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Assessing the Role Personality Plays in Puppy Raisers and Guide Dogs in Training

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Assessing the Role Personality Plays in Puppy Raisers and Guide Dogs in Training

by

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Abstract

Several factors affect how guide dogs in training fare during the period before the dogs are paired with their future handler. One factor that has not been researched in the past is personality compatibility between the puppy raiser and the dog in training. For the needs of the visually impaired community to be met, guide dog schools need to efficiently train and match dogs to handlers without the dogs failing. To help reduce the number of dogs that fail guide dog training, this study suggests the assessment and comparison of personality for the dog and potential puppy raisers to better pair the team. A survey was sent via social media and email to several different guide dog schools for puppy raisers to complete. The Big Five Personality Assessment (Mezquita et al., 2019) and the Dog Personality Questionnaire were used to assess five factors of personality for both humans and canines respectively. Then training-specific satisfaction, stress, and positive and negative emotions questions were included in the survey to monitor progress of the training period. A total of 105 responses were viewed for this project. Preliminary results have shown that dogs high in responsiveness are the least stressful dogs to train. Raisers high in neuroticism are the most stressed and least satisfied with the experience. Pairing people and dogs based on their responses to personality questionnaires could lead to a higher passing rate from guide dog schools.

Keywords: service animal, service dog, guide dog, puppy raiser, personality, Big Five Inventory, blind, visually impaired, aggression, responsive, dog training

Dedication

To all the puppy raisers who dedicate their time to raising guide dogs, your time and commitment will change lives for good.

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First and foremost, I would like to thank Dr. Keefer for believing in my ability to create something worthwhile. For teaching me statistics during each meeting and for adopting all the animal psychology studies, I am eternally grateful for you. To the Honors College, thank you for giving me the opportunity to expand my knowledge and grow as a student. To my family and friends, thank you for being understanding when I talked about guide dogs during all of our social interactions. And lastly, thank you to Gallant Hearts Guide Dog Center, who sparked my love for guide dogs.

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List of Abbreviations

APA	American Psychological Association
BFI	Big Five Inventory
DPQ	Dog Personality Questionnaire
MBTI	Myers-Briggs Type Indicator

Assessing the Role Personality Plays in Puppy Raisers and Guide Dogs in Training

Currently, more than 10 million blind people are estimated to live in America (American Foundation of the Blind, 2020). With the growing geriatric population, this number will continue to rise (Centers for Disease Control and Prevention, 2006). Blind people often struggle to navigate new areas and large crowds, and without proper guidance, they may withdraw from society.

However, these challenges can effectively be met with the assistance of a guide dog. Around 10,000 blind Americans use guide dogs to aid in their mobility today (Guiding Eyes, 2020). However, guide dogs help with more than safe navigation; they are companions for their handlers, giving them a new sense of confidence.

Unfortunately, individuals who want to use a guide dog may have to wait for months or even years to get their guide dog. The wait time depends on the school from which they choose to get a dog, how many puppy raisers were willing and available to train, and how many dogs passed training at a given time (e.g., Ennik et al., 2006).

These delays stem from the fact that guide dogs require up to two years of training to be prepared for this important role. For a dog to become a guide, they must go through rigorous training that starts around 8 weeks old. At this age, the puppies are placed in puppy raiser homes for training (e.g., Batt et al., 2008). Puppy raisers can be individuals or families of all ethnicities, backgrounds, and social statuses. Even some college campuses have puppy raising clubs in which college age students take on the responsibility of socializing these dogs in a busy university setting. Puppy raisers are responsible for basic obedience and socialization of prospective guide dogs. They are allowed and encouraged to take the puppy to many social

settings, including grocery stores, shopping malls, and class, if applicable to the raiser. They often support financially by paying for the dog's food and vet bills, while some schools cover all costs of the puppy. The puppy raiser period lasts anywhere from 14-24 months and is a critical time frame for the dogs' development and training to one day lead a blind person in their home and throughout society.

Even though puppies and their raisers train for up to two years, not all dogs are equipped to handle the important job of being a guide (Goddard & Beilharz, 1982/83). In some cases, dogs and their raisers thrive in during this training phase, while others do not. The first contributor that will affect the dogs' success is puppy raisers. Prior to the research for this paper, there is limited published research evaluating personality of the puppy raiser affecting guide dog puppies in training.

The present study offers an initial investigation of the extent to which the personalities of puppy raisers and their trainees might impact the training process. We recruited a targeted sample of puppy raisers and conducted a series of correlational analyses to determine the most important factors in establishing an effective puppy raiser period.

