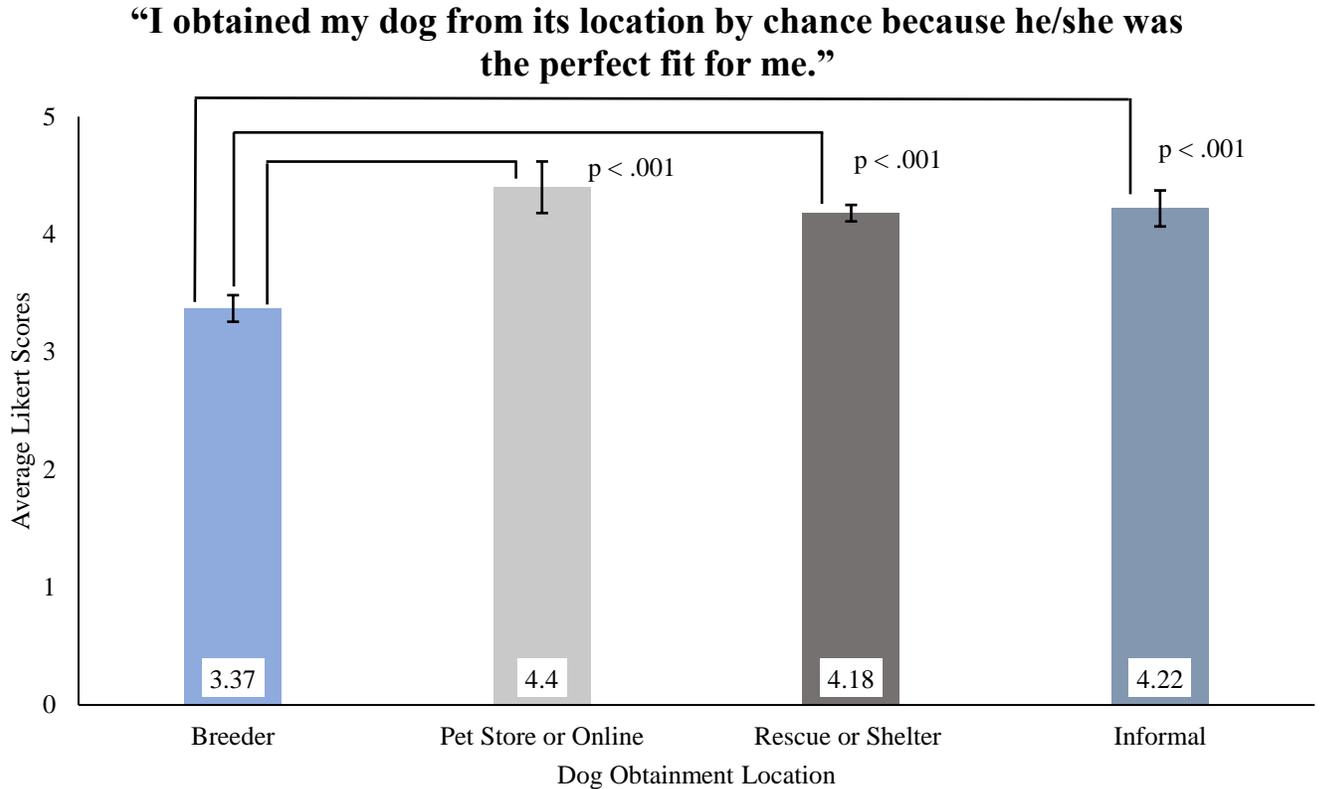


Figure 10: Results from a one-way between-subjects ANOVA describing the relationship between dog owners’ average Likert scores for the statement about choosing their obtainment location by chance because their dog was the perfect fit for them. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

Why Dog Owners Chose Their Dog

Our Likert scale included statements regarding why dog owners chose their dog specifically. The statement, “I chose my dog because he/she was cute” had a significantly different rating in relation to where female dog owners obtained their dog ($F(3,407) = 10.59; p < .001; \eta^2 p = .07$). LSD Post Hoc tests showed that females that got their dog from a *Pet Store or Online* ($M = 4.44, SD = 0.77$) scored significantly higher on the scale than those who got their dog from a *Breeder* ($M = 3.70, SD = 1.22; p = .001$) and *Informally* ($M = 3.47, SD = 1.27; p < .001$). Females who got their dog from a *Rescue or Shelter* ($M = 4.11, SD = 0.78$) had

significantly higher scores than females who got their dog from a *Breeder* ($p = .001$) or *Informally* ($p < .001$).

