

32nd International Society for Anthrozoology Conference



Anthrozoology: The Spectrum of Human-Animal Interactions and Relationships



ISAZ 2023

EDINBURGH, SCOTLAND

June 15-18, 2023



THE UNIVERSITY
of EDINBURGH

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Welcome to ISAZ 2023

We are delighted to welcome you to the 32nd Annual Conference of the International Society for Anthrozoology at The University of Edinburgh. This year's theme is "Anthrozoology: The Spectrum of Human-Animal Interactions and Relationships." We have three internationally renowned keynote speakers: Dr Sandra McCune, Professor Hannah Buchanan-Smith and Dr Anindita Bhadra, and a full program of workshops, oral presentations, symposia, emerging trends presentations, and posters.

We have also organized a full social program, so you can sample Scottish culture and hospitality. You are invited to join our opening wine reception, a 3-course conference meal with Scottish ceilidh dance, and a closing wine reception. There is a meet the ISAZ Fellows event, an early career researcher event, and a bespoke trip to Edinburgh Zoo to see Living Links researchers at work and hear about their world-leading research.

This year we are welcoming over 260 delegates, making this the largest ISAZ annual conference to date. As the first in-person event since 2019 we have endeavored to make this conference a wonderful experience for you, both intellectually and socially.

We hope that you enjoy the conference and welcome to ISAZ 2023!

The ISAZ 2023 Local Organizers



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School of Veterinary
Studies

About the International Society for Anthrozoology

The International Society for Anthrozoology (ISAZ) was formed in 1991 as a supportive organization for the scientific and scholarly study of human-animal interactions. ISAZ is a non-profit, non-political organization with a worldwide, multi-disciplinary membership of students, scholars and interested professionals.

Our mission is to serve the growing community of scholars and scientists working in the field of Anthrozoology (the study of human-animal interactions and relationships) by supporting research, publishing and disseminating new insights and discoveries, and promoting the exchange of knowledge and expertise within the field.

To learn more, please explore our website: www.isaz.net

© International Society for Anthrozoology

Our Journal

Anthrozoös: A Multidisciplinary Journal of the Interactions of People and Other Animals

Official Journal of the International Society for Anthrozoology (ISAZ)

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Anthrozoös is a bi-monthly, peer-reviewed publication whose focus is to report the results of studies, from a wide array of disciplines, on the interactions of people and animals. Academic disciplines represented include anthropology, archaeozoology, art and literature, education, ethology, history, human medicine, psychology, sociology and veterinary medicine.



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Keynote Speakers



Dr. Sandra McCune, VN, BA (Mod), PhD

"How did we get here and where do we want to go?"

Sandra qualified as a registered veterinary nurse in 1983 from the Royal College of Veterinary Surgeons, UK, before completing a degree in zoology from Trinity College, The University of Dublin, Ireland. She has a PhD in animal behaviour and welfare from the University of Cambridge, U.K. She has studied a range of companion animal topics including aspects of temperament, behaviour, cognition and welfare, and Human-Animal Interaction (HAI). Sandra is a Visiting Professor of Human-Animal Interaction at the University of Lincoln in the School of Life Sciences and the School of Psychology. She is the founding director of ANIMAL MATTERS Consultancy Ltd, providing expert input on a wide range of animal issues. She is a trustee for the UK charity, [Society for Companion Animal Studies](#) and a Fellow of the [Annenberg PetSpace Leadership Institute](#). She shares her home with her family including two cats and a dog.



Dr. Anindita Bhadra, PhD

"Living in the human's world – a dog perspective"

Dr. Anindita Bhadra is a behavioural biologist at the Department of Biological Sciences, Indian Institute of Science Education and Research Kolkata. She is engaged in studying the behaviour, ecology and cognitive abilities of dogs using the free-ranging /stray dogs in India as a model system. She is particularly interested in understanding the evolution of the dog-human relationship. Her research group, The Dog Lab, has pioneered research into the behavioural ecology of free-ranging dogs and has firmly established them as a good model system for understanding dog evolution. Dr. Bhadra is the recipient of the INSA young scientist award, SERB women excellence award, IAP young scientist award and the Janaki Ammal National Women Bioscientist award Young category.



Prof. Hannah M. Buchanan-Smith, PhD

"Interactions with our closest living relatives"

Professor Hannah M. Buchanan-Smith established the Behaviour and Evolution Research Group in Psychology at the University of Stirling in Scotland, where she has been working for over 30 years. Given that humans are an inevitable part of the lives of all captive animals, she has been studying the human-animal relationship, and its impact on both human and animal behaviour and wellbeing. She has studied animals in laboratories, zoos and animal shelters, and draws on her field work of South American primates in their natural habitats. Prof. Buchanan-Smith was recently awarded the Primate Society of Great Britain's Osman Hill memorial medal for her contributions to animal welfare.

Keynote: How did we get here and where do we want to go? – [Dr. Sandra McCune](#), VN, BA (Mod), PhD

14:00 – 15:00 Thursday, 15th June, 2023

Location Pentland

Dr. Sandra McCune's ISAZ 2023 keynote talk will draw on her international experience of leading research programmes to provide a synthesis of the history and future of human–animal interaction research. She will also consider the challenges of translating human–animal interaction research evidence into policy and practice to support animals and people.

Keynote: Living in the human's world – a dog perspective – [Dr. Anindita Bhadra](#), PhD

11:00 – 12:00 Friday, 16th June, 2023

Location Pentland

Dr. Bhadra's ISAZ 2023 keynote talk will discuss how dogs navigate the human-dominated landscape of Indian cities, based on her group's work over the past 13 years.

Keynote: Interactions with our closest living relatives – [Prof. Hannah M. Buchanan-Smith](#), PhD

11:00 – 12:00 Saturday, 17th June, 2023

Location Pentland

Prof. Buchanan-Smith's ISAZ 2023 keynote talk will integrate findings from her research across a range of different settings where we interact with animals: in nature, in zoos, laboratories and in our homes, with a focus on our closest living relatives, the primates.

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|--|--|---|---|---|
| 08:00 - 08:30 | Registration Opens at 8:00 am (ongoing) - John McIntyre Conference Centre, Pollock Halls, 18 Holyrood Park Road, Edinburgh | | | | |
| 08:30 - 11:00 | | Workshop: <u>Thinking Systemically: An Opportunity to Enrich Research in Anthrozoology</u> | Workshop: <u>Redefining “Training”: Exercises and Discussions in Horse-Human Interactions With a Horse-Led Approach</u> | Workshop: <u>Reining in Anxiety: A manualised Riding Intervention using CBT for Children with Anxiety</u> | |
| 11:00 - 11:05 | Comfort Break | | Comfort Break | | |
| 11:05 - 13:05 | | Workshop: <u>Managing Adverse Events in Animal Assisted Interventions</u> | Workshop: <u>A future focus for horse welfare and social licence to operate</u> | Workshop: <u>Purrfect Partners: A Deep Dive Into Cat-Assisted Counseling</u> | [CANCELLED] Workshop: <u>Equine Facilitated Family Therapy for Parent-Child Dyads</u> |
| 12:30 - 13:05 | Lunch Location: John McIntyre Restaurant | | | | |
| 13:05 - 13:30 | | Lunch - Location: John McIntyre Restaurant | | | |
| 13:30 - 14:00 | Conference Opening - Location: Pentland | | | | |
| 14:00 - 15:00 | Keynote: <u>How did we get here and where do we want to go?</u> Dr. Sandra McCune, VN, BA (Mod), PhD - Location: Pentland | | | | |
| 15:00 - 15:15 | Refreshment Break | | Refreshment Break | | |
| 15:15 - 16:15 | Thematic Oral Presentation Session: <u>Canine-Assisted Interventions for Adults</u> Chair: Kerri Rodriguez <u>A pilot randomized clinical trial of a canine-assisted intervention demonstrates reduced loneliness, anxiety, and improved mood in hospitalized older adults</u> Nancy R. Gee, Lisa Townsend, Erika Friedmann, Megan K. Mueller, Sandra Barker <u>Psychiatric service dog placements are associated with better daily psychosocial functioning for military veterans with PTSD</u> Sarah C Leighton, Kerri E Rodriguez, Run Zhuang, Clare L Jensen, Elise A Miller, Arman Sabbaghi, Marguerite E O'Haire <u>Effects of the program “My Animal, My Friend” an Animal Assisted Education (AAE) Program of animal welfare for women in social risk conditions in Antioquia (Colombia)</u> Paula Calvo, Raquel Montes, Julio C Aguirre, Sara Jaramillo, Elizabeth Laverde, Pilar Jaramillo, Nuria Máximo <u>Effects of an Animal-Assisted Drop-in Visitation Program on First Semester University Students' Trajectories of Psychological Wellbeing</u> Alexa M Carr, Patricia Pendry | | Workshop: <u>Delivery, Implementation, and Research Evaluation of a School-based Equine Assisted Mental Health Intervention</u> | | Poster Session A Location: Concourse Poster presenters listed after the program |
| 16:15 - 16:45 | | | | | |
| 16:45 - 18:45 | Opening Reception & Welcome - Location: Centro | | | | |


| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|--|--|---|---------------|--|
| 08:00 | Registration Opens at 8:00 am (ongoing) | | | | |
| 08:00 - 08:45 | Emerging Topic Oral Presentations A Chair: Emma K. Grigg <u>Understanding zoo visitors and non-visitors' knowledge and perceptions toward zoos: Quantitative research in Hong Kong and the UK</u> Tsz Ting Fok <u>Handling Wild Equids: A Safe, Low-Stress and Enriching Approach</u> Bonny Mealand <u>Human-animal interactions in zoos and aquariums with a focus on a benefit for both</u> Sabrina Brando, Max Norman, Melody Tamayo Moreno, Patricia Rachinas Lopes <u>Defining Dominance in Domestic Dogs (<i>Canis familiaris</i>): A Scoping Review with Recommendations for Human-Canine Interactions</u> Gia J. da Vinci , Erik D. Fausak, Emma K. Grigg | Emerging Topic Oral Presentations B Chair: Miki Kakinuma <u>Noah's Next Steps: An Integrative Treatment Model for Animal Hoarding Disorder</u> Katherine O Compitus <u>Companion Animals and the Call for Authenticity</u> Tina Sharifi , Souha R Ezzedeen <u>How does viewing videos of animals affect the heart rate of freshman college students?</u> Annie Petersen <u>Use of Natural Language Processing to Identify Patient Human-Animal Interactions in Human Electronic Health Records</u> Jennifer W Applebaum , AJ Alvero, William R Hogan [ADDED] <u>Social provisioning by companion animals: Development of a scale</u> Jannes Eshuis , Mayke Janssens | Stand Alone Oral Presentations A-1 Chair: Steve Loughan <u>Exploring Diversity, Equity, and Inclusion Perceptions Among Leadership in the Field of Human-Animal Interaction</u> Clare L Jensen , Jennifer Ogeer, Alan M. Beck, Marguerite E. O'Haire <u>The creation of a systematic framework to identify differences in dog laws across the nations of the United Kingdom</u> Sarah Weir , Lynsey McDevitt, Clare Andrews, Sharon E Kessler <u>Exploring Gender Differences in Stress Reduction of University Students Attending a Canine-Assisted Intervention</u> John-Tyler Binfet , Freya L. L. Green, Rebecca J. P. Godard, Camille X. Rousseau, Madisyn M. Szypula, Jordy Decker <u>How Young People Manage Undesired Behaviours Exhibited by their Dogs</u> Renata Roma , Christine Tardif-Williams, Shannon Moore | | |
| 08:45 - 09:00 | Comfort Break | | | Comfort Break | |
| 09:00 - 09:20 | Thematic Oral Presentation Session: Children, Animal-Assisted Interventions and Pets Chair: Roxanne Hawkins <u>Effectiveness of Equine-Assisted Activities and Therapies (EAAT) for Children with Autism and Cerebral Palsy: A Systematic Review of Research</u> Nathasha H Don , Lindsey H Roberts <u>A more systemic perspective on the benefits of service dog on children with ASD and their families.</u> Nicolas Dollion , Association Handi'Chiens, Fondation Mira, Florian Auffret, Nathe François, Pierrich Plusquellec, Marine Grandgeorge <u>Child and Animal Emotion-Recognition and Empathy Scale (CARES): A novel measure of empathy towards people and animals across development</u> Laura Wauthier , Monja Knoll, Joanne Williams <u>Children's behaviour towards pets: the role of behavioural and emotional problems and attachment to pets</u> Unaiza Iqbal , Joanne M Williams, Monja A Knoll | Thematic Oral Presentation Session: Shelter Animals & Pet Adoption Chair: Emma K. Grigg <u>Home-to-home rehome: Predictors of successful diversion of cats and dogs away from animal shelter intake through a self-rehoming website</u> Lexis H Ly , Alexandra Protopopova <u>The motivations of foster caregivers at animal shelters</u> Lauren Powell , Roxy Ackerman, James Serpell, Chelsea L Reinhard, Brittany Watson <u>The effect of daily gabapentin on behaviour modification progression and signs of stress in fearful shelter cats rescued from hoarding environments</u> Bailey H Eagan , Karen van Haaften, Alexandra Protopopova <u>Adopting a rescue dog from Romania: a cross-sectional survey to identify factors that reduce the likelihood of the dog being a 'perfect fit' for the adopter's household</u> Parizad Baria-Unwalla , Carri Westgarth, Louise A Buckley | How Young People Manage Undesired Behaviours Exhibited by their Dogs Renata Roma , Christine Tardif-Williams, Shannon Moore 5-min Reset Break <u>What's unique about the social support people get from their dogs?</u> Jonathan Bowen , Aubrey Fine, Jaume Fatjo <u>Veterans and their dogs: A nationwide survey examining dog functional types, human-dog relationships, health and wellness</u> Cheryl A. Krause-Parello , Erika Friedmann, Christine Spadola, Jacquelyn Baldwin, Joy Sessa <u>Understanding handlers' perspectives: Under-explored pillars supporting canine-assisted interventions</u> Camille Xinmei Rousseau , John-Tyler Binfet, Amelia Alice Willcox | | Poster Session B Location: Concourse Poster presenters listed after the program |
| 09:20 - 09:25 | | | | | |
| 09:25 - 10:25 | | | | | |

Friday, 16th June 2023 (continued)

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|--|--|--|--|--|
| 10:30 - 11:00 | Refreshment Break | Sponsor Presentation Location: Prestonfield | Refreshment Break | | |
| 11:00 - 12:00 | Keynote: <u>Living in the human's world - a dog perspective</u> - Dr. Anindita Bhadra, PhD Location: Pentland | | | | |
| 12:00 - 13:00 | <u>Lunch with the ISAZ Fellows</u> Location: John McIntyre Restaurant | Lunch Location: John McIntyre Restaurant | Lunch Location: John McIntyre Restaurant | | |
| 13:00 - 14:30 | Thematic Oral Presentation Session: Cats-Human Relationships Chair: Roxanne Hawkins <u>More than one way to feed a cat: human-cat relations and cat feeding in the Anthropocene</u> Virginia Thomas <u>When the cats come out to play: Factors associated with play and human-cat interactions</u> Julia SL Henning, Torben Nielsen, Eduardo J Fernandez, Susan Hazel <u>Did anyone ask the cats? Using speculative fiction to explore the feline perspective on guardianship and agency</u> Kris Hill <u>The “Aunty-Phenomenon” – Distinctive Caring Behaviors and its Effects on the Human-Animal Bond</u> Christine Krouzecky, Birgit Ursula Stetina | Thematic Oral Presentation Session: Farm Animal-Human Interactions Chair: Steve Loughan <u>Feathered ambassadors: Stories of how backyard chickens are causing a shift toward a kinder coexistence.</u> Ashley J McFalls, Margaret Mailey, Alivia Fritz, Rachel Casella, Igor Osadchyi [CANCELLED] Escape the farm, escape the nation: Bio(in)secure pig and salmon multiplicities in Catalonia and Scotland Guillem Rubio-Ramon <u>Changes in management and care of rural cats in Denmark help to explain decrease in number of unowned cats - a survey study from 1998 repeated in 2022</u> Peter Sandøe, Ulrike Gade, Bryndis Wöhler, Marianne Lund Ujvári, Henrik Meilby, Søren Saxmose Nielsen <u>Shifting Values: How a television drama put donkeys at the center of a billion-pound industry that is driving them towards extinction</u> Dr Michelle Whitham Jones | Stand Alone Oral Presentations A-2 Chair: Marie-Jose Enders-Slegers <u>An experience sampling study into the role of animal species and behaviour in the pet-effect: it is not who we appraise, but what we appraise</u> Mayke Janssens, Jannes Eshuis, Nele Jacobs, Karin Hediger, Sanne Peeters <u>Resource management practices of dog breeders in Canada and the United States and associations with competitive behaviours in puppies: A Cross-Sectional Survey</u> Quinn Rausch, Samantha White, Jason Coe, Tina Widowski, Jacquelyn Jacobs, Lee Niel <u>Attachment style and social fear in dogs from commercial breeding kennels</u> Allegra K Stahl, Alessia Diana, Shanis Barnard, Monique AR Udell, Candace C Croney <u>Trainer views of working marine mammals: Bonds, Trust, Individuality, and Welfare</u> Amber Marie Ramos, Joanne Williams | Workshop: <u>Art of the Other: Human Animal Live Drawing</u> Location: Duddingston | |
| 14:30 - 14:45 | Comfort Break | | Comfort Break | | |
| 14:45 - 15:00 | Thematic Oral Presentation Session: Children, Young People, & Pets Chair: John-Tyler Binfet | Thematic Oral Presentation Session: Veterinarians Perspectives on Human-Animal Interaction Chair: Patricia Pendry | Stand Alone Oral Presentations A-3 Chair: Beckie Marsland | | Stand Alone Oral Presentations B Chair: Steve Loughan |
| 15:00 - 16:15 | <div> Your Pet, Our Passion.®</div> <u>Relationships between adverse childhood experiences (ACEs) and pet-related variables among a sample of children and adolescents in the US</u> Kerri E Rodriguez, Samantha A Brown | <u>Pathways to the Veterinarians Compassionate Self: First Results of the Austrian Vet-Studies 2022 and 2023</u> Birgit Ursula Stetina, Christine Krouzecky, Jan Aden, Armin Klaps, Lisa Knoll, Zuzana Kovacovsky, Lisa Emmett | <u>Exploring Human Animal Relationship in Prehistoric Japan-an review of archeological evidences show changes in the role of dogs from hunter-gathers to rice cultivators</u> Miki Kakinuma, Asami Tsuchida | <u>[CANCELLED] Dogs in the Workplace (sort of): The effect of dogs on their human companions’ work-related behaviours</u> Beth Daly, Jill Singleton-Jackson, Riley Fisher | |

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|--|---|--|--|--|
| 15:00 - 16:15 | <p>(Continued)</p> <p><u>Parenting profiles in parents of children with Autism Spectrum Disorder (ASD) and the effects of service dogs on these profiles</u></p> <p>Margot Poirier, Marine Grandgeorge, Mira Fondation, Handi'chiens Association, Nathe François, Florian Auffret, Pierrich Plusquellec, Nicolas Dollion</p> <p><u>The Human-Animal Bond in Young People's Self-Management of Mental Health Difficulties</u></p> <p>Roxanne Hawkins, Charlotte Robinson</p> <p><u>"A companion animal... it knows you and you know it": Children's conceptualisations of different types of animals and friends</u></p> <p>Christine Yvette Tardif-Williams, Sandra Leanne Bosacki, Renata Roma</p> | <p>(Continued)</p> <p><u>'Good' killing: Situational Analysis as a Method for Critically Reflecting Veterinarians' Understanding of Farm Animal Killing Practices</u></p> <p>Marc J. Bubeck</p> <p><u>"All I do is fight fires": Qualitative exploration of veterinarians perceived role in pre-purchase consultations regarding brachycephalic dogs</u></p> <p>Rowena MA Packer, Lauren E Pound, Michelle L Farrow</p> <p><u>Your dog as a guinea pig: exploring veterinary professionals' perceptions of undertaking clinical research in client-based veterinary practice</u></p> <p>Tamzin Furtado, Elizabeth Perkins, Debbie Archer</p> | <p>(Continued)</p> <p><u>Enhancing connections, positive emotions and perceptions towards unpopular species through anthropomorphic storytelling videos.</u></p> <p>Alaina M Macri, Rachel Arnold, Deborah L Wells</p> <p><u>Understanding landlord decisions in relation to pet friendly renting in order to minimise concerns</u></p> <p>Luciana Santos de Assis, Sandra McCune, Daniel Mills</p> <p><u>A scoping review of campus-based animal-assisted interactions (AAI) programs for college student mental health</u></p> <p>Tanya K Bailey</p> | <p>(Continued)</p> <p><u>Reactive dogs: using social listening as a research tool in under-investigated areas of HAI</u></p> <p>Carla J Hart, Davide Uras, Tammie King</p> <p><u>Comparing efficacy in reduction of pulling among four types of dog walking equipment</u></p> <p>Anamarie C Johnson, Clive D.L Wynne</p> <p><u>The Development of Materials for Professionals Working with Older Adults, Persons with Dementia, and Caregivers on the Benefits, Challenges, and Resources of Pet Ownership: The Results of Theory-Driven Mixed-Methods Investigation</u></p> <p>Jessica Bibbo, Justin Johnson, Sarah Nicolay, Ashley Haas</p> | |
| 16:15 - 16:30 | Refreshment Break | | | | Refreshment Break |
| 16:30 - 18:00 | <p>Thematic Oral Presentation Session: Pets & Wellbeing</p> <p>Chair: Steve Loughan</p> <p><u>How Much Do Dogs Care About People?</u></p> <p>Clive D. L. Wynne, Joshua Van Bourg</p> <p><u>The impact of self-expansion, perceived pet responsiveness, perceived pet insensitivity, attachment, and animal attitudes on variability of wellbeing outcomes in pet owners</u></p> <p>Annalyse E Ellis, Steve Loughnan, Sarah Stanton, Roxanne Hawkins</p> <p><u>Which Psychological Factors are Beneficial in our Relations with Pets? Correlational and Experimental Evidence</u></p> <p>Catherine E Amiot, Christophe Gagné, Liane Poliquin, Brock Bastian</p> <p><u>Dog interactions and psychophysiology in adolescents with social anxiety</u></p> <p>Erin K King, Eli D Halbreich, Eric C Anderson, Megan K Mueller</p> | <p>Thematic Oral Presentation Session: Pets & Crime</p> <p>Chair: Jo Williams</p> <p><u>Animal Crime in Context: An Examination of Community-Level Correlates of Animal Welfare Offenses and Violent Crime in Finland</u></p> <p>Keri Burchfield, Fred Markowitz, Tarja Koskela</p> <p><u>Could cats help solve crime?</u></p> <p>Heidi A Monkman, Roland A H van Oorschot, Mariya Goray</p> <p><u>The Experiences and Needs of Dog-owners Affected by Dog-theft</u></p> <p>Akaanksha Venkatramanan, Lindsey Roberts</p> <p><u>The Psychological Impact of Dog Theft on Human Well-being: Development and Testing of the Dog-Theft Impact Scale (DTIS)</u></p> <p>Malki Nathasha Hindurangalage Don, Lindsey Helen Roberts</p> | <p>Stand Alone Oral Presentations A-4</p> <p>Chair: Beckie Marsland</p> <p><u>An Environmental Scan of Canadian Service Dog Organization Websites</u></p> <p>Linzi Williamson, Aliya Khalid, Abu-Hena Mostofa Kamal</p> <p><u>Evaluation of the Animal Guardians Program: An Intervention for Primary School Children Who Have Harmed Animals</u></p> <p>Laura Wauthier, Scottish SPCA, Joanne Williams</p> <p><u>Children's Experiences of Positive Affect with Pet Dogs</u></p> <p>Kathryn A Kerns, Carli A Obeldobel, Heather House, Logan B Kochendorfer, Allysia White, Marissa Gastelle</p> <p><u>Rethinking Anthronosis – new pathways of human borne ill-health of animals in modern society</u></p> <p>Bruno Beljak, Martina Balaban</p> | | <p><u>Poster Session C</u></p> <p>Location: Concourse</p> <p>Poster presenters listed after the program</p> |
| 18:00 - 18:45 | Break | | | | Break |
| 18:45 - 23:55 | <p><u>3 Course Dinner & Ceilidh Band</u></p> <p>Location: South Hall</p> <p>COMPLETE Registration Package Delegates only</p> | | | | |