Personality in Puppy Raisers

Although there have historically been many models of human personality, the current study employs the Five Factor Model of personality (Goldberg, 1990; McCrae & Costa, 2009). This taxonomy offers a way for researchers to examine the overarching characteristics of personality rather than involving the innumerable facets that make each person unique. This model has been widely employed within and outside of personality psychology while being concise and easy to understand (John & Srivastava, 1999).

This personality model proposes that five basic traits generally capture basic aspects of human personality. These traits are Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Goldberg, 1990). Openness to Experience represents one's level of curiosity, preference for fantasy, appreciation of art, and a willingness to try new things. Conscientiousness describes one's preference for planning, impulse control, and affinity for following the rules and regulations set in place in all areas of their lives. Extraversion reflects one's preference to be involved in the social crowd, excitement seeking, and comfort in social settings. Agreeableness represents variation in prosocial behavior, including trustworthiness and altruism (e.g., Hofstee et al., 1997). Neuroticism reflects negative emotionality, including measures of the frequency and severity of anxiety, fear, and depression.

The Big Five was chosen for this project because it is a five dimensional model which allows researchers to see where individual scores lie on a continuum. With its concise and simple results, Big Five assessments can be completed and scored with ease of delivery and data collection.

The Big Five allows researchers to see where a person's personality falls in each of the five facets (Shiota, Keltner, & John, 2006). This allows researchers to predict future behavior and easily compare subjects to other people (John, Donahue, & Kentle, 1991). For example, the Big Five is highly predictive of psychopathology, including a wide range of personality and mood disorder (Kotov et al., 2010). Additionally, the Big Five has been shown to predict a number of practically important outcomes, including alcohol and tobacco consumption, student GPA, religiosity, and exercise behavior (e.g., Paunonen & Ashton, 2001).

These differences in personality could also affect the training of guide dogs in several ways. For example, those high in Openness would be willing to try new things whereas a person

high in Neuroticism would be more likely to worry about what negative possibilities could happen in a new situation (Goldberg, 1992). We turn to specific hypotheses at the end of the introduction.

However, just as trainers bring their personality to the puppy raiser relationship, dogs have their own personalities as well. Next we introduce this topic and describe our strategy for studying dog personality in the current project.

Personality in Dogs

Dog personality has been studied since the beginning of the 20th century when Pavlov dedicated his time to studying that basic facets of canine personality (Pavlov, 1906). By creating a program to identify dog personality, he created the basis for what would become animal personality psychology today. This movement helps connect psychological research to everyday intuitions about dogs: Dog training centers such as guide dog schools and pet owners have long since believed that dog personality was important (Goddard & Beilharz, 1984a, 1984b, 1986).

Dog personality has been researched with several different goals in mind. Shelter organizations have utilized dog personality assessments to educate and prepare future owners for the type of pet they are adopting. Kennel club conformation utilizes personality traits such as “courageous”, “merry”, “stubborn”, and “proud” to describe characteristics of certain breed standards, rather than individual dogs (e.g., Hart et al., 1983; Hart & Miller, 1985). Breeders have created age appropriate personality tests to assess which of their puppies should go to sport homes versus pet homes. Families that need a dog to perform a job such as herding or protection test dogs at multiple intervals to see if the dog may be able to complete the demanding task (e.g., Hart & Hart, 1985; Hart, 1995).

Dog personality is vital especially in working animals because it influences the way animals respond to their surroundings. This field of research is important to consider for many of these types of organizations, especially guide dog schools because the dogs have such an important task.

Although there is agreement that dog personality is important, research after Pavlov has seen considerable debate about what dimensions best describe dog personality. For this paper, I will employ the framework offered in the Dog Personality Questionnaire (DPQ; Jones, 2009) which was created to help service animal groups and animal shelters assess dog personality easily and efficiently. The measure consists of five facets of dog personality: Fearfulness, Aggression towards People, Aggression towards Animals, Activity/Excitability, and Responsiveness to Training. These factors are examined because they offer complementary and descriptive facets of dog personality. Fearfulness relates to the dog's likelihood to show stress symptoms in novel situations. For example, if the dog cowered meeting a new dog or hid from unfamiliar people entering the home, he would be high in fearfulness. Aggression towards Animals and People are separated because dogs may exhibit one or the other or both. The manifestation of aggression, particularly towards people is often defensive or fear related. Aggression towards Animals however, is different in that prey drive and dominance are not based off fear. Activity and Excitability describe the dog's playfulness and engagement with their environment. This facet also measures the dogs' companionship and activity levels. Responsiveness measures the dogs' ability to respond to training and demonstrate learning. It also measures the dog's unruliness. An unruly dog would demonstrate out of control behavior such as stealing food from the table or refusing to come when called.