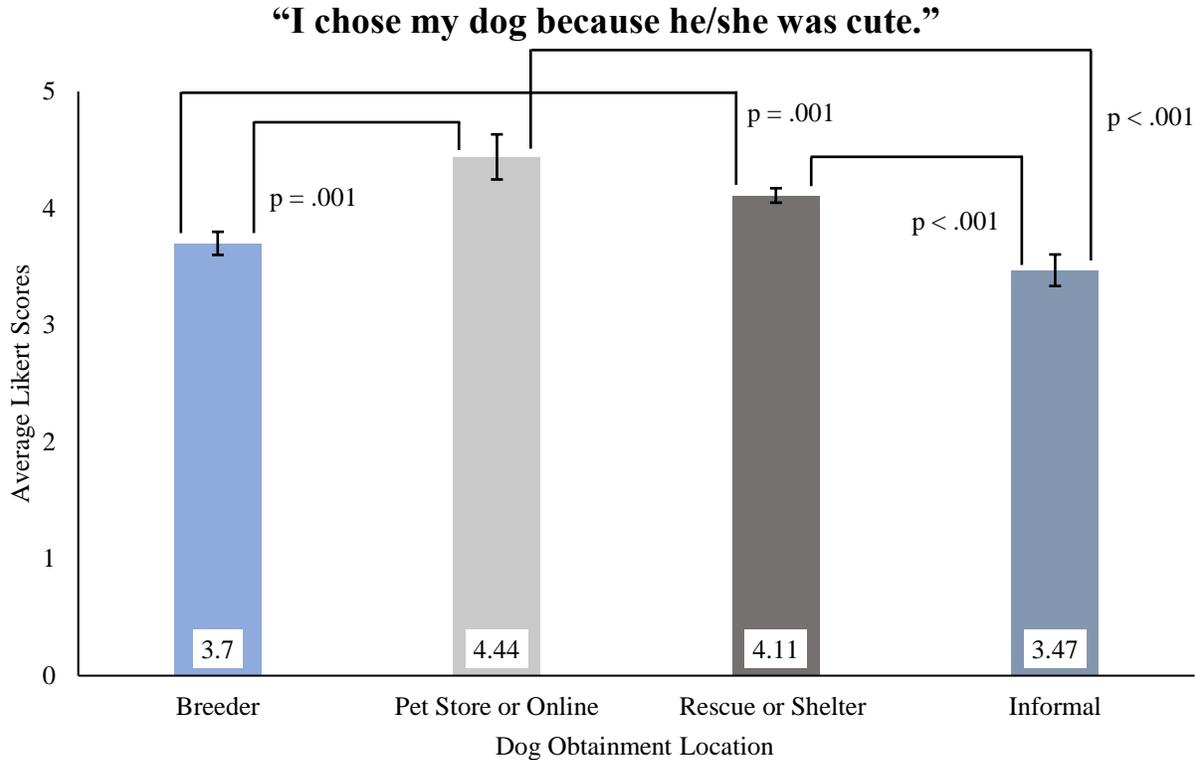


Figure 11: Results from a one-way between-subjects ANOVA describing the relationship between dog owners' average Likert scores for the statement about choosing their dog because he/she was cute. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

The statement “I chose my dog because he/she was smart” had a significantly different rating in relation to where female dog owners acquired their dog from ($F(3,407) = 3.10; p = .03; n^2p = .02$). LSD Post Hoc tests indicated that female dog owners who got their dog from a *Breeder* ($M = 3.71, SD = 1.09$) scored significantly higher on the Likert scale for this statement than those who got their dog *Informally* ($M = 3.29, SD = 1.19; p = .02$) or from a *Rescue or Shelter* ($M = 3.38, SD = 0.98; p = .009$).

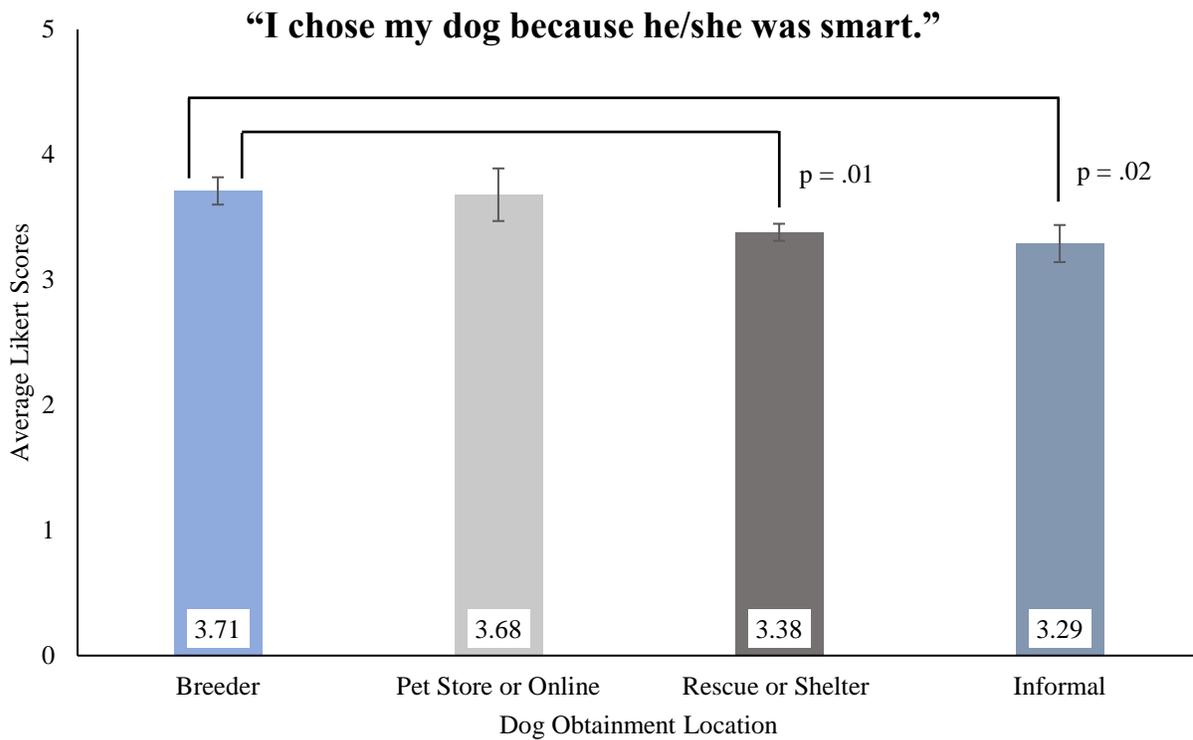


Figure 12: Results from a one-way between-subjects ANOVA describing the relationship between dog owners average Likert scores for a statement regarding choosing their dog because he/she was smart. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

Female dog owners scores for the statement “I chose my dog because he/she was the breed I wanted” had significantly different rating in relation to where dog owners got their dog from ($F(3,407) = 62.84; p < .001; \eta^2 p = .32$). LSD Post Hoc tests revealed that females who got their dog from a *Breeder* ($M = 4.71, SD = 0.60$) scored significantly higher on this statement than those who got their dog *Informally* ($M = 3.31, SD = 1.26; p < .001$), from a *Rescue or Shelter* ($M = 2.76, SD = 1.30; p < .001$), or from a *Pet Store or Online* ($M = 3.56, SD = 1.33; p < .001$). Females who got their dog *Informally* scored significantly higher than those who got their dog from a *Rescue or Shelter* ($p = .002$).

