

University of Prince Edward Island

Faculty of Veterinary Medicine
Summary of Dissertation

Submitted in Partial Fulfilment
of the Requirements for the

DEGREE OF MASTER OF SCIENCE

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Effects of changing veterinary handling techniques on canine behaviour and physiology

The aim of this thesis was to determine if changes in veterinary handling techniques—with an emphasis on collaborative, adaptive care—affected the level of distress experienced by canine patients during veterinary visits. Twenty-eight dogs were screened via questionnaire and examined 4 times across 8 weeks. All dogs received the same initial treatment. Dogs were randomized into control and intervention groups for visits 2-4. In the intervention group, 14 dogs underwent exam procedures designed to reduce stress and enlist their collaboration. The 14 dogs in the control group received routine care. At each visit, physiological (heart rate, serum cortisol, creatine kinase, and neutrophil/lymphocyte ratio) and behavioural parameters (in-person scores and video analysis) were measured.

No significant differences in physiological parameters between groups across the 4 visits were found; however, the intervention group showed a greater overall decrease in cortisol than did the control group when comparing visit 4 to visit 1 (Wilcoxon Mann–Whitney test: $Z = 1.75$; $p < 0.04$). The composite stress score index based on summed standardized scores for the physiological parameters was significantly different at visit 4 compared to visit 1 for the intervention (paired t-tests: t -value = 2.37; $p = 0.027$) but not control group (t -value = -1.12 ; $p = 0.29$).

At visit 4, intervention group dogs had lower behavioural stress scores when weighed (1-tailed t-test; $t(26) = 2.087$; $p = 0.023$), at the start, and at the end of the physical exam (Start: $\chi^2(1, n = 28) = 5.60$, $p = 0.018$; End: $\chi^2(1, n = 28) = 7.036$, $p = 0.0080$).

The combined data indicate that patient-centered changes during vet visits can have a profound effect on reducing fear and stress in canine patients.

Publications

Effects of Changing Veterinary Handling Techniques on Canine Behaviour and Physiology Part 1: Physiological Measurements. *Animals* 13, 1253. doi:10.3390/ani13071253.

Generalized Anxiety Disorder (GAD) in a teaching laboratory beagle: Presentation, relative contributions, and treatment. *Journal of Veterinary Behavior* 64-65. doi.org/10.1016/j.jveb.2023.05.008

Effects of Changing Veterinary Handling Techniques on Canine Behaviour and Physiology Part 2: Behavioural Measurements. Submitted to *Animal Welfare* July 21, 2023

Presentations

Veterinary Behavior Symposium June 2022: Effects of veterinary handling on canine behaviour and physiology: Must we scare dogs?

Graduate Research Seminar October 2022: Effects of veterinary handling on canine behaviour and physiology: Must we scare dogs?

Veterinary Behavior Symposium June 2023: Effects of changing veterinary handling on canine behaviour and physiology: More on physiological measures and behaviour findings

Biographical Data

Born in Winnipeg, MB

Awards

2022 Zoetis Graduate Student Research Award

VBS 2022 Fear Free Award

2023 G. Murray and Hazel Hagerman Scholarship

VBS 2023 R.K. Anderson Resident Award