The other major approach to studying dog personality is applying the Five Factor Model described above to dogs (e.g., Gosling et al., 2003). This approach is limited by the fact that it assumes that human personality traits cleanly translate into other species, something that has been challenged in the literature (Gosling, 2008). In contrast, the DPQ framework that we selected was developed specifically for dogs.

The Current Study

The goal of the current study of puppy raisers was to build on past research showing that both human and dog personality have important practical implications. If guide dog schools can test dog personality before pairing with a puppy raiser, they are more likely to be able to accurately pair dogs with personalities that compliment those of their human counterpart. The hope of this study is that research presented could lead to more dogs passing to become guide dogs rather than being career changed.

Because neurotic individuals tend to experience more negative emotions and stress (e.g., Suls & Martin, 2005), I expected that neurotic trainers would find training less satisfying and more stressful. Because agreeable people are cooperative and trustful (e.g. John & Srivastava, 1999) and because agreeableness is characterized by greater empathy, we expect that they will be less stressed about training and more satisfied. Each personality trait can be used as a guideline to predict behaviors that can affect training a guide dog.

In terms of dog personality, we had somewhat simpler predictions: The DPQ has a trait specifically reflecting responsiveness to training. We anticipated that more responsive dogs would generally yield more satisfied and less stressed puppy raisers. Additionally, we expected that dog traits like aggression and excitability might adversely affect the relationship between the puppy raiser and the target dog by making the training process more difficult.

Method

Participants

A sample of 105 puppy raisers (96.19% female; 89.42% Caucasian; 0.95% Black/African American; 2.86% Hispanic/ Latino; 3.81% Asian/Pacific Islander; 2.86% Multi-racial) were recruited from several guide dog training facilities in the United States through an online convenience sample (sampling procedure described below). Participants represented ages ranging from 12 to 73. ($M= 38.38$, $SD= 17.78$). Of these, 50.96% reported being the primary trainer and 49.04% reported not being the only raiser involved in this puppy raising experience. Because trainers were asked about their dogs, the sample includes 105 dogs (*Canis familiaris*) involved in the study as well (50.47% male). The ages of the dogs ranged from three to 20 months. The majority of the dogs were Labrador Retrievers. Other breeds included Golden Retrievers, English Cream Golden Retrievers, German Shepherd Dogs, Standard Poodles, Doberman Pinchers and mixes of Golden Retriever and Labrador Retrievers and one cross between Curly Coated Retriever and Labrador Retriever (Table 1).

Materials

Trainer Personality

A subset of items from the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991) was used to measure puppy raiser personality. This questionnaire consists of 44 items to assess the Big Five traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. Participants rate their agreement with each item along a 5-point scales (1 = *Strongly disagree*; 5 = *Strongly agree*). .

The BFI includes items that all start with the prompt “I see myself as someone who is...” Due to an oversight, 11 items were missing from the questionnaire, but the remaining items

provided sufficient coverage of the Big Five. Specifically, we included six items assessing trait Extraversion (e.g., “Is talkative,” “Is full of energy”), six items measuring Agreeableness (e.g., “Is helpful and unselfish with others,” “Likes to cooperate with others”), seven items for Conscientiousness (e.g., “Does a thorough job,” “Makes plans and follows through with them”), six for Neuroticism (e.g., “Gets nervous easily,” “Can be moody”), and seven for Openness (e.g., “Is original, comes up with new ideas,” “Is curious about many different things”). All measures showed adequate reliability for the current sample and descriptive statistics are provided in Table 2.

Dog Personality

The Dog Personality Questionnaire (DPQ; Jones, 2009; full scale is available at <https://gosling.psy.utexas.edu/scales-weve-developed/dog-personality-questionnaire-dpq/>) was used to assess the personality of the dogs being raised at this time. The DPQ was created to help groups, such as rescue groups and service dog training schools, to efficiently and effectively assess dog personality. The DPQ utilized the same 5-point scale for each item as the BFI.

The DPQ includes items assessing five overarching traits reflecting variation in dog personality. These include 20 items assessing four sub-factors of Fearfulness (e.g., “Dog is anxious”; “Dog behaves submissively (e.g., rolls over, avoids eye contact, licks lips) when greeting other dogs”), 10 items measuring two facets reflecting Responsiveness to Training (e.g., “Dog is attentive to owner’s actions and words”; “When off leash, dog comes immediately when called”), 20 items with four sub-factors measuring Activity/Excitability (e.g., “Dog is boisterous”; “Dog seeks constant activity”), 10 items measuring two facets of Aggression toward People (e.g., “Dog behaves aggressively towards unfamiliar people”; “Dog behaves aggressively when a person (e.g., visitor, delivery person) approaches the house or yard”), and 15 items

measuring three separate facets of Aggression toward Animals (e.g., “Dog behaves aggressively toward dogs”; “Dog likes to chase squirrels, birds, or other small animals”). To match analysis for human personality, we averaged subfactors to create a 5-trait profile for each dog. All measures showed adequate reliability for the current sample and descriptive statistics are provided in Table 2.