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|--|---|----------|-----------|--|
| 08:00 - 08:15 | Registration Opens at 8:00 am (ongoing) | | | | |
| 08:15 - 09:30 | <p>Emerging Topic Oral Presentations C</p> <p>Chair: Jo Williams</p> <p><u>Canine-assisted interventions: considerations regarding suitability and selection criteria-matching suitable candidate dogs to the appropriate CAI</u></p> <p>Lieve L Meers, Elizabeth A Walsh, Carolina Duarte-Gan, Laura Contalbrigo, Vicky A Stevens, William E Samuels, Daniel Berckmans, Simona R Normando</p> <p><u>What does the horse think of a therapeutic riding lesson compared to a normal riding lesson? An equine cognitive bias study</u></p> <p>Kathalijne EK Visser, Bélena EH Van Beekhuizen, Machteld C VanDierendonck</p> <p>[CANCELLED] The role of companion animals in the experiences of early adolescents with symptoms of anxiety and depression: A mixed methods investigation</p> <p>Katie Baynham, Dr Rebecca Marsland, Professor Joanne Williams</p> <p><u>Office dogs: A within-company quasi-field experiment using daily experience sampling</u></p> <p>Joni Delanoeije, Emma Willemen, Marijke Verbruggen</p> <p><u>Manualizing a Brief Animal Assisted Intervention for Children with Attention Deficit Hyperactivity Disorder; Streamlining the Positive Assertive Cooperative Kids AAI Protocol for Practice</u></p> <p>Lydia A. Steinhoff, Rachel Y. Stokes, Elissa Monteiro, Patty Ramsey, Aubrey H. Fine, Cassie Zeiler, Sabrina E.B. Schuck</p> <p><u>Describing Canine Stress-Related Behavior during Animal Assisted Intervention (AAI) with Children with ADHD: Exploring Behavioral Coding Methods</u></p> <p>Daniel A. Mejia, Alexandria E. Graham, Aubrey H. Fine, Elissa Monteiro, Cassie Zeiler, Emma M. Lakes-Kay, Sabrina E.B. Schuck</p> <p><u>Canine-Assisted Occupational Therapy for Children on the Autism Spectrum: multiple case study</u></p> <p>Mirela De Oliveira Figueiredo, Lais Riviera Baratela, Roberta Giampá Roiz, Caroline Cristina Bruno</p> | <p>Emerging Topic Oral Presentations D</p> <p>Chair: Nancy Gee</p> <p><u>Healthy as a Horse: Ethnoveterinary Medicine and Human-Horse Relationships</u></p> <p>Evelien Deelen</p> <p><u>Kynographies: challenges regarding canine experiences and participant observation.</u></p> <p>Sebastián Pelayo Benavides</p> <p><u>Dog Breeds mistreatment and/or abuse: a new phenomenon to manage</u></p> <p>Irene Maja Nanni, Fiammetta Sofia Di Cocco, Francesca Sorcinelli</p> <p><u>Exploring the impact of affiliative behaviors and interspecies communication on horse-human interactions</u></p> <p>Emily Kieson</p> <p><u>From bad to worse: Impact of the ‘Cost-of Living Crisis’ on Canine Welfare in a UK Cohort of Pandemic Puppies</u></p> <p>Claire L Brand, Dan G O'Neill, Zoe Belshaw, Fiona Dale, Bree Merritt, Camilla L Pegram, Kim B Stevens, Rowena M A Packer</p> <p><u>Lasting lockdown love?: dog-owner bond at age 21 months in the Pandemic Puppy cohort</u></p> <p>Bree Merritt, Claire L Brand, Dan G O'Neill, Zoe Belshaw, Camilla L Pegram, Fiona Dale, Kim B Stevens, Rowena MA Packer</p> <p><u>Legal Governance of Dog Rescues: Addressing Post-Pandemic Challenges in a Period of Austerity</u></p> <p>Sarah Singh, Marie Fox</p> <p><u>The Personality Assessment of Domestic Animals - A new standardized screening method</u></p> <p>Christine Olsen</p> | | | <p><u>Poster Session D</u></p> <p>Location: Concourse</p> <p>Poster presenters listed after the program</p> |

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|---|--|---|---|-------|
| 09:30 - 09:45 | Comfort Break | | | Comfort Break | |
| 09:45 - 10:45 | ISAZ Annual General Meeting - Location: Pentland | | | | |
| 10:45 - 11:00 | Refreshment Break | | | Refreshment Break | |
| 11:00 - 12:00 | Keynote: Interactions with our closest living relatives - Prof. Hannah M. Buchanan-Smith, PhD - Location: Pentland | | | | |
| 12:00 - 13:00 | Lunch Location: John McIntyre Restaurant | Early Career Researcher Mixer Location: John McIntyre Restaurant | | New ISAZ Board Meeting Location: Salisbury | |
| 13:00 - 14:30 | <div>Thematic Oral Presentation Session: Benefits & Challenges of Pet Ownership Chair: John-Tyler Binfet</div> <div></div> <div>Developing baseline data in order to measure the health of indoor cats to facilitate health equity between aged care residents and foster cats Carmel Nottle, Neil Bretana, Young Janette</div> <div>Pet Ownership and Maintenance of Cognitive Function in Community-Residing Older Adults: Evidence from the Baltimore Longitudinal Study of Aging (BLSA) Erika Friedmann, Nancy R Gee, Eleanor M Simonsick, Melissa H Kitner-Triolo, Erik Barr, Barbara Resnick, Ikmat Adesanya, Lincy Koodaly, Merve Gurlu</div> <div>The nature and impact of challenges currently experienced by pet owners in the UK Joanne M Williams, Laura Wauthier, Janine C Muldoon, Johanna Neufuss, Tracy Genever</div> <div>The potential impact of dog-related activities on owners' well-being: A four-week prospective cohort study Ana Maria Barcelos, Niko Kargas, Phil Assheton, John Maltby, Sophie Hall, Daniel Mills</div> | <div>Thematic Oral Presentation Session: Dog Behaviour & Responses Chair: Catherine Amiot</div> <div>Dog Behaviour Traits Associated with Scent Task Performance in Biological Odour Discrimination Paradigms Clara Wilson, Catherine Reeve, Kerry Campbell, Cynthia Otto</div> <div>Association of dog owner temperament with dog-owner relationship and dog behavior Miiamaaria V Kujala, Tiina Parviainen, Katriina Tiira, Noona Kiuru</div> <div>Dogs’ attachment insecurity towards the owner affects their physiological response to a standardized veterinary procedure Giacomo Riggio, Carmen Borrelli, Angelo Gazzano, Chiara Mariti</div> <div>Context Matters: Human Biases in the Perception of Dog Emotions Holly G Molinaro, Clive D. L. Wynne</div> | <div>Thematic Oral Presentation Session: Physiological Assessment in Human-Animal Interaction Research Chair: Kerri Rodriguez</div> <div>A longitudinal analysis of the cortisol awakening response in a population of military veterans with and without psychiatric service dogs for posttraumatic stress disorder (PTSD) Leanne Nieforth, Run Zhuang, Arman Sabbaghi, Kerri Rodriguez, AJ Schwichtenberg, Elise Miller, Marguerite O'Haire</div> <div>Healthy test-persons’ immediate physiological response to different intensities of contact with a dog Lene H Fuglsang-Damgaard, Sigrid Juhl Lunde, Janne W Christensen, Lene Vase, Poul B Videbech, Karen Thodberg</div> <div>Salivary cortisol response to pain and stress tests with or without the support of a dog Karen Thodberg, Lene H Fuglsang-Damgaard, Janne W. Christensen, Lene Vase, Poul B Videbech, Tina B. Nielsen, Sigrid J Lunde</div> <div>Capturing Heart Rate Variability for Children with ADHD during Animal Assisted Intervention: Feasibility, Acceptability, and Relevant Preliminary Findings Cassie Zeiler, Rachel Azar, Annamarie Stehli, DeWayne P. Williams, Julian F. Thayer, Elissa Monteiro, Lydia A. Steinhoff, Rachel Y. Stokes, Sabrina E.B. Schuck</div> | | |
| 14:30 - 14:45 | Comfort Break | | | Comfort Break | |

