

The effect of enrichment on the welfare and performance of kennelled working dogs



Mia Cobb[#], Alan Lill & Pauleen Bennett

Anthrozoology Research Group, Animal Welfare Science Centre

Monash University, Melbourne, Australia

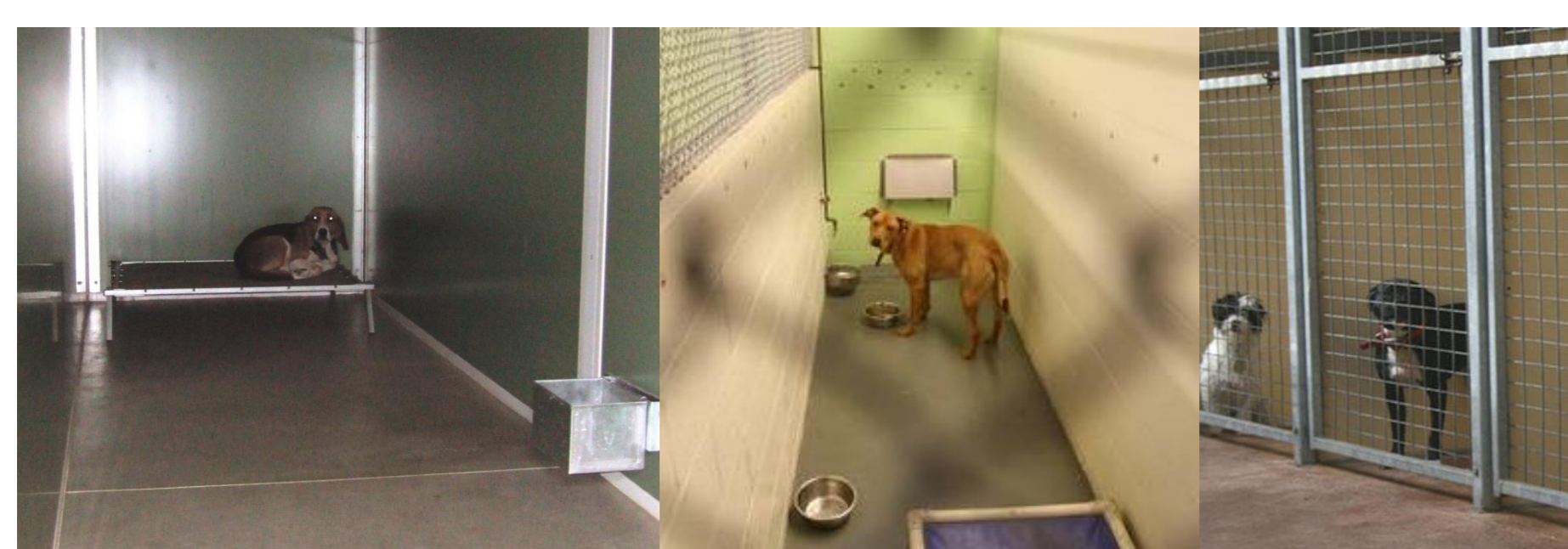
#mia.cobb@monash.edu

Introduction

Domestic dogs play significant roles in the lives of many people around the world today as companion animals. They also perform valuable duties in many societies as assistance, detector and security aids as well as providing entertainment in racing and performance industries.



A large proportion of these dogs are housed in kennel environments for medium to long term periods that may range from weeks to years. Kennel facilities are typically designed for ease of maintaining hygiene and housing numerous individuals safely and securely in a limited amount of space. Even when facilities are fairly new and kept clean and hygienic, they tend to be sterile and unable to fulfil dogs' behavioural needs¹.