Emotions During Training Experience

Items from the PANAS (Clark & Watson, 1999) were used to assess emotions during training. The PANAS is a brief measure of positive and negative emotions. Participants rated how much they felt (1 = Not at all; 5 = Very much) a series of six positive and six negative emotions. The negative emotions included: “angry,” “alone,” “embarrassed,” “angry at self,” “sluggish,” and “exhausted.” The positive emotions for this scale were “calm,” “happy,” “proud,” “enthusiastic,” “excited,” and “determined.” Positive and negative emotion scores were created by averaging each group (Table 2).

Stress During Training Experience

To assess stress about the training experience, participants completed an ad hoc measure constructed for the current study. The measure included:

1. *When you give the dog a command, how likely is the dog to obey?*
2. *When you correct the dog, how likely is it to stop a behavior?*
3. *When the dog is disobedient in public, how likely are you to leave the situation?*
4. *In your experience, how likely are people to comment that you are doing an admirable thing?*

5. *Are you likely to experience issues juggling time to complete your daily routine as well as take the dog out?*
6. *Are your family or friends likely to complain about the time you spend working with the dog?*

Participants rated their response along a 5-point scale (1 = *Very unlikely*; 5 = *Very likely*) and responses were averaged.

Satisfaction about Training Experience

To assess how confident the raiser was in certain aspects of the experience, a few questions about confidence were added to the questionnaire. Participants rated their response along a 5-point scale (1 = *Very unlikely*; 5 = *Very likely*) and responses were averaged.

These questions included:

1. *When you go out in public, how confident are you answering questions about the dog?*
2. *When you go out in public, do you feel confident correcting the dog?*
3. *When you are at home, how confident are you that the dog will not get into trouble regardless of if you are there or not?*

Procedure

Participants who raised puppies at multiple sites were given the survey via their field director or through social media. University puppy raiser groups were contacted by direct message via Instagram. The survey was also posted in a closed group specifically for puppy raisers on Facebook. Specific area representatives were contacted via email to send the survey to their group. One associate trainer from a guide dog center was asked to send the survey out via email to the puppy raisers under their advisement. One Assistant Executive Director from

another school was contacted to send the surveys out via email to the field specialists for that particular school.

Participants completed an online Qualtrics survey and were encouraged to respond truthfully as the survey was anonymous. All participants were asked to provide informed consent (acknowledged by continuing past the first page) and were informed that they could close the browser at any time without penalty. There was no monetary incentive for participants to complete the survey, nor was there any risk in doing so. Participants were given transparent information about the study's aim.

The survey was structured in a fixed order to ensure consistency across samples. First, participants answered demographic questions including their gender, age, and ethnicity. Then they were asked to document the age, gender, and breed of the dog they were raising. They were asked if they were the only person involved in raising this dog, or if they were co-raising this dog with another person. Then, they answered how long they had been raising this dog. Two general questions about training followed: "How long is the dog left in the crate per day? (Not including sleep at night)" and "How many times per week do you take the dog out to a social setting?" Next, they completed the Big Five Inventory questionnaire followed by questions on their personal experience. In the questions on their personal experience, participants were prompted with the question, "*When thinking about the puppy raiser period, I feel...*" and rated their emotions with the PANAS noted above. Then, they rated their stress, confidence, and satisfaction levels during their raising experience. Finally, participants completed the Dog Personality Questionnaire. In closing, they were given the opportunity to include any other information that seemed relevant to the study. Then participants were debriefed and the link closed.

Statistical Analyses

First, we tested bivariate correlations between the trainer personality, dog personality, and training experience items to test for initial associations between our scales. To clarify the associations between personality and training experience, we then created a series of linear regression models predicting each variable of training experience by composite personality scores. First, we regressed each dimension onto the full profile of trainer personality scores. Then we computed parallel models with the dog personality traits.

Results

Correlational Analysis.

Initial correlation analysis indicated a number of important relationships between our variables of interest. We observed strong associations between human and dog personality, and both personality profiles were strongly associated with training outcomes (Table 2 for all correlations).