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|---|--|---|-------------------|-------|
| 14:45 - 16:15 | <p>Symposium: What’s the Story? Measurement and Mechanism of Change in Equine-Assisted Interventions</p> <p>Chair: Angela K. Fournier</p> <p>Discussant: Clare E Thomas-Pino</p> <p><u>Approach and Response – Recording HAI Behaviors in Equine-Assisted Interventions</u></p> <p>Angela K Fournier, Megan French</p> <p><u>A theory for how change happens in equine-assisted intervention including psychotherapy incorporating horses</u></p> <p>Noreen W Esposito</p> <p><u>"What’s the Story? Measurement and Mechanism of Change in Equine-Assisted Interventions"</u></p> <p>Elizabeth A. Letson, Sarah E. Cronin</p> | <p>Thematic Oral Presentation Session: The Human-Animal Bond and Welfare</p> <p>Chair: Steve Loughan</p> <p><u>Rescuer Attributions of Responsibility for Companion Animal Suffering</u></p> <p>Lori L. Jervis, Laura Bray</p> <p><u>The human-animal bond and adherence to veterinary services: the role of commitment and emotional closeness</u></p> <p>Elena Garcia, Jon Bowen, Miriam Pérez, Jaume Fatjó</p> <p><u>"I would know if my dog was overweight" A qualitative exploration of dog owner’s recognition and understanding of canine obesity.</u></p> <p>Imogen Lloyd, Francine Watkins, Tamzin Furtado, Alex German, Robert Christley, Carri Westgarth</p> <p><u>"Moving a problem from A to B": A qualitative analysis of health problems in imported rescue dogs and their implications for the dogs, owners, and other stakeholders</u></p> <p>Lisa J Wallis, Gina Pinchbeck, Jenny Stavisky, Louise Buckley, Carri Westgarth</p> | <p>Thematic Oral Presentation Session: Behavioural Challenges in Canine Companionship</p> <p>Chair: Roxanne Hawkins</p> <p><u>Exploring social inequalities in dog-related injuries within Scotland using administrative data sources</u></p> <p>Jade E Hooper, Paul Lambert, Hannah Buchanan-Smith, Tony Robertson</p> <p><u>"If you have a dog, you sort them yourself": Barriers to seeking professional dog-training</u></p> <p>Sarah K Weidman, Lauren K Harris, Katherine L Anderson, Kevin Atkinson Hughes-Gandy, Kirsty Britton, Kirsty MacQueen, Rachael Marley, Molly Maunders, Michelle Moat, Zoe Morris, Isaac Simpson, Jennifer Terris, Abigail Ward, Robert M Christley</p> <p><u>Well-behaved, but... Caregiver acceptance and management of unwanted behaviours in dogs.</u></p> <p>Lauren K Harris, Sarah K Weidman, Kevin Atkinson Hughes-Gandy, Kirsty Britton, Kirsty MacQueen, Rachael Marley, Molly Maunders, Michelle Moat, Zoe Morris, Isaac Simpson, Jennifer Terris, Abigail Ward, Robert M Christley</p> <p><u>"It’s time he needs”: A qualitative analysis of behavioural problems in imported rescue dogs and their implications for the dog and owner</u></p> <p>Alisha Murphy, Lisa Wallis, Louise Buckley, Carri Westgarth</p> | | |
| 16:15 - 16:30 | Refreshment Break | | | Refreshment Break | |
| 16:30 - 18:00 | <p>Thematic Oral Presentation Session: Human-Equine Interactions</p> <p>Chair: Clare Thomas-Pino</p> <p><u>Horse agency and welfare: Insights from experienced horse sector participants.</u></p> <p>Julie M Fiedler, Josh D Slater, Margaret L Ayre, Sarah M Rosanowski</p> <p><u>Human Ability to Classify Horse Affective States Depicted in Media via an Online Survey</u></p> <p>Katelyn Trudel, Katrina Merkies</p> | <p>Thematic Oral Presentation Session: New Directions in Canine-Assisted</p> <p>Chair: Megan Mueller</p> <p><u>Exploring a range of dog-assisted interventions using robotics, virtual reality, and videos.</u></p> <p>Luke T Argyle, Kerstin Meints</p> <p><u>Virtual connections with canines: Therapy dogs reducing undergraduate student stress</u></p> <p>John-Tyler Binfet, Freya L. L. Green, Christine Y. Tardif-Williams, Rebecca J. Godard, Akshat Singal, Camille X. Rousseau, Renata Roma, Amelia Wilcox</p> | <p>Thematic Oral Presentation Session: Human-Animal Interaction in Cultural Context</p> <p>Chair: Steve Loughan</p> <p><u>The Health of Working Dogs in Conservation in Africa</u></p> <p>Nicola Earnshaw, Neil Anderson, Jill Mackay, Megan Parker</p> | | |

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|---|--|--|-----------|-------|
| 16:30 - 18:00 | (Continued) <u>Management of Overweight Horses in Prince Edward Island, Canada: Horse Owner Perspectives</u> Megan Ross, Kathryn Proudfoot, Katrina Merkies, Jean Mitchell, Caroline Ritter <u>Contradiction and complexity in equestrians' horse keeping and training practices</u> Karen L Luke, Tina McAdie, Andrea Rawluk | (Continued) <u>Developing School Facility Dog Guidelines: An Action Research Project</u> Stacie Baumbarger, Suzanne Reinhart, Janet Hoy-Gerlach <u>An Online Dog-Assisted Intervention Across the Lifespan</u> Holly Tyers, Kerstin Meints | (Continued) <u>Pet Demographics, Reliability and Country Differences: Impact on HAB Theorizing.</u> Andrew N Rowan, Tamara Kartal <u>Compassion fatigue among animal shelter volunteers: role of social cognition, attachment, social support, and workload.</u> Javier López-Cepero, Rafael Martos-Montes, Jesús García-Martínez, Francisco J. Rivera De los Santos <u>A comparison of attitudes towards zoo animal welfare between British and Japanese zoo visitors</u> Yumi Yamanashi, Moe Honjo, Yuko Ikkatai, Nahoko Tokuyama, Rie Akami, Duncan Wilson, Hannah Buchanan-Smith | | |
| 18:00 - 20:00 | <u>Award Ceremony & Closing Reception</u> Location: TBA | | | | |

Sunday, 18th June 2023

| | Pentland | Prestonfield | Holyrood | Salisbury | Other |
|---------------|---------------|--------------|--|---|--|
| 09:00 - 09:40 | | | Workshop: <u>Pets & Housing: Global Challenges and Solutions</u> | Workshop: <u>One Welfare Phoenix Project: the links between animal and human abuse and neglect</u> | <u>Interested in hosting ISAZ 2025?</u> Location: Boardroom |
| 09:40 - 10:30 | | | | | |
| 10:30 - 11:30 | | | | | |
| 11:30 - 11:45 | Comfort Break | | | | <u>Research Day Trip to Edinburgh Zoo</u> Ticket Holders only |
| 11:45 - 12:45 | | | Workshop: <u>Saying Goodbye to Assistance Dogs: Psychological and Practical Challenges</u> | Workshop: <u>The Science of Reading: Incorporating Therapy Dogs in Reading Interventions for High School Students</u> | |
| 12:45 - 15:00 | | | | | |

Poster Session A, 15:15–16:45 Thursday, 15 June, 2023, Concourse

[ID #: 1] The influence of school dogs on the social structure in the classroom: .I never thought that my classmate could be as affectionate as he is with Lupo'
Mona M. Mombeck

[ID #: 2] A Competition Question: horse welfare, pentathletes, and competitive riding
Aviva Vincent, Ruth Burke, Kaylynn Coates

[ID #: 3] Community-Engaged Researcher Human Subjects Training for Volunteer Animal-Assisted Intervention Teams
Lisa Townsend, Nyssa Towsley, Nancy R. Gee

[ID #: 4] Autism spectrum disorders: when it's easier to read emotions in animals than in humans
Aurelien Miralles, Marine Grandgeorge, Michel Raymond

[Session A – ID #: 5] "We Need More Dogs!": The Outcomes and Experiences of the Canine-Ambassador Program in Elementary and Secondary Schools in Ontario, Canada
Howard Bloom, Adam Stibbards

[ID #: 6] Pet attachment and owner personality
Deborah L Wells, Jordan Collins, Saoirse O'Donnell, Lingyi Su, Siqi Shangguan

[ID #: 7] Supporting wildlife workers: working in isolation and the impact to mental health
Frances E. Carleton

[ID #: 8] Horses as Part of the Health and Wellbeing Sector – Practitioner Perspectives
Rita Seery, Deborah L Wells

[ID #: 9] The Trouble with a Cuddle: Reported experiences from care givers of interactions between middle childhood aged children and their family dog
Anna Baatz

[ID #: 10] Longitudinal patterns of pet ownership in families with children during the COVID-19 pandemic
Megan K Mueller, Seana Dowling-Guyer, Emily McCobb

[ID #: 11] Attachment to Pet Dogs and Children's Psychological Wellbeing and Happiness
Roxanne D Hawkins, Charlotte J Robinson, Zara P Brodie

[ID #: 12] Capturing Saliva Samples from Children with ADHD during Animal Assisted Intervention: Feasibility, Acceptability and Preliminary Findings
Lydia A. Steinhoff, Peyton R. Groves, Douglas A. Granger, Annamarie Stehli, Rachel Y. Stokes, Cassie Zeiler, Elissa Monteiro, Sabrina E.B. Schuck

[ID #: 13] How the handler's familiarity and the living environment affect the human-horse interactions in a working context?
Océane Liehrmann, Léa Lansade, Virpi Iummaa

[ID #: 14] Relationships and Resilience at the Zoo
Shantelle Tjaden, Leslie Stewart, Steven Moody, Conner Vrba

[ID #: 15] [CANCELLED] "Watch Me!": The Impact of Training Experience on Social Referencing of Human Emotional Cues in Dogs
Madison Murray, Anna Zamansky, Nareed Farhat, Angie Lee, Lydia Lopez Pelaez, Sarah-Elizabeth Byosiére

[ID #: 16] It's like looking after someone else's kids: a qualitative study of dog fostering experiences
Katrina E Holland, Robert M Christley, Melissa M Upjohn, Rachel A Casey

[ID #: 17] Man and Horse. "when communication with words fails"
Richard E Griffioen, S. Haven-Prost, Hannah Verkuil

Poster Session B, 09:00–10:30 Friday, 16 June, 2023, Concourse

[ID #: 1] A national animal welfare crisis. The Scottish SPCA's Pet Aid Service aims to tackle the issues that breaks that human animal bond and ultimately keep people and pets together.