Certain behaviours observed in kennelled dogs have been shown to indicate chronic stress in dogs and can help to identify environments where welfare could be improved². Growing awareness of the implications of animal use and housing on welfare has led to rising public expectations and lower levels of tolerance for housing conditions not perceived to be adequate. In recent years this has led to calls for improved provision for the welfare of animals housed in captivity, including the use of enrichment programs for dogs housed in kennels. Industry has responded to published research with the implementation of composite enrichment programs, combining multiple elements of enrichment intuitively and uncritically without due consideration for the possible effects of combining elements. Composite programs containing elements of visual, auditory, olfactory, environmental and social enrichment actually risk overstimulating dogs³.

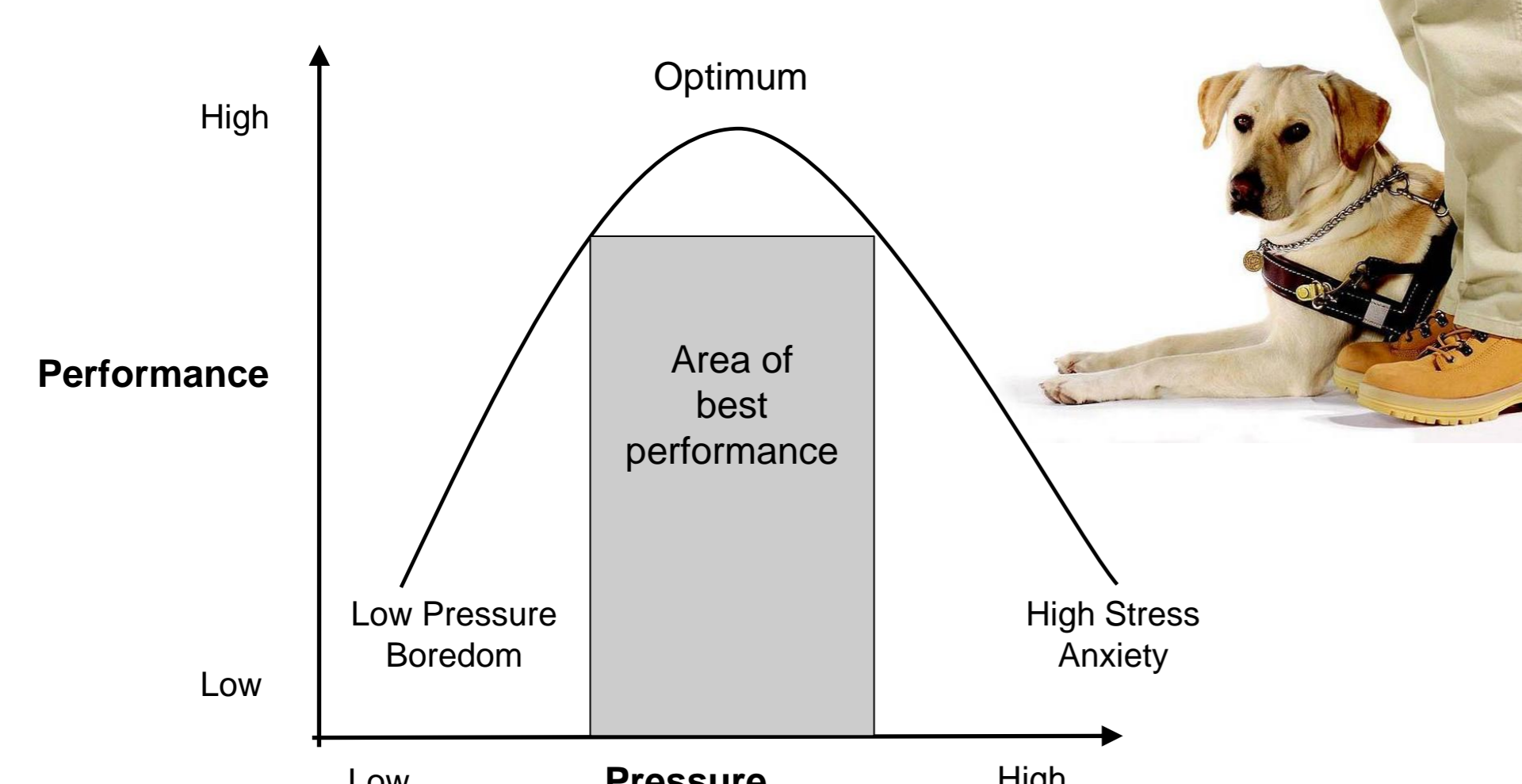


Fig. 1. Proposed inverted-U relationship between pressure and performance

This could increase levels of stress in the kennel environment and reduce, rather than improve, levels of canine welfare. This is potentially problematic, not only to the welfare of the animals, but also in terms of their ability to provide the desired service for humans. If too much stimulation leads to increased stress (Fig.1.), potential working dogs may fail the training and accreditation programs for substance detection, guide or assistance work, increasing wastage.

The aim of this study was to determine whether a composite enrichment program affected the welfare and performance of kennelled working dogs.

Methods

There were 3 experimental groups:

Home: 10 dogs remained in puppy raising home environments;

Control: 32 dogs entered the Guide Dogs Victoria Training Kennel facility under normal in-house protocols;

Enrichment: 32 dogs entered the same facility and were provided with a composite enrichment program.

All dogs were of similar age (14-16months) and from the same population of Guide Dogs Victoria stock. Dogs were randomly assigned to groups. All dogs were initially sampled in their Puppy Raising homes.



Salivary and blood samples were collected from this total of 74 dogs to determine salivary cortisol, salivary Immunoglobulin A (IgA) and blood neutrophil: lymphocyte ratios. Kennel behaviour was recorded, but will not be reported on here.

Preliminary Results

Preliminary cortisol results have indicated:

- no significant effect of time in the HOME group
- a significant ($p < 0.05$) response to entering kennels in the CONTROL and ENRICHMENT groups
- a significant difference to the groups entering kennels compared to the HOME group
- significant difference between CONTROL and ENRICHMENT groups at Day+1; Day+3 and Day+15