Starting with the associations between puppy raiser and dog personality, we noted that puppy raisers high in conscientiousness and high in agreeableness rated their dogs as less fearful and aggressive toward other animals. Additionally, highly conscientious puppy raisers also rated their dogs as easier to train. Extraversion was associated only with decreased fearfulness ratings. Finally, neuroticism and openness scores were uncorrelated with ratings of dog personality.

Turning to the associations between raiser's personality and training experience, we observed a number of associations. More agreeable puppy raisers felt more positive emotions and more satisfaction with the raiser period. They reported fewer instances of stress and negative emotions while raising a prospective guide dog. Highly neurotic trainers reported greater stress and negative emotions about the experience, whereas those high in conscientiousness reported the opposite; they had lower levels of stress and negative emotions. More extraverted puppy raisers also reported lower stress, but that was only significant correlation between Extroversion and training experience. Finally, openness showed no significant relationships with our training experience variables.

In addition to these associations with trainer personality, we also observed several strong associations between that experience and dog personality. Those puppy raisers who rated their dogs were high in fearfulness had more stress, less satisfaction, and less positive emotions about

the experience. Both aggressiveness toward people and animals were associated with less satisfaction, fewer positive emotions, more negative emotions, and greater stress during the puppy raiser period. In contrast, dogs that were rated as more responsive to training also tended to produce puppy raiser periods that were more satisfying, less stressful, and generally more positive. Surprisingly, the activity dimension of dog personality was unrelated to training experience.

Trainer Personality

Although bivariate correlations between our variables of interest demonstrated several interesting correlations between trainer personality and experience during training, it is important to consider personality traits in context. Given that personality traits tend to be highly correlated (e.g., Muek, 2010) and were correlated in our sample, we next turned to linear regression models intended to test the unique effect of each personality trait (controlling for other related traits). The parameters for these models are presented in full in Table 2.

Regressing positive emotion scores onto the five dimensions of each person's Big Five profile demonstrated that the more agreeable trainers specifically experienced more positive emotions during the training period. There was also a marginal association between extraversion and positive emotions during training. No other relationships were significant in the full model, suggesting that agreeableness is the primary trait predictor of positive emotions in this context.

Negative emotion scores were then regressed onto the five Big Five traits. Participants who rated high in neuroticism experienced more negative emotions during the training period. Neuroticism was the only trait predictor of negative emotions about the training experience.

Stress and the five dimensions of the participants Big Five profile was then compared using the regression model. There was marginal evidence that puppy raisers who were more

conscientious and agreeable reported less stress whereas more open and neurotic puppy raisers felt more stress. No relationships between the Big Five and stress were significant, however.

Satisfaction with the training experience was significantly higher in agreeable trainers when compared to the Big Five dimensions. There was also weak evidence that raisers who were high in openness were more satisfied with their puppy raising experience.

Dog Personality

A similar series of linear regression models was used to show the effect dog personality had on the puppy raiser's experience. These models again provided evidence for a consistent role of a single primary trait, responsiveness.

Responsiveness was the most indicative factor on how the human would feel about training the puppy. Regressing positive emotion onto the five dimensions of the dog's personality showed the more responsive dogs caused more positive emotions in their human trainers. Responsive dogs also caused less stress in the raisers, fewer negative emotions, and trainers with responsive dogs felt more satisfaction about the experience.

Other dog personality traits were generally less impactful. Dogs that were aggressive to people caused their trainers to rate having more stress about their training experience. However, interestingly, the regression model demonstrates that the dogs that were aggressive to people did not increase negative emotions about training the dog.

Discussion

The current study evaluates how personality affects guide dog training using correlational and regression analysis. Past research does not pair the experience of training a guide dog with human and dog personality. Data from this study shows puppy raisers view their experiences differently depending on their own personalities and the personality of the dog they are handling.

Specifically, results indicated that both trainer and dog personality may play an important role in shaping the success (or failure) of the training experience. At the trainer level, we observed that puppy raisers high in Neuroticism are more likely to experience stress and find the training experience less fulfilling. These patterns were clear in both the bivariate and regression analyses. Conscientiousness, on the other hand, correlated with lower stress and negative emotions but not greater satisfaction. Openness in humans predicted marginally more stress during the experience. High values of Conscientiousness, Agreeableness, and Extroversion in the raisers were all correlated with more desirable traits in the dogs. These human personality traits were correlated with ease training dogs.

Agreeableness showed evidence of being the most telling factor of the Big Five for puppy raisers. More agreeable trainers tended to be more satisfied and less stressed by the experience. Regression models show those raisers high in Agreeableness were more likely to have more satisfaction and positive emotion and less stress. Similarly, those who were more agreeable had lower ratings of negative emotions; whereas, neurotic trainers rated more instances of negative emotions.