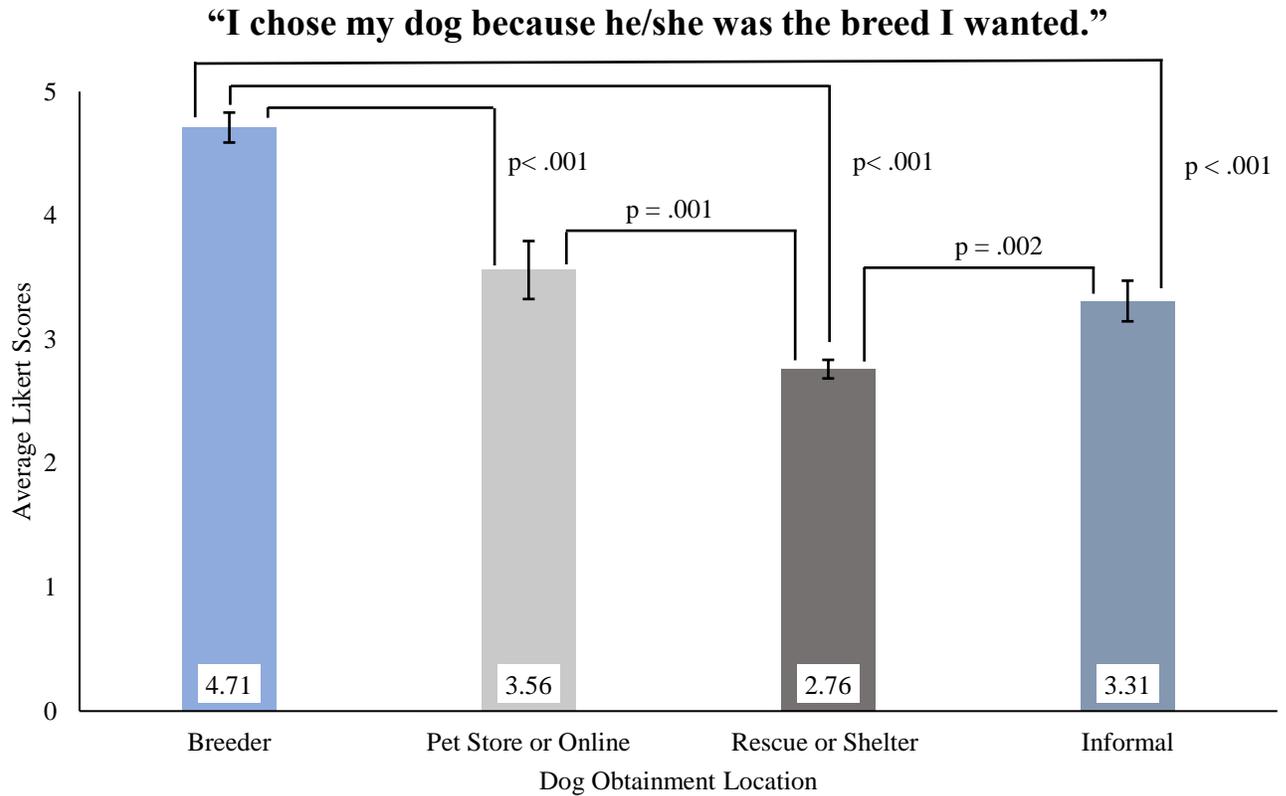


Figure 13: Results from a one-way between-subjects ANOVA describing the relationship between dog owners’ average Likert scores for the statement about choosing their dog because he/she was the breed they wanted. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

The final statement on the Likert scale which had significantly different scores in relation to female dog owners method of obtainment was “I chose my dog because I liked his/her personality” ($F(3,407) = 3.00, p = .03, \eta^2 p = .02$). LSD Post Hoc tests revealed that females who got their dogs from a *Rescue or Shelter* ($M = 4.29, SD = 0.78$) scored significantly higher for this Likert statement than those who acquired their dog *Informally* ($M = 3.90, SD = 1.06; p = .004$).

“I chose my dog because I liked his/her personality.”