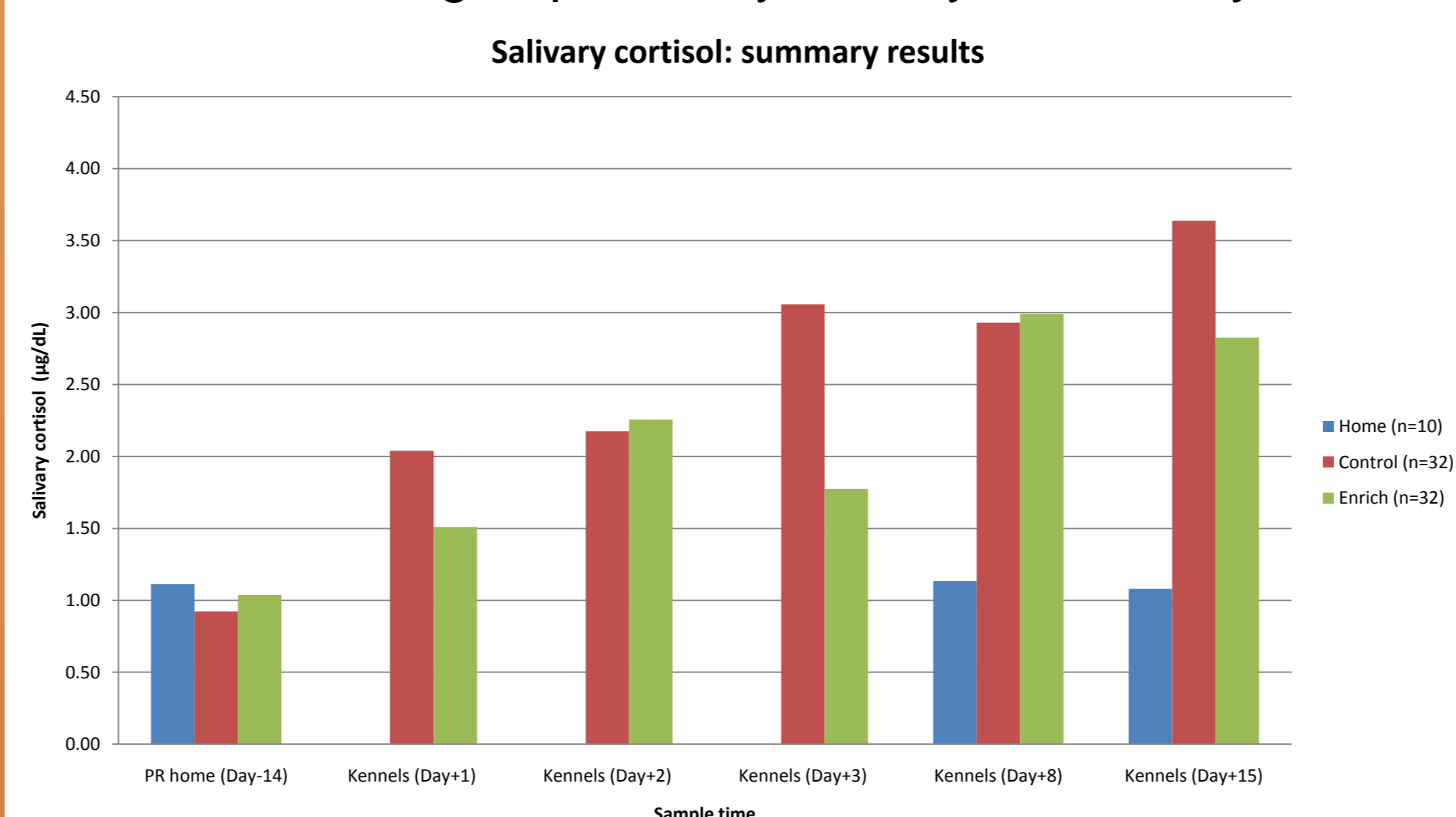


Fig. 2. Summary results for salivary cortisol

Preliminary IgA results have indicated:

- no significant effect of time in the HOME group (not shown in Fig.3.)
- a significant ($p < 0.05$) response to entering kennels in the CONTROL and ENRICHMENT groups
- a significant difference in the groups entering kennels compared to the HOME group
- a significant difference between CONTROL and ENRICHMENT groups at Day+8