Each dog's personality also influenced perceptions of the training experience. Responsiveness in dogs are the most pertinent predictor on how well the training experience is going. Puppy raisers had more positive emotions when handling dogs high in responsiveness.

If schools would implement a formal prerequisite of requesting raisers to take a personality test before being paired with the guide dog in training, schools could better match humans and animals to improve training. With more effort to match puppy raisers and puppies considering personality compatibility, guide dog schools can graduate more successful handler teams. This research could aid in reducing the number of dogs who fail the guide dog training program due to personality incompatibility.

Limitations and Future Directions.

Limitations in this questionnaire include that personality is assessed using self-report measures via online questionnaires. Self-report scales are limited in that participants can be unaware of their behavior or may answer in a socially desirable way. Although this survey was anonymous, participants in this study also may have felt embarrassed or unwilling to admit that their current puppy was struggling to behave so it is possible that these measures are biased. A more accurate method would be to rely on behavioral observation or some more objective metric.

Other issues of doing this study online are notable. Additionally, completing questionnaires online introduces the limitation that distractions could alter the accuracy of responses (Peer, Brandimarte, Sama, & Acquisti, 2017). A number of the responses of this study were not able to be included due to participants leaving large portions unanswered. In total, 105 responses were completed and suitable to analyze in this research.

Limitations of the human personality assessment exist as well: to ensure the questionnaire can be completed in a short time frame and data can be gathered with ease, the BFI is purposefully short in its length and breadth. Additionally, an ad hoc subset measure of the BFI was used because several items were left out when programming the Qualtrics questionnaire.

Although the measure used in the study represented all five facets of personality adequately, it did not encompass every question on the full BFI. Future researchers could use personality questionnaires other than the BFI such as the Enneagram or Myers-Briggs Type Indicator (MBTI) to assess a different approach to evaluate personality (e.g., Arthur, 2008 & Wagner, 1980). These alternatives might bring to light different aspects of personality that the BFI does not assess. Using a different personality assessment would simply provide a different framework of reference. Perry (1996) suggests that pairing two personality assessments would enrich the understanding of individual personality psychology. Additionally, because the Enneagram and MBTI are gathering support from individuals on social media platforms, many people know their “types.” By participants entering their type rather than taking the entire test, the questionnaire would take less time.

The Dog Personality Questionnaire was created to help multiple organizations choose dogs for the jobs they would hold based on their personality. The DPQ was chosen for this research project because it was the most comprehensive assessment of dog personality at the time. Other measures such as VIDOPET could lead to a different set of results for researchers to consider (Virányi, 2018).

In 2020, an American multinational technology company, International Business Machines Corporation (IBM) partnered with Guiding Eyes for the Blind on a project similar to this research. IBM used their cloud data to pair a guide dog in training, Jackson, with his trainer. Using Guiding Eyes for the Blind’s recorded data, IBM created a program they named IBM Watson Personality and Natural Language Processing to match trainer profiles to the dogs in training at the time. Implementing personality data of the dogs and people into a system such as IBM Watson is expected to increase success rates for Guiding Eyes by 20%.

I predict that if guide dog schools could pair dogs that are more responsive with trainers who are higher in neuroticism or lower in agreeableness, we could reduce the stress and negative emotions these raisers feel. From there, schools should place dogs that are higher in the traits that lead to stress, such as aggression and activity, with people who are less likely to feel stress when their dogs misbehaves. Understanding the implications of cohesive pairings will make the training experience more satisfactory and the dogs more likely to become a guide dog. For a future study, one could implement the Big Five and DPQ data found in this study into a program such as the IBM Watson to further enrich the data that guide dog schools have in their toolbox to pair handlers to guide dogs.

Conclusion

The study investigated personality in guide dog puppy raisers and the puppies themselves. Guide dogs take roughly two years to train and many people contribute in guide dog success. Prior to the research for this paper, there was limited published research evaluating personality of the puppy raiser affecting guide dog puppies in training.

The goal of this project was to help reduce the number of dogs that fail guide dog training programs. To do so, I evaluated the relationship between trainer personality, dog personality and the puppy raiser experience in hopes to more appropriately pair puppies and raisers from the start of the training experience. However, service dog groups, animal shelters, and families hoping to add a dog to their family could use this research to their benefit. Because of the depth of training and expectations of these dogs, they may be more responsive and less aggressive than dogs in general, but the patterns we observed likely hold in other samples as well.

