Standardizing the Assessment of Service Dogs; A Literature Review of the CBARQ Behavioral Survey

Authors: Sophia Cuchetti, Chelsea Jesmer
Faculty Advisor: Dr. Corbett

INTRODUCTION

Service dogs have a vital role in society, allowing increased independence and emotional comfort for those with chronic illnesses. Matching clients with service dogs occurs after years of training, with uncompromising behavior qualifications. The probability of a dog meeting these standards is unlikely "Failure rates of 50%-70% are typical," (Goddard and Beilharz, 1986).
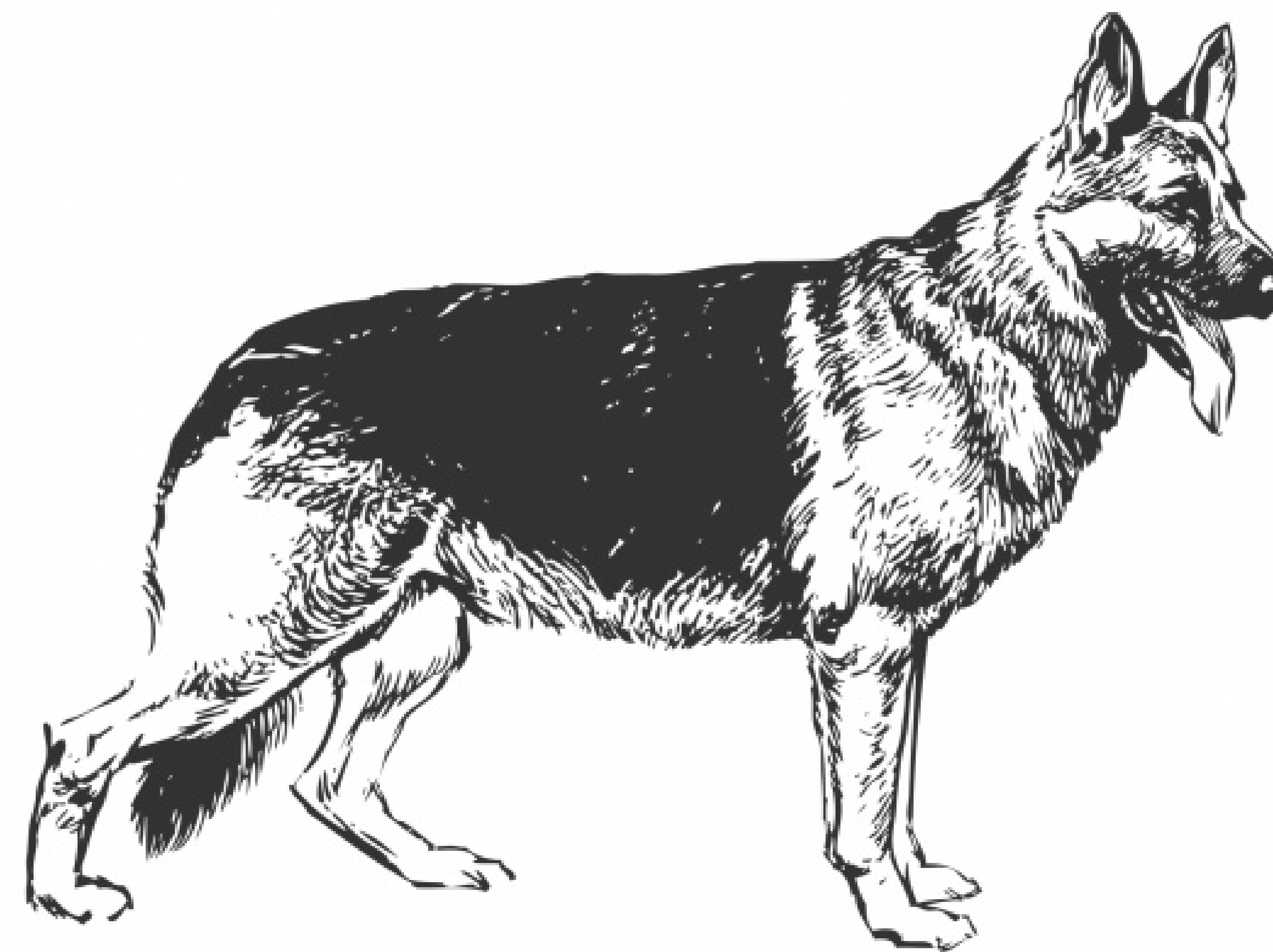
OBJECTIVES