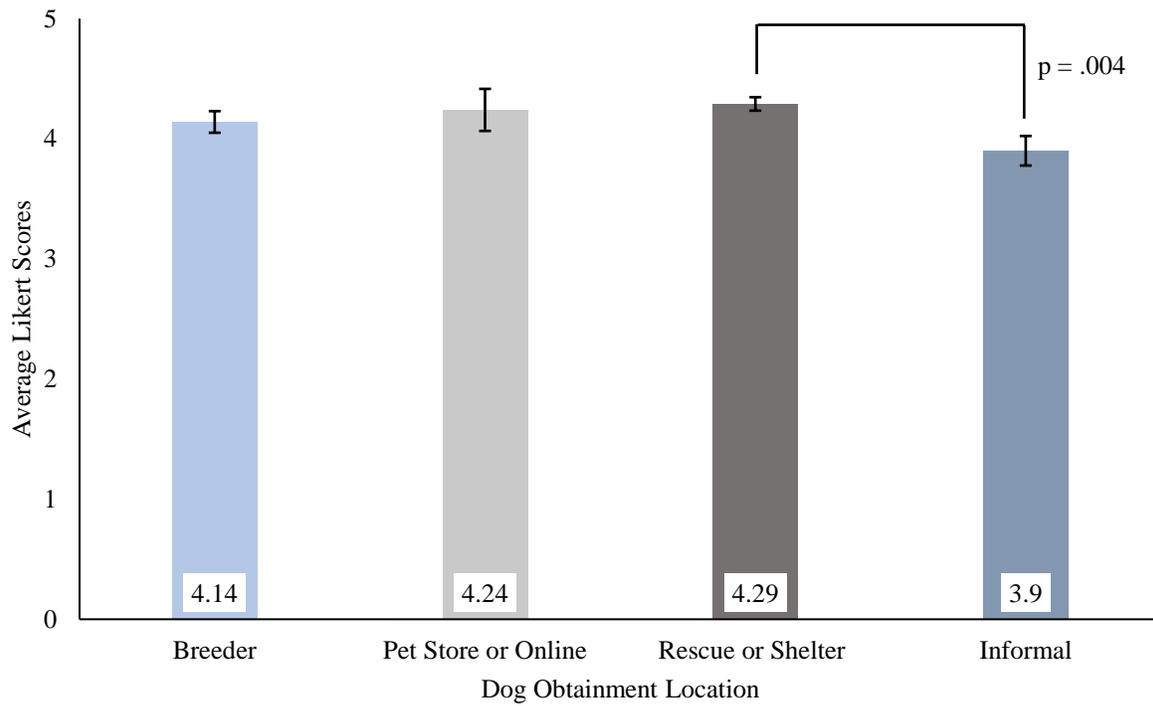


Figure 14: Results from a one-way between-subjects ANOVA describing the relationship between dog owners' average Likert scores for the statement about choosing their dog because they liked him/her personality. Error bars represent standard error and the mean Likert score per obtainment location is located at the bottom of each bar.

DISCUSSION

Participants & Demographics

The purpose of this study was to measure and assess the relationship between dog owner personality traits and their method of dog obtainment. To our knowledge, no studies have assessed the relationship between dog owner personality traits and their method of dog obtainment. This study involved an online survey distributed primarily through social media outlets. The survey received a large sample size ($N = 653$) comprised of 90% women. Due to this unexpected outcome, we limited our analysis to only female dog owners ($N = 411$). Previous studies which used surveys to study the relationship between dog owners and their dog, also found substantial female participation over male participation (Kubinyi et al., 2009; Bennett & Rohlf, 2007). Women are more likely to consider themselves their dog's "parent" than men; women have also been reported to label themselves the "mother" of their pet, whereas men were more likely to describe their dog as their "friend" (Owens & Grauerholz, 2019; Ramirez, 2006). Therefore, a plausible explanation for our findings is that women put more emphasis on caretaking and are more attached to their dog than men. Prato-Previde et al. (2003) analyzed the language spoken between male and female dog owners and their dogs. Their results indicated that women provided more infant-directed speech than males. These findings suggest we received large female participation because women felt more compelled to take our survey and wanted to report data on their "child."

The female participants in this study were highly educated, with most having a Bachelor's degree ($n = 142$) or a Master's degree ($n = 112$). This is likely because the survey was shared on social media by the researchers who attend and work for the university where the research was conducted. The researcher's friends and family shared their posts, who then had friends and

family share their post, resulting in a domino effect. Additionally, past research has shown that dog owners with college degrees were more likely to adopt from a rescue (Reese et al., 2017). This could explain why many of our participants were highly educated and why *Rescue or Shelter* was the largest dog obtainment category.

Our study received a surprisingly uniform ethnic population, with 87% participation from White female dog owners, followed by 9% Hispanic/Latino female dog owners. This is consistent with 2016 demographic data reported by the American Veterinary Medical Association (2017), which found that White households had the highest rate of pet ownership (64.7%), followed by Latino/Hispanic households (61.4%). Although in regard to dog ownership specifically, Latino/Hispanic households reported the highest rate of dog ownership (44.6%) and White households reported the highest rate of cat ownership (31.8%). A study by Brown (2003) looked at ethnicity as a factor of dog ownership in university students (Median age = 25.90) and found that White students owned significantly more pets than African American students. It is evident that dog ownership and pet ownership, in general, is highly popular among White populations.

Personality

Personality scores from the Mini-IPIP revealed that overall, out of the five personality factors, participants had the highest mean scores for Agreeableness. The participants in this study participated voluntarily with no incentive other than assisting the researchers collect data for the study. It is likely that highly Agreeable people participated in this study because of their willingness to help and good nature; common traits associated with Agreeableness (John & Srivastava, 1999). Moreover, Chopik & Weaver (2019) found that female dog owners high in Agreeableness were most likely to report high relationship quality with their dogs. Female dog

owners high in Agreeableness could have wanted to take this study because they 1) wanted to assist with the research study but also because 2) they have a strong relationship with their dog and were pleased to report data on him/her.

Personality & Method of Dog Obtainment

Agreeableness

Our results indicated that personality had an impact on where female dog owners got their dogs from. Specifically, female dog owners who got their dog from a *Rescue or Shelter* had significantly higher Agreeableness scores than female dog owners who got their dog from a *Breeder*. Dogs adopted from a shelter are otherwise homeless and potentially face euthanasia. Fortunately, dogs at rescues do not have the possibility of this doomful fate, however, they are still in need of a home. Our findings supported our initial prediction that there would be a relationship between dog owners high in Agreeableness and dogs adopted from a *Rescue or Shelter*. The personality factor Agreeableness, relates to traits such as trustfulness and respect and care for others' feelings (John & Srivastava, 1999; Hendriks et al., 1999). Agreeable female dog owners likely have sympathy for dogs in these locations and want to help the dogs by adopting them. Bir et al. (2017) cited a study which examined dog owner's rationales for choosing an obtainment location. This study found that dog owners who acquired a dog from a shelter reported it was because they wanted to help the dogs. In our study, female dog owners who got their dog from a *Rescue or Shelter* also indicated on the Likert scale that they chose their dog based off his/her personality. These dog owners were high in Agreeableness and likely wanted to help the dogs, which may be why these owners valued the dog's personality rather than other factors, such as dog breed. It is important to note that the majority of the dog owners in this study got their dog from a *Rescue or Shelter* ($n = 241$). Adopting a dog has come to be

perceived as the most ethical way to obtain a dog (Bir et al., 2017). Additionally, past research has found that women are more likely to adopt dogs from rescues and shelters than men (Reese et al., 2017). Being that our analysis did not include men, this could also be an explanation as to why so many dogs were obtained through a *Rescue or Shelter*.