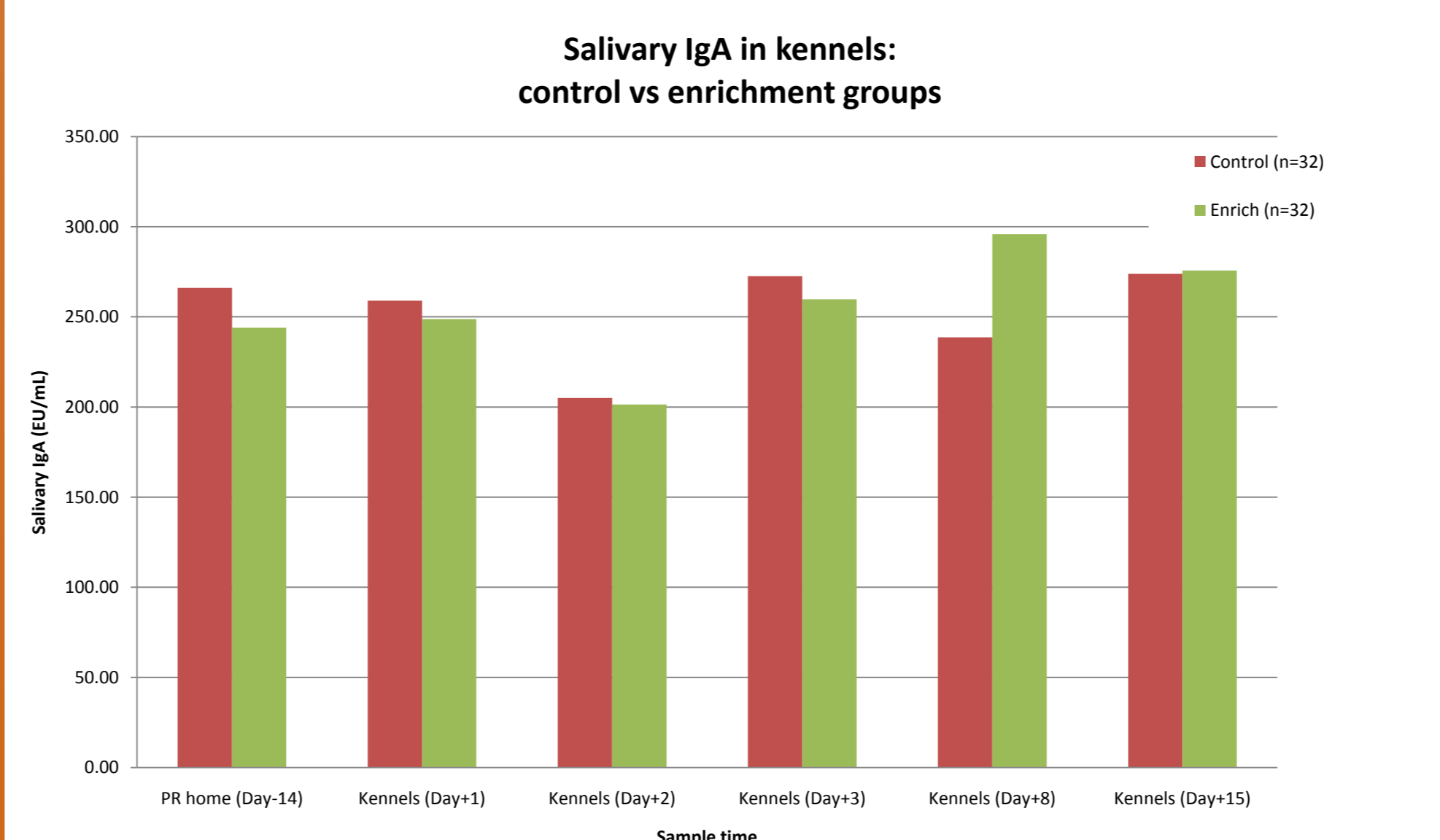


Fig. 3. Summary results for salivary IgA

Discussion

These preliminary findings form part of a larger research project that aims to examine:

- Attitudes and perceptions regarding the welfare of dogs housed in kennels and the importance of enrichment
- The physiological and behavioural response of young Guide dogs entering a kennel facility after a 12 month period in a home environment
- Whether composite enrichment programs have any effect on the welfare and performance of working dogs housed in a kennel facility.



Results have so far shown that:

- The welfare of dogs is very important to 95% of people⁴
- Attitudes can vary between general public, dog trainers and primary care givers (ie. kennel attendants)
- Dogs respond differently to entering kennels: some demonstrate an acute stress response (stress then recover) while others demonstrate a chronic stress response (gradually increasing over time)
- Multiple physiological measures are important in assessing the welfare of dogs in kennels
- The provision of a composite enrichment program does not increase the stress response of dogs housed in a kennel facility
- There is no significant difference in the rate of dogs passing or failing assessment for Guide Dog training between dogs provided with enrichment or not.



Further analysis of the results (including behavioural data) is still required and will be completed in the coming year.

Conclusion

Physiological samples were collected from a total of 74 dogs. Both kennelled groups showed a marked increase in measures of stress following admission. Physiological measures varied significantly between the two kennelled groups at times, but the differences are complex and difficult to interpret. The results also revealed marked individual variation, suggesting that relationships between welfare, assessment outcomes and provision of enrichment are not straightforward. Careful monitoring of individual dogs may be required to optimise working dog training outcomes and welfare objectives.



References

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