To remedy this, D.I. Duffy and J.A. Surpell conducted a study to determine whether the C-BARQ (Canine Behavioral Assessment and Research Questionnaire,) could accurately predict a dog's success. C-BARQ addresses an animals' mannerisms and focuses on trainability, reactivity, and aggression. "The ability to predict a puppy's future working success is important for working dog programs to maximize the number of dogs placed in service and allocate resources to puppies most likely to succeed," (Lazarowski, L., Rogers, B., Krichbaum, S., Haney, P., et al.) A standardization of effective early assessment methods may remedy high failure rates, saving organizations time and money.

METHODS

With the involvement of the University of Pennsylvania School of Veterinary Medicine, as well as five guide and service dog schools, 9,150 puppies were placed in the homes of volunteers. At approximately eight weeks old C-BARQ evaluation begins. Puppies are subsequently handed back to each organization at fifteen months; the start of their formal service dog training.

After their instruction, dogs successfully completing training and dogs used for breeding are marked as "successful." Dogs with behavioral issues are marked as "unsuccessful." "Unsuccessful" dogs include puppies never entering the formal training stage. Behavioral issues were surveyed relative to the questionnaire subscale. This comprised thirty-six mannerisms thought to be undesirable in the dog's future work.

RESULTS

- 27 of 36 CBARQ subscales discriminated the pass-fail rate at the 95% confidence level.

- 21 of these align with both 6- and 12-month evaluations

- High scores for energy level, hyperactivity, and pulling on leash significantly related to reduced training success

- 6-month evaluation, owner-related aggression found to be highest indicator; 4:1 odds of discharge compared to non-aggressive dogs