Ultimately, the main issue at hand is that the needs of the visually impaired community are not currently being met, and there is not a simple solution (American Foundation for the Blind, 2020). As more and more people need guide dogs to help them live independent lives, guide dog schools are trying to implement changes to meet these needs. Guide dog schools could positively further this research by applying it to their puppy raising programs to preemptively pair dogs and raisers for the greatest chance of success. Schools could test their litters of puppies using the DPQ and offer the BFI questionnaire to potential puppy raisers before dogs and humans are paired. My hope is that doing so would better pair dogs to people so that not only is that experience more positive for both, but also that more dogs would pass to become a guide dog.

Limiting relational issues between the raiser and the dog should lead to more success. To build off this research, schools could utilize this research and apply it in a large scale case study to see the results of the dogs that were paired before placement and compare to past success rates of previous guide dog raising pairs who were not given the assessments.

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Table 1.*Number of breeds of dogs in training*

Breed	<i>N</i>
Labrador Retriever	62
Golden Retriever	15
Standard Poodle	9
Labrador/Golden Retriever Cross	8
German Shepherd Dog	5
English Cream Golden Retriever	3
Doberman Pincher	2
Curly Coated/Labrador Cross	1

Table 2
Correlations and descriptive statistics for all variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. O	-	.36***	.37***	.16	-.40***	-.15	.10	-.04	-.08	.03	.09	-.18†	-.03	.20†
2. C		-	.24*	.35***	-.42***	-.28**	-.04	-.17	-.24*	.22*	.18†	-.26*	-.31**	.14
3. E			-	.09	-.31**	-.21*	.20†	-.12	-.09	.11	.19†	-.06	-.22*	.03
4. A				-	-.36***	-.24*	.001	-.11	-.31**	.19†	.31**	-.27*	-.31**	.32**
5. N					-	.13	.17	.04	.14	-.10	-.05	.38***	.29**	-.10
6. Fearfulness						-	-.004	.36***	.30**	-.45***	-.26*	.20†	.27*	-.23*
7. Activity							-	-.01	.25*	-.09	-.02	.19†	.004	-.17
8. Aggression to People								-	.52***	-.39***	-.27*	.26*	.33**	-.21*
9. Aggression to Animals									-	-.56***	-.22*	.40***	.23*	-.40***
10. Responsiveness										-	.35***	-.46***	-.54***	.48***
11. Positive Emotions											-	-.38***	-.40***	.51***
12. Negative Emotions												-	.49***	-.58***
13. Stress													-	-.33**
14. Satisfaction														-

M(SD)	3.49 (0.63)	3.91 (0.57)	3.32 (0.87)	3.92 (0.60)	2.50 (0.71)	1.73 (0.49)	3.96 (0.45)	1.19 (0.33)	1.63 (0.55)	4.18 (0.54)	4.15 (0.80)	1.54 (0.51)	2.03 (0.59)	2.68 (0.28) .67
α	.71	.73	.84	.66	.76	.78	.59	.60	.69	.61	.91	.70	.50	

Note. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3*Regression models predicting training experience on the basis of trainer personality.*

	<i>b</i> (<i>SE</i>)	β	<i>t</i>	<i>p</i>
Pos. Emotion				
O	.02 (.15)	.01	0.12	.90
C	.12 (.16)	.09	0.75	.46
E	.17 (.10)	.19	1.69	.09
A	.44 (.15)	.32	2.92	.004
N	.18 (.13)	.16	1.36	.18
Intercept	.85 (1.09)	0	0.78	.44
Neg. Emotion				
O	-.02 (.10)	-.03	0.26	.80
C	-.09 (.10)	-.11	0.93	.36
E	.06 (.06)	.10	0.89	.38
A	-.11 (.09)	-.12	1.15	.25
N	.22 (.08)	.31	2.66	.009
Intercept	1.68 (.68)	0	2.48	.01
Stress				
O	.19 (.11)	.20	1.73	.09
C	-.21 (.12)	-.21	1.85	.06
E	-.11 (.07)	-.17	1.57	.12
A	-.19 (.11)	-.19	1.75	.08
N	.13 (.10)	.16	1.34	.19
Intercept	3.00 (.77)	0	3.89	< .001
Satisfaction				
O	.11 (.06)	.23	1.94	.06
C	-.01 (.06)	-.02	0.19	.85
E	-.02 (.04)	-.05	0.42	.67
A	.16 (.05)	.33	2.98	.004
N	.03 (.05)	.08	0.67	.50
Intercept	1.69 (.39)	0	4.34	<.001

Table 4*Regression models predicting training experience on the basis of dog personality.*