Gilly A R Mendes Ferreira, Kirsteen Campbell

[ID #: 2] On birds and people: animal urbanum

Suzana Marjanić

[ID #: 3] Causes of Deaths of Law Enforcement K-9s in 2016–2019 during Service and after Retirement

Lynette A Hart, Andrea Sierra, Neil H Willits

[ID #: 4] Assessing Untrained Helpful Behaviours of Service Dogs Who Assist People With Post-Traumatic Stress Disorder (PTSD)

Liane Poliquin, Jacques Forget

[ID #: 5] Children's bond with companion animals and associations with psychosocial health: a systematic review

Daniëlle Groenewoud, Marie-Jose Enders-Slegers, Roeslan Leontjevas, Tynke de Winkel, Annemiek van Dijke, Hediger Karin

[ID #: 6] Paradigm Shift from Early Neutering of Dogs to Caregiver's Personalized Choice for Each Dog's Age of Spay/Neuter

Benjamin L Hart, Lynette A Hart, Abigail P. Thigpen, Neil H Willits

[ID #: 7] Both ends of the leash: Animals in Australian Residential Aged Care Facilities, views of aged care workers who are experienced animal trainers/handlers

Wendy M Newton, Tania D Signal, Jenni A Judd

[ID #: 8] The Mediator Role of Religious Practices in the Relationships between Authority and Violence Against Animals

Agnieszka Potocka, Maksymilian Bielecki

[ID #: 9] Equine-assisted social education in Finland: The effects of the intervention on participants' well-being as described by the instructors

Maija Lipponen, Elina Vehmasto

[ID #: 10] General and Specific Attitude toward Animals: A Predictive Model Differentiating on Diet

Claudia Suarez Yera, Maria Sanchez Castello, Jorge L. Ordoñez Carrasco, Antonio J. Rojas Tejada

[ID #: 11] Protocol for the process-evaluation of the development of the innovative PET@home Toolkit using the comprehensive EBCD+ method for frail client pet guardians

Peter W.A. Reniers, Ruslan Leontjevas, Ine J.N. Declercq, Marie-Jose Enders-Slegers, Debby L. Gerritsen, Karin Hediger

[ID #: 12] Pawsitive Training: An Investigation of Animal-Assisted Counseling Competencies in a University-Based Training Program

Jordan Jalen Evans, Elizabeth Kjellstrand Hartwig

[ID #: 13] Is it effective, ethical and easy to apply? A preliminary analysis of factors influencing horse owners' choice of training approach

Ella Bartlett, Emily J Blackwell, Lorna J Cameron, Jo Hockenhill

[ID #: 14] Age and experience affect the interpretation of dog facial emotional expressions by humans

Heini Törnqvist, Hanna Höller, Kerstin Vsetecka, Stefanie Hoehl, Miia Maria V. Kujala

[ID #: 15] Factors influencing the acceptance of pets at evacuation shelters in three Japanese cities during natural disasters

Mitsue Motomura, Hajime Tanida

[ID #: 16] "It didn't change my life; it saved my life": An evaluative study of a social pedagogical programme: Changing Lives through Horses (CLtH).

Rebecca P Harding, Dr Lindsey H Roberts, Alison Blackmore

Poster Session C, 16:30–18:00 Friday, 16 June, 2023, Concourse

[ID #: 1] [Intersubjectivity in human–horse relationships associates with compassion and lived practices](#)

[Sonja E Koski, Jenni Spännäri](#)

[ID #: 2] [The difference between two brachycephalic and one mesocephalic dog breeds' problem-solving performance suggests evidence for paedomorphism in behaviour](#)

[Dorottya J Ujfalussy, Zsófia Bognár, Marianna Molnár, Ádám Miklósi, József Topál, Enikő Kubinyi](#)

[ID #: 3] [Are attachment, animal species, and animal contact duration associated with the health of pet owners and people having regular contact with animals?](#)

[Rahel Marti, Karin Hediger](#)

[ID #: 4] [Animal Welfare Education in UK Primary School Settings: A Collaborative Approach](#)

[Anna Baggott, Rebecca Ashman, Tracy Genever, Kerry Taylor, Shelley Brown, Maria Kyle, Louise Hart, Aimee Griffiths, David Allen, Caroline Francoli, Anna Cowling, Chris Bennett](#)

[ID #: 5] [“I am getting confused Mum”: Anthropomorphism, agency, and ‘animal talk’ in training between disabled humans and their assistance dogs](#)

[Jamie Arathoon](#)

[ID #: 6] [Evaluating the impact of a cartoon on the perception of wasps \(*Vespula vulgaris*\).](#)

[Lesley Elizabeth Elizabeth Craig](#)

[ID #: 7] [Family Animal Veterinarians' Perception of Their Euthanasia Related Roles and Challenges: An Interview Study](#)

[Ida Kunzendorf, Nadia Vogt, Tia Hansen](#)

[ID #: 8] [Doctoral Dissertations in Human–Animal Interaction: Update on Gerbasi et al. \(2002\)](#)

[Kelly A Weigand, Jane KYatcilla](#)

[ID #: 9] [Public consent to the legal ban on dog meat production, sale, and purchase in South Korea](#)

[Myung–Sun Chun, Seola Joo](#)

[ID #: 10] [Pet ownership and Chinese adolescents' and emerging adults' mental wellbeing: The mediating role of pet attachment](#)

[Xiaoshan Yin, Paul Graham Morris, Joanne M Williams](#)

[ID #: 11] [Are you Thinking what I'm Thinking? How do Zoo Visitors' Anthropomorphic Conception of Nonhuman Great Apes Influence Conservation Intent and Beliefs about the Lives of Great Apes?](#)

[Cassandra E. M. Lyon](#)

[ID #: 12] [Best practices for measuring physiological responses in youth with autism spectrum and co-occurring mental health diagnoses within an equine-assisted activities environment](#)

[Hannah Christensen, Cory Smith, Veronica Henderson–Davis, Matthew Siegel, Robin L Gabriels](#)

[ID #: 13] [Promoting solutionary education through service–learning](#)

[Michelle M Proctor](#)

[ID #: 14] [Caregiver Burden of Dogs and Cats Owners in South Korea](#)

[Seola Joo, Myung–Sun Chun](#)

[ID #: 15] [The IN-HABIT project: co-designing a hum–animal city](#)

[Carmen Borrelli, Giulia Granai, Massimo Rovai, Angelo Gazzano, Roberta Moruzzo, Francesco Riccioli, Francesco Paolo Di Iacovo, Chiara Mariti](#)

[ID #: 16] [Dog–owner interaction modulates the heart rate variability in humans according to the type of interaction](#)

[Aija Koskela, Heini Törnqvist, Sanni Somppi, Virpi–Liisa Kykyri, Laura Hänninen, Jan Kujala, Miiamaaria Kujala](#)

Poster Session D, 08:15-09:45 Saturday, 17 June, 2023, Concourse

[ID #: 1] [The Donkey Who Wanted to Be Free. Negotiating Multispecies Livelihoods and Extinction in Rural Sardinia.](#)
Alessandro Guglielmo

[ID #: 2] [Building relationships between children, handlers and dogs in animal assisted educational contexts.](#)
Helen Lewis, Janet Oostendorp-Godfrey, Marikris De-Leon

[ID #: 3] [Matters of Context: Educating about human-animal interaction and developing critical thinkers](#)
Darcy Bornemann, Clare Thomas-Pino

[ID #: 4] [Designing an analytical framework for canine-assisted interventions in school contexts](#)
Marikris de Leon, Bethany Hill, Lydia Morgan, Helen Lewis

[ID #: 5] [Paws on Campus: A Psychoeducational Dog-Facilitated Programme Supporting Mental Wellbeing in University Students](#)
Laura Wauthier, Andrew Gardiner, Jillian Bradfield, Joanne Williams

[ID #: 6] [Can we recognize emotions of tigers, monkeys and goats?](#)
Laura Hiisivuori, Anssi Vainio, Emma Vitikainen, Sonja E. Koski

[ID #: 7] ["When it comes to fireworks our tactics is try and cope rather than cure": Qualitative Analysis of UK Dog Owners' Decision-Making and Help-Seeking During Firework Events.](#)
Sara Owczarczak-Garstecka, Hannah Dempsey, Tamsin Durston, Lauren Harris, Katrina Holland, Rachel Kinsman, Hoi-Lam Jim, Chloe Maher, Kate Main, Jane Murray, Jillian Rose, Malcolm Stagg, Rachel Casey

[ID #: 8] [Not all who wander are lost: The influence of transience on the welfare of mules and their relationship with people](#)
Tamlin Watson, Laura MKubasiewicz, Caroline Nye, Sajana Thapa, Stuart L Norris, Natasha Chamberlain, Faith A Burden

[ID #: 9] ["This rabbit crisis needs to stop": Animal shelter and rabbit rescue perspectives on companion rabbits before and during the COVID-19 pandemic in Canada and the United States \(2017-2022\)](#)
Carol E Tinga, Lee Niel

[ID #: 10] [CANCELLED] [What is human-animal interaction like in Chile in times of pandemic?](#)
Francisca C Cuevas-Pavincich, Jorge J Varela, José Antonio Muñoz, Pablo Polo, Rafael Miranda

[ID #: 11] [Where Narratives About Human-Animal Relations During the COVID-19 Pandemic Lead Us: Advancing Animal-Inclusive Housing to Promote Human and Animal Health](#)
Holly A McKenzie, Colleen A. Dell, Kayla Arisman, Alexandria Pavelich, Linzi Williamson, Elisabeth Snead, Maryellen Gibson, Ben Carey, Emma Raichuk, Catherine Beaupre, Aliya Khalid, Erynn Buhr, Jane Smith, Stephanie Peachey, Kaylyn Kubes

[ID #: 12] [Analysis of companion animal abandonment during 2021 in the city of Barcelona \(Spain\)](#)
Paula Calvo, Anna Ortonoves, Eva Forniellles, Carla Cornellá, Laura Arena

[ID #: 13] [The Anthrozooethogram: Monitoring Equine Welfare Through Human-Animal Behavior Analysis](#)
Megan N French, Angela Fournier, Elizabeth Letson, Joy Hanson, Sarah Cronin

[ID #: 14] [Lead the Way: The Effects of Dog-Led Lead Walks on the Behaviour of Pet Dogs](#)
Beth L Ritchie, Vicky Melfi

[ID #: 15] [Hierarchy of human-generated signals in free-ranging dogs' approach decision](#)
Rohan Sarkar

[ID #: 16] [Who traverses the Sundarban forest? The intricacy and meaning of merging boundaries](#)
Camellia Biswas

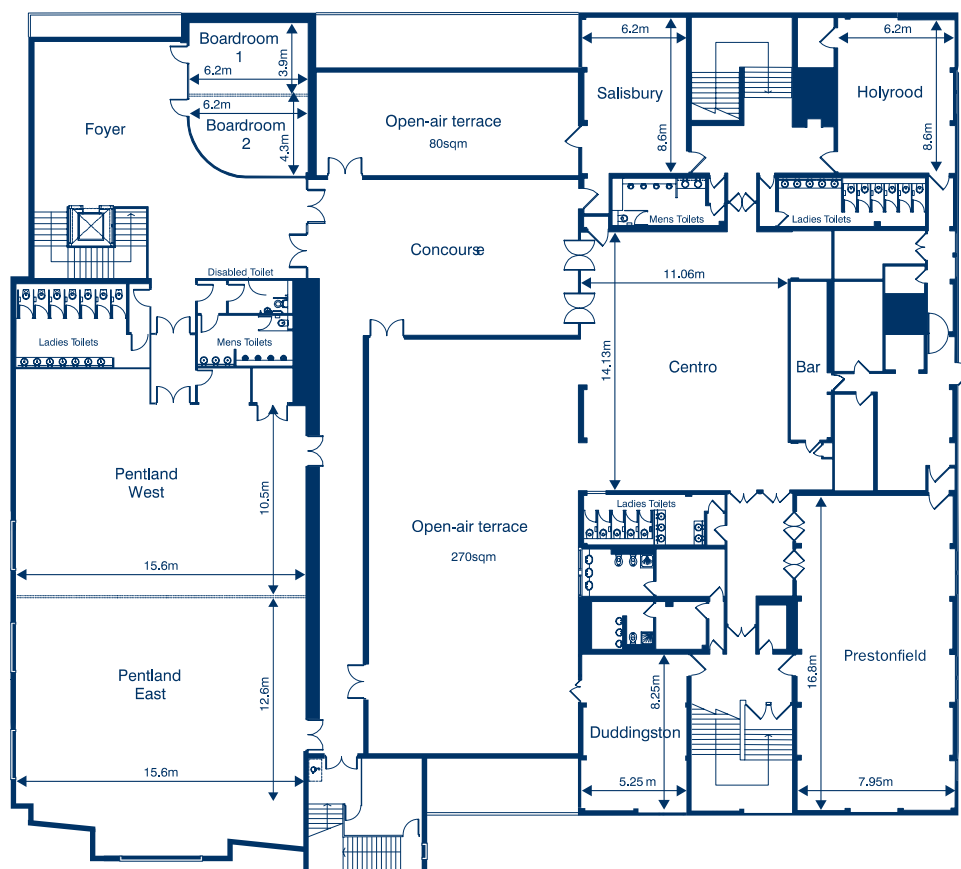
[ID #: 17] [Associations between attitudes towards animal assisted therapy \(AAT\) and personality traits](#)
Livia Langner, Adriána Csinády, József Topál