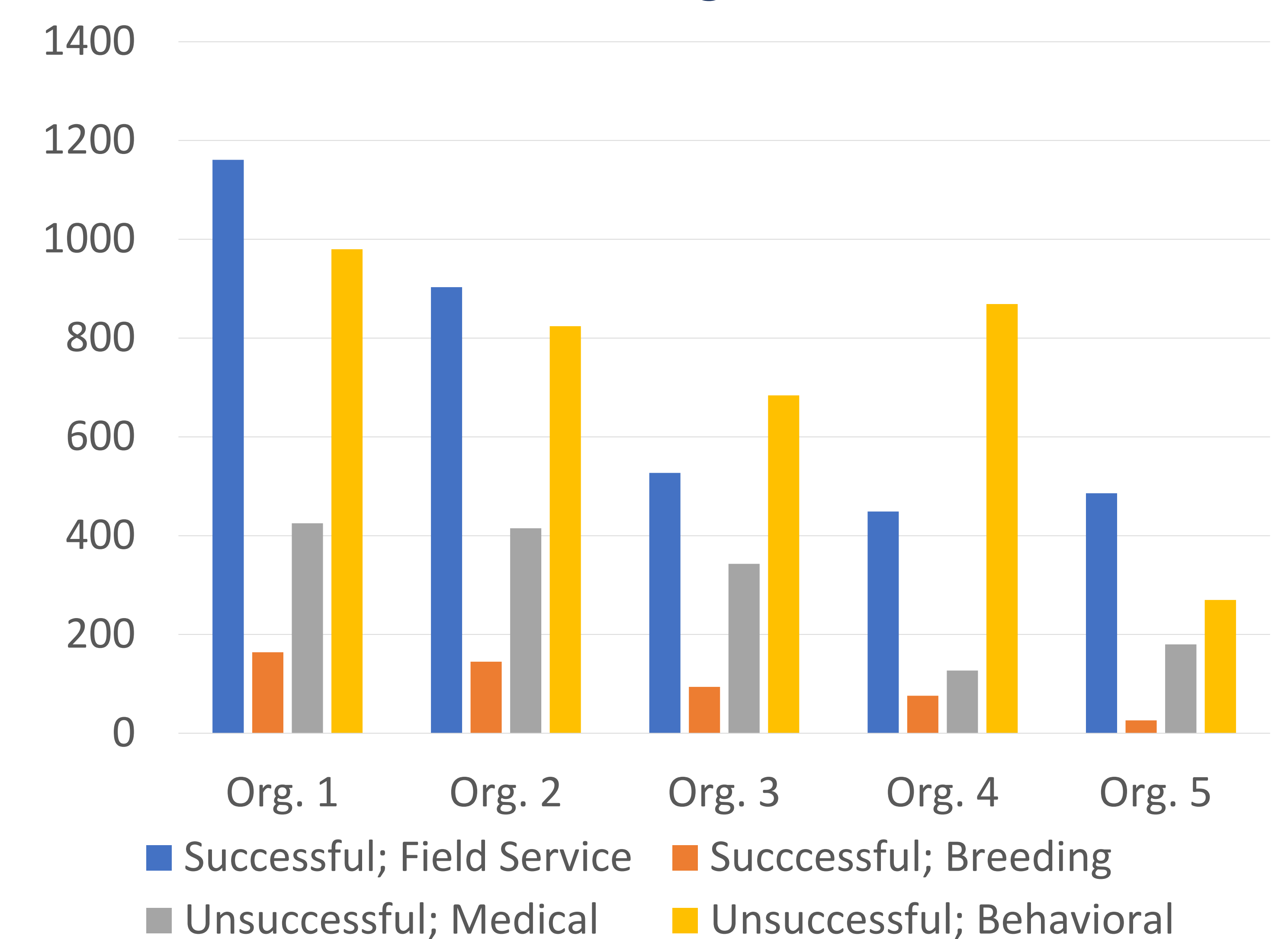- 12-month evaluations found leash pulling to be biggest indicator; odds of failure 2-6 times fold

Success Rates Using Logistic Regression Model			
6 months evaluation	N		P-Value
Org. 1		783	0.0007
Org. 2		907	0.006
Org. 3		777	0.136
Org. 4		540	0.032
Org. 5		503	0.018
12 months evaluation			
Org. 1		1445	0.00001
Org. 2		1048	0.00001
Org. 3		758	0.375
Org. 4		910	0.00001
Org. 5		527	

Data from L. Duffy, A. Serpell, 2012

CONCLUSIONS

The C-BARQ assessment's main goal is to create an efficient vetting system before formal instruction. Currently there is no standardized behavioral assessment for working dogs. Most service dog organizations are non-profit; funds must be allocated only to high-yielding animals. C-BARQ carries the potential to distinguish unsuccessful dogs before training.

C-BARQ Training Outcomes

Legend: Successful; Field Service, Successful; Breeding, Unsuccessful; Medical, Unsuccessful; Behavioral

Data from L. Duffy, A. Serpell, 2012

FUTURE WORK

- Conducting more studies to test subscale validity

- Possibly altering subscales to include and determine most accurate indicators

- Focusing on specific dog breeds to determine why certain breeds show better performance for established tasks

References

Duffy, D. L., & Surpell, J. A. (2012, April). *Predictive validity of a method for evaluating temperament in young guide and service dogs*. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S016815911200 0433?fr=RR-2&ref=pdf_download&rr=7a44896ffcd6a21d

Lazarowski, L., Rogers, B., Krichbaum, S., Haney, P., Smith, J. G., & Waggoner, P. (2021, April 1). *Validation of a behavior test for predicting puppies' suitability as Detection Dogs*. MDPI. From, https://www.mdpi.com/2076-2615/11/4/993