Conscientiousness

Our results revealed that female dog owners who obtained their dog from a *Breeder* had significantly higher scores of Conscientiousness than female dog owners that got their dog from a *Rescue or Shelter* and *Informally*. The difference in Conscientiousness scores for dog owners that got their dog from a *Breeder* and from a *Pet Store or Online* reached marginal significance ($p = .056$). This may have occurred due to the small sample size of dog owners in the *Pet Store or Online* category ($n = 25$) as compared to the large sample size of dog owners who obtained their dog from a *Breeder* ($n = 94$). If provided a larger sample size for the *Pet Store or Online* category, we predict we would have observed a significant difference. Our results partially support our initial hypothesis, because there was only observed to be a relationship between high scores of Conscientiousness and dogs obtained from a breeder; there was not a relationship between high scores of Conscientiousness and dogs obtained from a pet store. Female dog owners who got their dog from a *Breeder* also indicated on the Likert scale that they chose their dog specifically because of the dog's breed. Individuals high in Conscientiousness like to follow a plan and are goal directed (Hendriks et al., 1999). Thus, individuals who actively seek a dog breeder usually have the advantage of acquiring a predictable dog in terms of the breed's genetics, breed's appearance, and the breed's overall temperament. This aligns with Conscientious individuals' tendencies to make premediated decisions and obligations, such as taking on the responsibility of caring for a dog. A study cited by Holland (2019) examined dog

owners reasoning for choosing where to acquire their dog and found that those who did not adopt from a shelter stated it was because they wanted a purebred dog and did not believe that a shelter would offer purebreds. This corresponds with our finding that Conscientious female dog owners were most likely to get their dog from a *Breeder* and strongly suggests that Conscientious dog owners go to a breeder in search of a specific breed.

Extraversion, Imagination/Intellect, Neuroticism

We did not find a significant difference between female dog owners personality scores for Extraversion, Imagination/Intellect, Neuroticism and dog owners' method of dog obtainment. However, the highest mean scores for Extraversion were from dog owners who obtained their dog from a *Breeder* and *Pet Store or Online*. This trend follows our initial hypothesis that dog owners high in Extraversion would acquire a dog from a breeder or pet store. However, the differences in Extraversion scores were not significant, so there is not support for this hypothesis. Although, the *Pet Store or Online* category had a small sample size ($n = 25$). If the sample size for this group was larger, we may have found that dog owners that got their dog from a *Pet Store or Online* would have had significantly higher Extraversion scores than other methods of obtainment. Future studies should collect more data from dog owners who utilized these methods of dog obtainment to see if there is a relationship between high scores of Extraversion and dog owners that got their dog from a *Pet Store or Online*.

Our results indicated that female dog owners highest in Imagination/Intellect got their dog from a *Rescue or Shelter*. As stated previously, dog owners who were highest in Imagination/Intellect were less likely to return shelter dogs after adoption than dog owners high in Extraversion (Walker, 2014). Although this finding relates to our initial hypothesis, Imagination/Intellect scores were not significantly higher than other methods of obtainment and

therefore cannot provide sufficient support for our initial hypothesis that there would be a relationship between high scores of Imagination/Intellect and dogs obtained from a rescue or shelter.

Female dog owners who were highest in Neuroticism obtained their dog from a *Pet Store or Online*, although this relationship was not significant. Kortschal et al. (2009) found that dog owners high in Neuroticism were more attached to their dog and relied on their dog for emotional social support; whereas those who scored higher in Extraversion (men scored significantly higher than women), saw their dog mainly as a companion for shared activities. Since there were not significant differences in Neuroticism scores and dog obtainment locations, highly Neurotic women may not have a preference of a dog obtainment method. It is possible that they view support from their dog to be more valuable than where their dog comes from.

Likert Scale Responses

Why Dog Owners Chose Their Method of Obtainment

Female dog owners who got their dog from a *Pet Store or Online* and *Informally* were significantly more likely to agree it was the easiest option for them, compared to those that got their dog from a *Breeder* and *Rescue or Shelter*. Dogs obtained from a *Pet Store or Online* may have been obtained by complete chance. The owner could have been browsing a store or a website and came upon a dog they liked, which they then decided to purchase. In this case, it may have been an easy option for the dog owner. Dogs obtained *Informally* were likely not sought out, hence they were obtained through informal means. The means of which the dog owner obtained the dog may have been an easy option for the dog owner, influencing their decision to get the dog. Dog owners who got their dog from a *Breeder* may not have agreed with this statement because breeders generally require a large financial obligation. According to the

Bloomberg Business magazine (2011), puppies purchased at a breeder generally range from \$500 to \$1,000 for a purebred puppy and an additional 25% to 50% more for hybrid puppies. Bir et al. (2018) found that dog owners believe dogs can be bred in an ethical and responsible way. However, dog owners may struggle to find a breeder in their area that they consider to be “ethical” and/or offer the breed they want, making this method of obtainment difficult as compared to other options. Dog owners who got their dog from a *Rescue or Shelter* may not have agreed with this statement because these obtainment methods come with a financial burden, although the price of a dog from a rescue or shelter usually is low and sometimes even free; much less than purchasing a dog from a breeder (The Humane Society, n.d.). Furthermore, rescues and shelters have increased the requirements for dog owners to adopt a dog to ensure that the dog is placed in a supportive home. As cited in Holland (2019), a study investigated American’s barriers when adopting a dog; one barrier being that the adoption requirements involve lengthy applications and deterred dog owners because they viewed the process as being too involved and complicated, thus, they decided to get their dog elsewhere with less restrictions.