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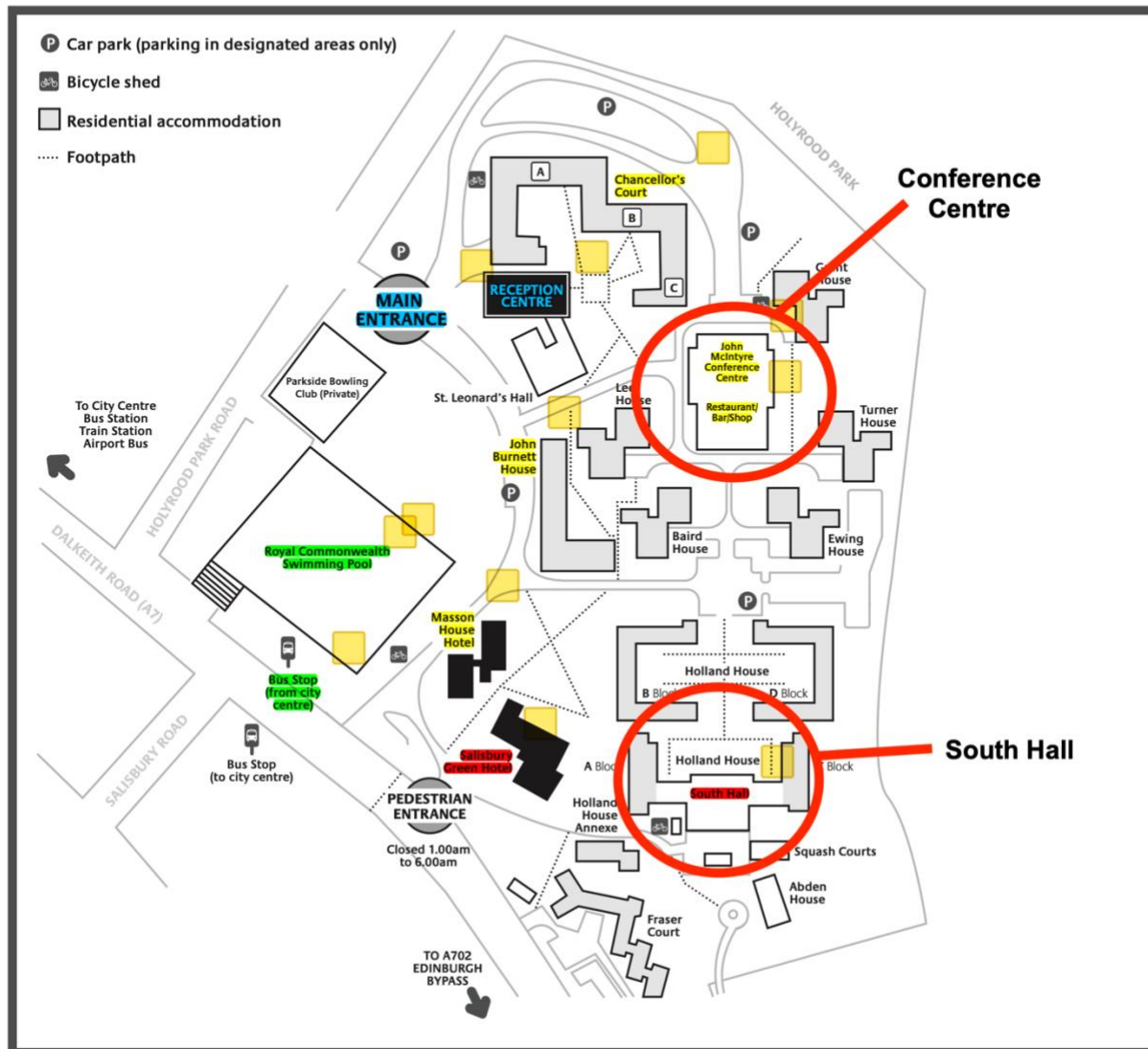
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Events

Opening Reception & Welcome

16:45 – 18:45 Thursday, 15th June, 2023

Location Centro

Beverages and hors d'oeuvres provided

Sponsor Presentation

10:30 – 11:00 Friday, 16th June, 2023

Location Prestonfield

Lunch with the ISAZ Fellows

12:00 – 13:00 Friday, 16th June, 2023

Location John McIntyre Restaurant

Hosted by Marie-Jose Enders-Slegers

We invite you to come and meet the ISAZ Fellows. The ISAZ Fellows are leaders in the field and include our founding members of the society. This event provides an informal setting for attendees to sit and engage with the ISAZ Fellows in attendance. An opportunity to talk with each ISAZ Fellow will be facilitated through timed rotations. Attendees will need to grab their provided lunch from the common area and bring it to the event. Tables and chairs will be provided.

Learn more about ISAZ Fellows here: <https://isaz.net/who-we-are/fellows.html>

Registration is required. Delegates are sent registration code via email.

3 Course Dinner & Ceilidh Band

18:45 – 23:55 Friday, 16th June, 2023

Location South Hall

Dress code: Casual

****COMPLETE Registration Package Delegates only****

3 course dinner, followed by coffee & tea, and then a performance by a local ceilidh band, The Jacobites.

Dancing is encouraged during the event, so we suggest comfortable attire!

ISAZ Annual General Meeting

09:45 – 10:45 Saturday, 17th June, 2023

Location Pentland

Early Career Researcher Mixer

12:00 – 13:00 Saturday, 17th June, 2023

Location John McIntyre Restaurant

Students and Post Docs are encouraged to attend this social event to meet other early career researchers in the field. Attendees will need to grab their provided lunch from the common area and bring it to the event.

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New ISAZ Board Meeting

12:00 – 13:00 Saturday, 17th June, 2023

Location Salisbury

For ISAZ Board members only

Award Ceremony & Closing Reception

18:00 – 20:00 Saturday, 17th June, 2023

Location TBA

Beverages and hors d'oeuvres provided

Interested in hosting ISAZ 2025?

09:00 – 09:40 Sunday, 18th June, 2023

Location Boardroom

Research Day Trip to Edinburgh Zoo – separate ticket purchase required

10:30 – 15:00 Sunday, 18th June, 2023

Location Edinburgh Zoo

A trip to Edinburgh Zoo with research tours and presentations from members of The Royal Zoological Society of Scotland (RZSS)

Join us for an exciting day at Edinburgh Zoo! Edinburgh Zoo is home to the Royal Zoological Society of Scotland and more than 2,500 incredible animals from around the world. The mission of the zoo is to save wildlife and empower people in Scotland and around the world to protect, value and love nature.

On this trip you will have a personalised tour (just for ISAZ attendees!) of the research centres within the zoo, Living Links, and the Budongo Research Unit, hear about the research projects and public engagement activities that are currently happening within the zoo, and even witness some research in action! There will also be time for yourselves to wander around the zoo and spend time observing the wide range of animals the zoo is home to (including the infamous pandas, penguins, and giraffes) and of course, there will be time for the gift shop.

About the research centres: The Living Links to Human Evolution Research Centre is a cutting-edge field station and research centre, opened by Dame Jane Goodall in 2008, and welcomes researchers from all over the world. Living Links is a mixed species primate exhibit, housing brown capuchin monkeys and common squirrel monkeys, designed specifically for advancing our scientific knowledge on primate cognition, behaviour and welfare and the links with the evolution of human cognition. Living Links is also a centre for public engagement with science; all research can be watched and enjoyed by the visiting public and the centre is specially designed to enhance and engage the public's knowledge in primates and our own evolutionary origins. The Budongo Research Unit (BRU) is a cutting-edge research centre for advancing scientific knowledge on chimpanzee cognition and behaviour. Based in the innovative Budongo Trail enclosure at Edinburgh Zoo, the research can be watched and enjoyed by visitors to the zoo.

Timetable for the day:

| | |
|---------------|---|
| 10:30 | Arrive at the Zoo and meet in the reception area. We encourage you to wear your ISAZ lanyards so that we can easily identify the group. |
| 11:00-12:00 | Research tours begin (Budongo trail and Living Links). |
| 12:00-13:00 | Lunch |
| 13:00-15:00 | Research presentations. Please arrive slightly early to get a seat. Please note that these talks are also open to the general public. |
| 15:00 onwards | Own time to explore the zoo/gift shop. |
| 18:00 | Zoo closes |

Further information

Cost: \$20 USD

*Please note that the ticket price does not include lunch or travel. Please bring a packed lunch or you can buy lunch from the various cafes on site. More information on zoo facilities can be found

here: <https://www.edinburghzoo.org.uk/plan-your-visit/day-planner/restaurants-and-facilities/>

Please also note that your own transport needs to be arranged. Edinburgh Zoo can be easily accessed via public transport with high frequency bus services from Edinburgh city centre. The bus takes approx. 20 minutes from the city centre. Please see more information here: <https://www.edinburghzoo.org.uk/plan-your-visit/day-planner/how-to-get-here/>

If you are unable to ride on public transport and register for the zoo trip, please reach out to conferences@isaz.net

Maximum number of guests: 60 (two groups of 30)

Registration is only available to ISAZ 2023 delegates.

Registration is required. Delegates are sent registration code via email.

Workshops

Thinking Systemically: An Opportunity to Enrich Research in Anthrozoology

08:30 – 11:00 Thursday, 15th June, 2023

Location Prestonfield

Organisers:

Karen Luke, PhD Candidate, Central Queensland University

Wendy Newton, PhD Candidate, Central Queensland University

Engaging in scientifically diverse research and stepping away from reductionist approach may help accelerate the rate of discovery in anthrozoology. This workshop aims to introduce participants to the idea of systemic thinking (an epistemological approach where all forms of thinking and knowing are valued and contribute to ‘an ecology of minds’), and to facilitate participants’ insight into their own scientific paradigm. Participants will start with self-reflection and then work in small groups to experientially explore their diverse range of research approaches. The main activity will be scenario planning, where participants decide what they consider to be the biggest animal welfare challenge, explore how this problem might look in 2040, and how this should impact plans for research going forward. This workshop is aimed at graduate students, ISAZ members, and the interested general public.