	<i>b</i> (<i>SE</i>)	β	<i>t</i>	<i>p</i>
Pos. Emotion				
Fearfulness	-.15 (.19)	-.09	0.81	.42
Aggression to People	-.39 (.30)	-.16	1.29	.20
Aggression to Animals	.07 (.20)	.05	0.34	.73
Activity	-.01 (.19)	-.009	.09	.93
Responsiveness	.41 (.19)	.28	2.12	.04
Intercept	3.12 (1.33)	0	2.34	.02
Neg. Emotion				
Fearfulness	-.02 (.11)	-.02	.20	.85
Aggression to People	.07 (.18)	.05	.40	.69
Aggression to Animals	.15 (.12)	.16	1.27	.21
Activity	.14 (.12)	.12	1.23	.22
Responsiveness	-.33 (.11)	-.35	2.89	.005
Intercept	2.07 (.79)	0	2.61	.01
Stress				
Fearfulness	-.01 (.12)	-.008	.08	.94
Aggression to People	.39 (.20)	.22	1.98	.05
Aggression to Animals	-.21 (.13)	-.19	1.59	.12
Activity	.01 (.13)	.007	.08	.94
Responsiveness	-.61 (.12)	-.57	4.90	<.001
Intercept	4.43 (.87)	0	5.10	<.001
Satisfaction				
Fearfulness	-.01 (.06)	-.02	.16	.88
Aggression to People	.03 (.10)	.03	0.30	.76
Aggression to Animals	-.09 (.07)	-.18	1.38	.17
Activity	-.06 (.06)	-.10	.98	.33
Responsiveness	.20 (.06)	.38	3.18	.002
Intercept	2.21 (.44)	0	5.00	<.001

Appendix

Office of
Research Integrity



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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-19-238

PROJECT TITLE: Evaluating the Effect of Puppy Raiser Personality on Training Success

SCHOOL/PROGRAM: Users loaded with unmatched Organization affiliation.,

School of Psychology, Psychology

RESEARCHER(S): Cassidy Wood, Lucas Keefer, Riley Macgregor,

IRB COMMITTEE ACTION: Exempt

CATEGORY: Exempt

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

APPROVED STARTING: May 8, 2019

A handwritten signature in black ink that reads "Donald Sacco". The signature is written in a cursive style with a prominent initial "D".

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

Big Five Inventory

<https://www.ocf.berkeley.edu/~johnlab/bfi.htm>

The Dog Personality Questionnaire – SHORT FORM (45 items)

<https://gosling.psy.utexas.edu/wp-content/uploads/2014/10/DPQ-forms-and-scoring-keys.pdf>

Demographics: Age, gender, employment

Emotional/Affective Evaluations (modified from PANAS)

Please think about what you have been doing and experiencing during the puppy raiser period. For each item, select a number that indicates how you feel about your experience so far.

When thinking about the puppy raiser period with this dog I feel... (1 – Not at all; 5 – Very much)

Angry
Alone
Embarrassed
Angry at self
Sluggish
Exhausted
Calm
Happy
Proud
Enthusiastic
Excited
Determined

When you give the dog a command, how likely is the dog to obey?

1 – Very unlikely; 7 – Very likely

When you correct the dog, how likely is it to stop a behavior?

1 – Very unlikely; 7 – Very likely

Relationship Satisfaction (Hendrick, 1986):

1) In general, how satisfied are you with the puppy raiser period?

1 – Not at all; 5 – Very much

2) How good is this puppy raiser period compared to most?

1 – Not at all; 5 – Very much

3) How often do you wish you hadn't gotten this dog?

1 – Not at all; 5 – Very much

4) To what extent has this dog met your expectations?

1 – Not at all; 5 – Very much

5) How often do you experience problems in the puppy raiser period?

1 – Not at all; 5 – Very much

Debriefing
Study Debriefing

Thank you for participating in this study!

For this project, we were interested in identifying which personality traits people preferred for prospective pets based on their own personality profile. Past research has shown that people and their current pets often share similar personality traits and we were curious to see how that may extend to people choosing a pet to adopt. We hope this research will be able to inform animal shelters and other adoption agencies on ways to optimize pet adoption rates.

We assure you that your responses are completely confidential. Your name will never appear in any resulting publication and you will remain anonymous. Any results will be reported in a manner as to not reveal any of the participants' identities.

If you have any questions, please don't hesitate to contact either one of us. For more information on this topic, you can check out this article:

Turcsan, Range, Viranyi, Miklosi, & Kubinyi (2012). Birds of a feather flock together? Perceived personality matching in owner-dog dyads. *Applied Animal Behavior Science*, 140, 154–160.

Thanks again!

Cassidy Wood (Cassidy.wood@usm.edu)