Participants who obtained their dog *Informally* were most likely to agree on the Likert scale that they chose their obtainment location based on financial reasons; this difference between responses was significant. Some examples of *Informal* obtainment were the participant found their dog, or their dog was given to them from a family or friend. The situation of which the dog was obtained informally varied from participant to participant, although it is likely the informal opportunities provided little to no financial burden; this is probably why dog owners agreed their method of the obtainment was financially suitable.

Participants who obtained their dog from a *Breeder* were most likely to agree on the Likert scale that they chose their obtainment location because it was the only way to get the

breed they were looking for. Dog owners who got their dog from a *Breeder* agreed with this statement significantly more than dog owners who got their dog *Informally* and at a *Pet Store or Online*. Although, *Breeder*, *Pet Store or Online*, and *Informal* all agreed with this statement significantly more than dog owners who got their dog from a *Rescue or Shelter*. Breeders, pet stores, and online sites are predictable in the way that they offer specific dog breeds. Dogs obtained *Informally* varied from situation to situation, but it is possible the informal circumstance provided the dog owner with an opportunity to obtain a breed they preferred. One example being their friends dog had puppies and the dog owner liked the breed of the puppies. The *Rescue or Shelter* category was less likely to indicate they chose their method of obtainment for the purpose of a dog breed. Most dog owners who go to a rescue or shelter must have minimal or no preference for a dog breed. This corresponds with our finding that Agreeable dog owners generally go to rescues and shelters for the purpose of “saving” a dog, not because they wanted to obtain a specific dog breed.

Female dog owners who obtained their dog *Informally*, from a *Pet Store or Online*, and at a *Rescue or Shelter* were most likely to indicate on the Likert scale that they chose their obtainment location by chance because their particular dog was there. These dog owners were significantly more likely to agree with this statement as compared to dog owners that got their dog from a *Breeder*. Our results from the Mini-IPIP found that dog owners who got their dog from a *Rescue or Shelter* were highest in Agreeableness. Therefore, they likely did not have a specific dog in mind when they went to their obtainment location and primarily had the intention of adopting a homeless dog. Dog owners who obtained their dog from a *Pet Store or Online* may have agreed with this statement because they were experiencing cognitive dissonance, defined as the psychological stress of conflicting motives (Festinger, 1957). As stated previously, dogs

obtained from pet stores and online generally originate from puppy mills. Dog owners may feel cognitive dissonance because they know the origin of dogs at pet stores and/or online. It is possible they agreed that they obtained their dog “by chance” as a way of justifying their reason for utilizing this method of obtainment. On the other hand, it is possible the dog owner was uninformed of the origin of dogs from pet stores and online and were just browsing when they came across a dog they wanted. Dog owners who got their dog from a *Breeder* were less likely to indicate their method of obtainment was driven by “chance.” This supports our finding that Conscientious dog owners are most likely to go to a breeder; these dog owners do not stumble upon a breeder, but rather, intentionally seek out a breeder for a specific dog breed.

Why Dog Owners Chose Their Dog

Female dog owners who indicated on the Likert scale that they chose their dog because he/she was cute, were more likely to get their dog from a *Pet Store or Online* and from a *Rescue or Shelter*; these dog owners were significantly more likely to agree with this statement than dog owners that got their dog *Informally* or from a *Breeder*. Dog cuteness has previously been found to be a strong predictor of relationship quality between a dog and its owner; Thorn et al. (2015) termed this phenomenon the “Canine Cuteness Effect.” Cuteness is a perceived concept which varies from person to person (Thorn et al., 2015). This can explain why female dog owners chose a dog because of his/her “cuteness,” because cuteness reflects the relationship quality between a dog and dog owner. Dog owners who got their dog *Informally* may have been pure coincidence and they did not choose the dog, which could be why they did not agree with this statement. We predict dog owners who got their dog from a *Breeder* did not denote this as a reason for choosing their dog, because they saw dog breed as a more important reason for choosing their dog.

Female dog owners who got their dog from a *Breeder* were significantly more likely to agree that they chose their dog because he/she was the breed they wanted, rather than dog owners that got their dog from a *Pet Store or Online, Rescue or Shelter, and Informally*. However, dog owners that obtained their dog *Informally* and from a *Pet Store or Online* agreed with this statement significantly more than dog owners who got their dog from a *Rescue or Shelter*. Studies have found that dog owners' desire for a specific dog breed is influenced by others (Bir et al., 2018). Popular movies containing dogs have been linked to spikes of specific dog breeds for the prime reason that the breed is viewed as fashionable (Ghirlanda et al., 2104). By going to a breeder, pet store, or looking for a dog online, dog owners have the ability to search for a specific dog breed that they want. Dog owners who got their dog *Informally*, may have taken in the dog because it was a breed they were looking for. Dog owners who got their dog from a *Rescue or Shelter* consistently appear to not have much preference over dog breed, as compared to dog owners that utilized a different method of obtainment.

Participants who obtained their dog from a *Rescue or Shelter* were significantly more likely to indicate they chose their dog based on personality than dog owners who got their dog *Informally*. Even though dog appearance has been consistently found to be a predictor of dog acquisition, Thorn et al. (2015) notes that dog owners judge their dog to be cuter than those unfamiliar to their dog. Dog owners high in Agreeableness were most likely to get their dog from a *Rescue or Shelter* and it is probably because they wanted to help the dog. These dog owners do not seem to put much emphasis on dog breed, but they may find their dog to be cuter if they know the dog well and like the dog's personality. Dog owners who got their dog *Informally* may not have had a choice over which dog they obtained being that it was situational; the dog's

personality must have not been a major factor when deciding to take the dog in, whereas other factors (e.g., helping the dog, the dogs breed) could have been more important to the dog owner.