Registration is required. Delegates are sent registration code via email.

Redefining “Training”: Exercises and Discussions in Horse-Human Interactions With a Horse-Led Approach

08:30 – 11:00 Thursday, 15th June, 2023

Location Holyrood

Organisers:

Emily Kieson, PhD, MS, PgDip, Equine International

Bonny Mealand, EP, Touching Wild

Most animal training methods focus primarily on behavioural shaping and operant conditioning. While this can be an effective, it may result in frustration or over-arousal and does not take into consideration the importance of social connection and reciprocal trust with the animal. This workshop offers insights and exercises that will challenge traditional approaches to handling horses, guiding participants through skills in animal-human interactions aligned with equine ethology, interspecies communication, consent, and choice. Participants will work individually and in groups to analyse their current methods, assess their goals and outcomes, and create a new, horse-led approach. Using video footage and alternative examples, participants will leave with new ideas and plans for implementing horse-led approaches to desired outcomes. This workshop is aimed at anyone who handles horses; participants are encouraged to come with a training, handling, or management goal with which they wish to work.

Registration is required. Delegates are sent registration code via email.

Reining in Anxiety: A manualised Riding Intervention using CBT for Children with Anxiety

08:30 – 11:00 Thursday, 15th June, 2023

Location Salisbury

Organisers:

Meghan Morrissey, MSW, NYU

Developing manualised equine assisted interventions can help ensure consistent delivery and is important for research to tease apart the mechanisms of change. This workshop will serve as a primer to learn about Reining in Anxiety (RiA), a 10-week intervention that integrates adaptive horseback riding and core elements of Cognitive-Behavioural Therapy (CBT) for youth ages 6-17 with anxiety. Participants will engage in a range of interactive didactic activities, including role play, discussion, and a chance to work through some of the activities on the programme. It is suitable for anyone who works in equine assisted services, collaborates with horses, or generally serves humans with anxiety in partnership with animals.

Registration is required. Delegates are sent registration code via email.

Managing Adverse Events in Animal Assisted Interventions

11:05 – 13:05 Thursday, 15th June, 2023

Location Prestonfield

Organisers:

Zenithson Ng, DVM, MS, University of Tennessee

Marcy Souza, DVM, MPH, MPPA, University of Tennessee College of Veterinary Medicine

Adverse events in animal assisted interventions are uncommonly discussed or reported, and little guidance exists to properly navigate these events. This workshop will provide attendees with knowledge and skills to manage adverse events in animal assisted interventions. Participants will learn to define types of adverse events, discussing what the most relevant information is for reporting. Using real examples with photos and video footage, participants will have a chance to practice filling out a sample adverse event reporting form and discuss outcomes with stakeholders. This workshop is aimed at anyone interested in animal assisted therapy.

Registration is required. Delegates are sent registration code via email.

A future focus for horse welfare and social licence to operate

11:05 – 13:05 Thursday, 15th June, 2023

Location Holyrood

Organisers:

Julie Fielder, PhD Candidate, University of Melbourne

Replacing the Five Freedoms model, the latest iteration of the Five Domains Model introduces a focus on positive welfare needs and includes agency, mental state and human–animal interaction. This workshop invites participants to work in small groups to consider how the Five Domains Model reshapes current concepts of welfare in the horse sector, and how this could be applied to their organisation or context by developing safeguarding approaches to welfare in order to meet societal expectations and maintain their social licence to operate. This workshop is aimed at all those involved in work in the horse sector including business owners, yard managers, veterinarians, and students who plan to undertake work in the horse sector.

Registration is required. Delegates are sent registration code via email.

Purrfect Partners: A Deep Dive Into Cat-Assisted Counseling

11:05 – 13:05 Thursday, 15th June, 2023

Location Salisbury

Organisers:

Elizabeth Hartwig, PhD, Texas State University

Cynthia Hodges, MEd, Peace Alcove

Cats can be very effective therapeutic partners, although their use in animal assisted interventions has received less attention than dogs and horses. This workshop explores different aspects of using cats in a counselling setting, including the qualities of a good therapy cat, an assessment protocol for cat counselling teams, and how to encourage clients to have positive interactions that increase human–cat affiliative behaviours. Participants will engage in experiential and interactive activities using videos that demonstrate CAC skills and training, and the organisers will facilitate some interventions so that participants have an idea of CAC interventions they can include in treatment plans. This workshop is aimed at any ISAZ members and graduate students.

Registration is required. Delegates are sent registration code via email.

Equine Facilitated Family Therapy for Parent-Child Dyads

[CANCELLED]

****This workshop has been cancelled due to personal circumstances. Kate Nicoll welcomes contact from any delegates to kate@soulfriendsct.org. You can also view one of her archived presentations here: [Equine Assisted Therapy with Children and Families: Exploring Connection after Loss and Trauma \(human-animal-interaction.org\)](#)**

Organisers:

Kate Nicoll, LCSW, Soul Friends, Inc

Horses provide an effective way of connecting with clients and working on themes of attachment, empathy and trust. This workshop is an exploration of the "Horses Inspire!" programme, a six session curriculum based on evidence based best practice to help caregivers and their children who are struggling with attachment disruptions. During this workshop, participants will be presented with family therapy case-examples and video footage while discussing how the programme helps clients in four main dimensions: affect regulation, attachment, attunement, and somatic present-moment affirmation. This interactive workshop includes role-playing, journaling, mindfulness and other activities, and is suitable for both clinicians and researchers.

Delivery, Implementation, and Research Evaluation of a School-based Equine Assisted Mental Health Intervention

15:15 - 16:15 Thursday, 15th June, 2023

Location Holyrood

Organisers:

Jennifer D'Agostino, PhD, MS, Rising Ground Inc., The Biondi Education Center

Debra Buny, MSW, Rising Ground Inc., The Biondi Education Center

The workshop will highlight lessons learned from a school-based equine-assisted mental health counselling intervention for students with disabilities who navigate a complex presentation of challenges including learning disabilities, mental health disorders, autism, communication deficits and a variety of deficits in social/emotional/behavioural development rooted in histories of trauma. The workshop will go through all the changes, challenges, and successes of the programme since it was launched in 2017. There will be an opportunity share best practice, and discuss feasibility challenges for those who wish to start such a program. The workshop is appropriate for all attendees, and organisers welcome especially those who would be interested in collaborative research.

Registration is required. Delegates are sent registration code via email.

Art of the Other: Human Animal Live Drawing

13:00 - 15:00 Friday, 16th June, 2023

Location Duddingston

Organisers:

Maija Esko, MA, University of Turku

Drawing and modelling are a way to concentrate on seeing the other, connecting, feeling and seeing. Working individually for a drawing component, this workshop offers a platform for communication and creative expression. Using art education as a framework there will be an opportunity to showcase work and reflect on the experience. Open to all.

Registration is required. Delegates are sent registration code via email.

Pets & Housing: Global Challenges and Solutions

09:00 – 11:30 Sunday, 18th June, 2023

Location Holyrood

Organisers:

Elizabeth Ormerod, BVMS, Society for Companion Animal Studies (SCAS)

Sandra McCune, VN, BA (Mod), PhD, University of Lincoln

Pet keeping in rental accommodation can be very challenging and is compounded by the emerging housing crisis, with most landlords prohibiting pets, rules being inconsistent and illogical, and with laws that are prohibitive on a global scale. A lack of access to pet-friendly housing remains relatively understudied, despite its impact on the human-animal bond, human mental health, and pet relinquishment. This workshop will present some of the research carried out on this topic by the Society of Companion Animal Studies, and participants answers to a series of questions around pet and housing in their own countries will be incorporated into a whitepaper being developed by the international steering group on Pets and Housing Issues. This workshop is aimed at a broad audience including health and social care professionals, housing providers, anthrozoologists, animal welfarists, politicians, and the general public, and aims to encourage transdisciplinary collaboration.

Registration is required. Delegates are sent registration code via email.

One Welfare Phoenix Project: the links between animal and human abuse and neglect

09:00 – 11:30 Sunday, 18th June, 2023

Location Salisbury

Organisers:

Rebecca Garcia Pinillos, One Welfare CIC

Gilly Mendes Ferreira, One Welfare CIC / Scottish SPCA

The workshop will be part of the evidence gathering for the One Welfare Phoenix project on the interconnections between animal and human abuse and neglect in four distinct areas: working animals, companionship, farming, and free roaming. Participants will cover the concept of One Welfare and the links between human and animal wellbeing, and will then work in groups to discuss how this applies to the four areas, sharing any examples or experience they have and discussing information on how to identify non-accidental animal abuse. This workshop will feed into a broader project to globally reduce violence and disseminate guidelines to help professionals identify and report the link between animal, human, and environmental abuse and neglect, and is aimed at anyone interested in this topic.

Registration is required. Delegates are sent registration code via email.

Saying Goodbye to Assistance Dogs: Psychological and Practical Challenges

11:45 – 12:45 Sunday, 18th June, 2023

Location Holyrood

Organiser:

Grainne O'Connor, PhD, The Open University

Assistance Dogs have had an increasing role in helping people living with a wide range of physical, sensory, and intellectual disabilities and mental illness. This workshop aims to provide information about the experiences of those who live with assistance dogs and the psychological and practical challenges they face at the end of these extraordinary relationships. Insights from a National lottery funded bereavement aftercare service recently developed in the North of England will be shared. Participants will use role play, personal narrative, and work together to develop a draft framework relevant to their area of work or interest to take away tips and tricks on how to support clients distressed by this issue. This workshop is aimed at anyone who is interested in, or works with, assistance dogs.

Registration is required. Delegates are sent registration code via email.

The Science of Reading: Incorporating Therapy Dogs in Reading Interventions for High School Students

11:45 – 12:45 Sunday, 18th June, 2023

Location Salisbury

Organisers:

Caitlin Scott, MS, Rising Ground

Cassandra Lella, MSeD, Rising Ground

The Covid-19 pandemic has had a profound negative impact on literacy rates worldwide, which has disproportionately affected vulnerable populations. This workshop provides an overview of a program developed based on the Science of Reading, in which a Special Education Teacher, a Speech-Language Pathologist, a dog trainer, a Mental Health Specialist and a canine partner collaborate to provide a group intervention for high school students with reading/language disabilities. Participants will work through interactive examples using high and low tech alternative/augmentive communication systems, supplemented with video data and concrete/practical examples of how to teach reading comprehension with the support of a canine and their handler. The workshop is appropriate for all attendees, and organisers welcome those who would be interested in collaborative research.

Registration is required. Delegates are sent registration code via email.