Dog owners who obtained their dog from a *Breeder* were significantly more likely to agree that they chose their dog because he/she was smart, than dog owners who got their dog from a *Rescue or Shelter* and *Informally*. Our results indicated that dog owners high in Conscientiousness go to a breeder to search for a specific dog breed. Choosing a dog specifically because the dog owner perceives him/her as smart, may relate to the perceived overall intelligence that is associated with a dog's breed. The *Pet Store or Online* category did not have significant differences in this question. This could, again, relate to the small sample size of this group. If there had been more participants in this category, we may have seen dog owners agree with this statement more, since dog owners that went to this location also agreed that they chose their dog based on its breed.

Suggestions for Rescues & Shelters

Our study demonstrated that Conscientious individuals gravitate towards a breeder for the purposes of finding a specific breed, so rescues and shelters should advertise when they have purebred and popular hybrid dog breeds available. Online photos with good quality, taken outdoors, have the dog maintaining eye contact with the camera, standing up, and wearing a bandana have been successful tactics to increase dog adoption (Lampe & Witte, 2015). Rescues and shelters should take these photo suggestions into account and can post about purebred and hybrid dogs online or in flyers to attract Conscientious female dog owners.

Another suggestion for rescues and shelters is to implement thorough and reliable dog temperament tests for dogs prior to being adopted. Some shelters already have tests in place, although many report these tests to be unreliable. Patronek & Bradley (2016) examined

diagnostic test evaluations in shelters and found these tests were “not much better than flipping a coin.” This is because the dogs are tested in a stressful and changing environment at the shelter. This type of environment makes it common for dogs to have a false positive for problematic behaviors because the dog would likely not act the same way in a stable and calm environment. Dogs that receive a false positive for problematic behaviors can be labeled as an aggressive dog and face the possibility of euthanasia for the reason of being an “unadoptable” dog. Patronek & Bradley (2016) argue that testing in this type of environment is setting the dogs up for failure. They suggest these tests be done in a more “normal” environment, such as walking, playing with other dogs, and socializing with people. Future research should examine temperament tests in these environments to determine if the test can be more reliable. Then, rescues and shelters can advertise these tests to potential adopters, especially those who are highly Conscientious and are concerned about shelter dogs’ temperament. If rescues and shelters can implement a reliable and thorough temperament test, it should help to increase the number of dogs given the chance to be adopted, and will show possible adopters that a dog has been tested to be safe with people, other dogs, etc. This in turn can assist in attracting Conscientious female dog owners because they can feel as though they are adopting a “predictable” dog.

Furthermore, it is worth noting that many purebred dogs have a loss of genetic diversity and suffer from many health problems, such as hip dysplasia and elbow dysplasia due to inbreeding (Leroy, 2011; Indrebo, 2008). Bellumori et al. (2013) examined 34 genetic disorders among mixed and purebred dogs and found no difference in the expression of 13 genetic disorders but found purebred dogs to be more likely to express 10 genetic disorders, whereas mixed dogs were more likely to have expression of only 1 genetic disorder. Rescues and shelters should advertise

the health benefits of obtaining a mixed breed because many Conscientious dog owners might be uninformed of the health benefits of mixed dogs.

Lastly, Conscientious people may have chosen a breeder to obtain their dog because they wanted to find a popular breed that is considered “trendy.” For example, the French bulldog is among one of the most popular dog breeds due to their appearance and temperament (Alt, 2020). A suggestion for rescues and shelters is they can target Conscientious individuals with this motive by creating fancy “boutiques” to sell purebred and hybrid rescue/shelter dogs at a higher price. This will allow them to fulfill their interest in obtaining a “fancy” dog in a respectable location, with the benefit of knowing they helped save a dog’s life by giving it a home.

Our results indicated that female dog owners high in Agreeableness were most likely to utilize rescues and shelters to obtain a dog, so less agreeable women should be targeted by rescues and shelters. Women who score low on Agreeableness tend to lack consideration for others and believe they are better than others (Hendriks et al., 1999). Therefore, it is not likely that rescues and shelters will have success with producing sympathy-based ads to attract non-Agreeable adopters. It is more likely that non-Agreeable people will respond to ads that highlight how a dog would fit their lifestyle and all the benefits a dog can provide them (e.g., happiness, companionship, safety).

The findings from this study, in addition to prior research, have made it clear that females are more willing to participate in studies that relate to their dog and are more likely to consider themselves the primary caregiver for their dog. Using this information, we suggest that rescues and shelters should directly target female dog owners in general. Some examples being, using diction to make the dog seem “cute;” such as writing a post from the dog’s point of view, dressing the dog up in an outfit, or describing the dog as a “baby.”

In summary, rescues and shelters should diversify their methods when trying to attract potential dog adopters. This will help by enticing people of all personality traits and will increase the chance that dogs will be adopted.

Limitations

A limitation of this study was that there were not enough men or participants that declared themselves as “Other” gender to be included in our analysis. Our analysis also only included a limited selection of ethnicities. Future studies should explore ways to make these type of online surveys appeal to all genders and ethnicities. We chose to limit our analysis to only those who had full control over where their dog was obtained. This eliminated many young participants, making the mean participant age increase. Our study was primarily distributed via social media, having both benefits and disadvantages- we were able to reach many people, of various ages, throughout many states in the U.S. in a short period of time. Despite this, participants were largely concentrated in Florida (where the study was conducted) and many participants had a personal connection to the researchers, which may have influenced the results. Being that our sample size was so large, we hope this helped to eliminate these biases.

Future Directions

We will be analyzing additional questions posed to the participants that were not included in this study. These questions include information about their beliefs on dog ownership and ethics. We hope to conduct an additional research study similar to this one, except it will involve cat owners rather than dog owners. We would like to collect data and conduct an analysis on both genders of cat owners, not just female cat owners. We also would like to look at more specific aspects of personality, as well as exploring how individual differences among people come into account when choosing a dog.

Conclusion

We have shown that female dog owner personality traits relate to where female dog owners obtained their dog. Females high in Agreeableness were most likely to get their dog from a *Rescue or Shelter* and females high in Conscientiousness were most likely to get their dog from a *Breeder*. Our results give us a better general understanding of personality traits and have shown that Agreeableness and Conscientiousness are predictors of how we choose and care for non-human animals. Additionally, our findings are helpful for future dog owners because it can make them aware of how their personality may affect their decision making when searching for a canine companion. We hope this information will encourage dog owners to explore all their options for dog obtainment. The findings of this study are also helpful for rescues and shelters because it provides a basis of which groups of women to target to increase adoption: less Agreeable women and highly Conscientious women.

**APPENDIX A: 20-ITEM MINI-INTERNATIONAL PERSONALITY ITEM
POOL SCALE**

Please read each statement below regarding personality and select how much you agree or disagree with each statement.

Table 2: 20-Item Mini-IPIP Scale and Scoring Guide

| Mini-IPIP Statement | Factor Analyzed | Keyed (+/-) |
|---|------------------------|--------------------|
| 1. I am the life of the party. | Extraversion | + |
| 2. I sympathize with others' feelings. | Agreeableness | + |
| 3. I get chores done right away. | Conscientiousness | + |
| 4. I have frequent mood swings. | Neuroticism | + |
| 5. I have a vivid imagination. | Intellect/Imagination | + |
| 6. I don't talk a lot. | Extraversion | - |
| 7. I am not really interested in other people's problems. | Agreeableness | - |
| 8. I often forget to put things back in their proper place. | Conscientiousness | - |
| 9. I am relaxed most of the time. | Neuroticism | - |
| 10. I am not interested in abstract ideas. | Intellect/Imagination | - |
| 11. I talk to a lot of different people at parties. | Extraversion | + |
| 12. I feel others' emotions. | Agreeableness | + |
| 13. I like order. | Conscientiousness | + |

| | | |
|---|-----------------------|---|
| 14. I get upset easily. | Neuroticism | + |
| 15. I have difficulty understanding abstract ideas. | Intellect/Imagination | - |
| 16. I keep in the background. | Extraversion | - |
| 17. I am not really interested in others. | Agreeableness | - |
| 18. I make a mess of things. | Conscientiousness | - |
| 19. I seldom feel blue. | Neuroticism | - |
| 20. I do not have a good imagination. | Intellect/Imagination | - |

APPENDIX B: DOG OWNERSHIP AND EXPERIENCE QUESTIONS

Please answer the following questions regarding dog ownership.

How many dogs do you currently own?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5 or more

**If you currently own multiple dogs, please answer the following questions using information for the dog you obtained first.*

What breed is your dog?

Note: only answer the following questions with information for one dog. Read disclosure directly above

- a. Purebred (please specify which breed- *free text response*)
- b. Hybrid (please specify which breed- *free text response*)
- c. Mixed breed (please specify which breeds- *free text response*)
- d. Unknown breed

What is the sex of your dog?

- a. Female
- b. Male

What is your dog's name?

**free text response*

Is your dog spayed or neutered?

- a. Yes

- b. No

If yes to the previous question, was your dog spayed or neutered before you obtained your dog?

- a. Yes
- b. No
- c. N/A

How old is your dog?

**free text response*

Where did you obtain your dog from?

- a. Breeder
- b. Pet store
- c. Rescue
- d. Shelter
- e. Friend/family member
- f. Other (please specify- *free text response*)

Why did you obtain your dog from that location? (Please answer in a full sentence)

**free text response*

How much control did you have over the location your dog was obtained from?

- a. Full control, I chose where my dog was obtained from
- b. Somewhat control, I helped with the decision of where my dog was obtained from
- c. No control, someone else chose where my dog was obtained from

Why did you choose your dog specifically? (Please answer in a full sentence)

**free text response*

What other locations would you have considered before getting your dog from his/her obtainment location?

- a. Breeder
- b. Pet store
- c. Rescue
- d. Shelter
- e. Family/friend
- f. Other (please specify- *free text response*)

How old were you when you first lived with a dog?

**free text response*

How many dogs have you lived with throughout your life?

**This includes dogs you have not directly cared for (i.e., a roommate's dog)*

**free text response*

How many years have you lived with dogs?

**free text response*

APPENDIX C: LIKERT SCALE QUESTIONS

How much do you agree with the following statements?

I am the person who cares for my dog the most in my household.

I am primarily responsible for the training of my dog in my household.

I pay for most, if not all, expenses for my dog in my household.

I obtained my dog from its location because it was the easiest option for me.

I obtained my dog from its location because it was most financially suitable for me.

I obtained my dog from its location because it was the only way to get the breed I was looking for.

I obtained my dog from its location by chance because he/she was the perfect fit for me.

I chose my dog because he/she was cute.

I chose my dog because he/she was smart.

I chose my dog because he/she was the breed I wanted.

I chose my dog because I liked his/her personality.

I believe in using physical means to discipline my dog.

I believe in using vocal instruction to discipline my dog.

I believe in using a combination of physical means and vocal instruction to discipline my dog.

I would never surrender a dog after obtaining it.

I would surrender a dog after obtaining it.

I would surrender a dog after obtaining it, depending on the circumstances.

I believe that dog behavior is a direct result of training by the owner.

I believe that dog behavior is a direct result of the dog's personality.

I see my dog as an animal, nothing more.

I see my dog as a family member.

I talk to my dog.

I believe my dog understands my feelings and emotions.

My dog sleeps with me.

My dog has a human-like name.

I give my dog presents.

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