Abstracts

Thematic Oral Presentation Sessions

Canine-Assisted Interventions for Adults

15:15 – 16:45 Thursday, 15th June, 2023

Location Pentland

Chair Kerri Rodriguez

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

155 A pilot randomized clinical trial of a canine-assisted intervention demonstrates reduced loneliness, anxiety, and improved mood in hospitalized older adults

Nancy R. Gee¹, Lisa Townsend¹, Erika Friedmann², Megan K. Mueller³, Sandra Barker¹

¹Virginia Commonwealth University, School of Medicine, Center for Human-Animal Interaction, Richmond, VA, USA. ²University of Maryland, Baltimore, School of Nursing, Baltimore, MD, USA. ³Tufts University, Cummings School of Veterinary Medicine, North Grafton, MA, USA

Introduction

Loneliness is linked to significant health threats and is potentially more dangerous than obesity. Loneliness affects as many as 29% of noninstitutionalized older adults. Loneliness is exacerbated for those who require inpatient rehabilitation, are displaced from their social networks, spend little time receiving therapy, and are physically inactive and socially isolated. Emerging evidence suggests that companion animals provide a number of health and wellbeing benefits and that interacting with a trained therapy dog may reduce loneliness.

Method

Older adult (50+ years) medical in-patients (N=45) were randomly assigned to receive one of three conditions: dog+handler interaction (AAI), handler-only Conversational Control (CC), or Treatment as Usual (TU), for 20 minutes per day over three days. Loneliness (UCLA Loneliness Short Form-UCLA-SF and an analog rating 1-100 of the statement “I feel lonely”), mood (Smiley Face Assessment Scale- SFAS), and anxiety (State-Trait Anxiety Inventory-5-STAI-5) were measured pre-post intervention each day.

Results

Linear Mixed Models or Generalized Linear Mixed Models (presence of anxiety) with random intercepts were applied to examine differences in the changes from before to after the conditions. Changes in the UCLA-SF [$t(195.357)=1.862$], the analog loneliness scale [$t(192.117)=1.823$], FAS [$t(196.962)=-1.784$], and the presence of anxiety [$F(1,230)=10.478$] differed significantly between the AAI condition and the TU conditions (one-tailed p 's <0.05) but not between the CC and TU conditions. Trajectories of changes in loneliness, mood and the presence of anxiety showed more improvement in the AAI than in the TU condition.

Discussion

These results indicate that a dog+handler interaction is effective for reducing loneliness and anxiety and improving mood in hospitalized older adults. Human handler only visits did not result in similar findings, indicating that there is something unique and beneficial about the presence of the dog.

4 Psychiatric service dog placements are associated with better daily psychosocial functioning for military veterans with PTSD

Sarah C Leighton¹, Kerri E Rodriguez², Run Zhuang³, Clare L Jensen³, Elise A Miller³, Arman Sabbaghi³, Marguerite E O'Haire¹

¹University of Arizona, Oro Valley, AZ, USA. ²Colorado State University, Fort Collins, CO, USA. ³Purdue University, West Lafayette, IN, USA

Introduction: Posttraumatic stress disorder (PTSD) is common among military personnel, often leading to challenges with psychosocial functioning. Research has shown that psychiatric service dog placements may benefit psychosocial functioning for veterans with PTSD, however, these effects have never been examined directly in daily life. This non-randomized longitudinal clinical trial used ecological momentary assessment (EMA) to quantify the therapeutic efficacy of psychiatric service dogs for daily psychosocial functioning among N = 168 US veterans with PTSD.

Methodology: EMA data were collected twice daily for two weeks at each assessment period (0 and 3 months), for a total of 9,408 survey responses (2 assessment periods x 14 days x 2 prompts x 168 participants). Regression analysis was used to examine associations between service dog placement and psychosocial functioning at follow-up.

Main results/findings: Service dog placement was associated with better perceived quality of social interactions ($\beta = 0.42$, $p < .05$) and emotional functioning in all areas, including better affect (lower negative affect: $\beta = -2.64$, $p < .001$; higher positive affect: $\beta = 2.44$, $p < .001$) and lower odds of panic attacks (OR = 0.68, $p < .05$). Social participation results were mixed: placements were associated with greater activity participation ($\beta = 3.21$, $p < .001$) but lower odds of being away from home (OR = 0.77, $p < .05$). Results further revealed that the service dog's trained tasks may be particularly important for social outcomes, whereas the service dog's presence may be more important for emotional outcomes.

Principal conclusions and implications for the field: We found possible support for anecdotes that unwanted attention and stigma in public act as obstacles to community participation, highlighting a need for education surrounding service dog etiquette and rights. Findings reveal support for and potential mechanisms underlying the complementary intervention of psychiatric service dog placements.

210 Effects of the program “My Animal, My Friend” an Animal Assisted Education (AAE) Program of animal welfare for women in social risk conditions in Antioquia (Colombia)

Paula Calvo¹, Raquel Montes², Julio C Aguirre³, Sara Jaramillo⁴, Elizabeth Laverde⁴, Pilar Jaramillo⁵, Nuria Máximo²

¹Chair Animals and Society, Madrid, Madrid, Spain. ²Universidad Rey Juan Carlos, Madrid, Madrid, Spain.

³Universidad CES, Medellín, Antioquia, Colombia. ⁴Fundación Instintos, Medellín, Antioquia, Colombia. ⁵Fundación Instintos, Medellín, Madrid, Colombia

Introduction:

In 2021 the Antioquia Government asked “Fundación Instintos” to develop an AAE program for women in social risk in 20 municipalities.

The program was called “My animal, my friend” and consisted of taking 20 women in social risk of every municipality to be trained in animal welfare in the local animal shelters.

The objective was to empower the women with this training, by turning them into referents of animal welfare in their communities.

Methodology:

Twenty women for each of the 20 involved municipalities were recruited for the AAE program, which consisted of 16h of training in an animal shelter and 12h of online training on the topic of animal welfare. And, afterwards, those women went to a school of their municipality to teach animal welfare to children in a workshop.

Before and after the EEA program women fulfilled a questionnaire which included validated scales for self-esteem, attitudes toward dogs and social skills. And children fulfilled a questionnaire (pre and post workshop) of attitudes towards dogs.

Participants also fulfilled a satisfaction questionnaire after the program.

Welch T-Tests were developed to compare pre and post-program data.

Main results/findings:

236 women and 286 children participated in the program.

No statistical significant difference was found between pre and post conditions for women participating in the AAE program for any of the three scales.

Women scored 9.8/10 (mean) in satisfaction for the AAE program.

Children showed a significant improvement in attitudes towards dogs after the AAE workshop (p value=0,03267).

Children scored 9.7/10 (mean) in satisfaction for the workshop.

Principal conclusions and implications:

This EAA program seems to be useful to improve children attitudes towards dogs, thanks to referent women trained in animal welfare.

More research on effects on women should be done, since they showed high satisfaction for the program, but scales didn't detect changes.

190 Effects of an Animal-Assisted Drop-in Visitation Program on First Semester University Students' Trajectories of Psychological Wellbeing

Alexa MCarr, Patricia Pendry

Washington State University, Pullman, WA, USA

Introduction: In response to university students' reports of mental health disparities and separation anxiety from pets, many universities offer animal visitation programs (AVPs). Despite the popularity and demonstrated efficacy of brief one-time AVPs, virtually nothing is known about the effects of expanding frequency and access to AVPs on students' psychological wellbeing.

Methodology: This RCT assessed psychological mood among a randomly selected sample of first semester university students (n=145) separated from their pet(s). Students were randomly assigned to access a program featuring seven, 2-hour-long, biweekly drop-in AVP sessions during their first semester (n=77) or a waitlisted control (n=68). The slope of each participants' trajectory of symptoms of depression, anxiety, worry, perceived stress, cognitive reappraisal, expressive suppression, and self-compassion were calculated based on assessments conducted at three time points (beginning, middle and end of term). Using regression analyses, the

slopes of these trajectories were modeled on treatment condition, presence of high separation anxiety from their pet, and attendance frequency.

Main Results/Findings: Results showed that random assignment to the AVP predicted steeper negative trajectories for symptoms of depression ($B=-3.05$, $p=0.01$, $d=0.514$), worry ($B=-3.92$, $p=0.04$, $d=0.416$), perceived stress ($B=-1.94$, $p=0.05$, $d=0.386$) compared with trajectories of waitlisted students, but not expressive suppression ($B=-1.62$, $p<0.11$, $d=0.32$). AVP participants showed steeper positive trajectories of self-compassion ($B=4.03$, $p<0.001$, $d=0.605$). Results demonstrate that bi-weekly, semester-long AVP participation significantly improved students' mood and wellbeing over the course of the semester.

Conclusions & Implications for the Field: Regular drop-in programs with therapy dogs can promote students' psychological wellbeing during the transition to college when their usual coping resources such as interactions with their own pet are not available.

Thematic Oral Presentation Session: Children, Animal-Assisted Interventions and Pets

09:00 – 10:30 Friday, 16th June, 2023

Location Pentland

Chair Roxanne Hawkins

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

196 Effectiveness of Equine-Assisted Activities and Therapies (EAAT) for Children with Autism and Cerebral Palsy: A Systematic Review of Research

Nathasha H Don, [Lindsey H Roberts](#)

University of Buckingham, Buckingham, Buckinghamshire, United Kingdom

Introduction: Anecdotal evidence exists to promote the inclusion of animals in interventions for children with various disabilities to promote the psychological and physical health benefits (Davis et al., 2009; Llambias et al., 2016; Srinivasan, 2018; Menor-Rodríguez et al., 2021), but particularly, for children diagnosed with autism spectrum disorder (ASD) and cerebral palsy (CP)). Equine assisted activities and therapies (EAAT) have shown promising results in relation to enhanced social communication and adaptive behaviour in children with special educational or developmental needs (SEND; Chen et al., 2022 & Lightsey et al., 2021). For this reason, this systematic review explores the evidence surrounding EAAT's in relation to improving the psychological and/or physical well-being of children who are diagnosed with ASD or CP.

Methodology: A systematic literature review was performed through EBSCO and Cochrane to identify, retrieve and assess relevant journals and their published outcomes. All articles were evaluated in accordance with PRISMA guidance and the JADAD criteria for quality.

Main results/ findings: 21 articles were identified, with a total of eight included in the final review ($n=5$ for ASD, $n=3$ for CP). Results demonstrated that equine therapy provides benefits in terms of behavioural outcomes/ well-being for children with ASD (e.g., social functioning, self-regulation and communication) and most notably, physical symptoms for children with CP (e.g., gross motor skills and hip adductor spasticity).

Principal Conclusions and Implications for the field: Reviewed studies demonstrated that equine therapy does indeed have the ability to improve children's psychological, social and physical functioning. Findings are in line with previous evidence demonstrating enhanced social functioning and a reduction of self-regulating behaviours for the children assessed in these studies (Berg & Causey, 2014; Llambias et al., 2016 & Srinivasan et

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al., 2018), further advocating the need for further equine-assisted interventions to support the psycho-social and physical needs of children with SEND.

100 A more systemic perspective on the benefits of service dog on children with ASD and their families.

Nicolas Dollion¹, Association Handi'Chiens², Fondation Mira³, Florian Auffret², Nathe François³, Pierrick Plusquellec⁴, Marine Grandgeorge⁵

¹Laboratoire C2S, University of Reims Champagne-Ardenne, Reims, France. ²Association Handi'Chiens, Paris, France. ³Fondation Mira, Ste-Madeleine, QC, Canada. ⁴Laboratoire d'observation et d'éthologie humaine du Québec, Montréal, QC, Canada. ⁵Laboratoire Ethos, University of Rennes, Rennes, France

Integration of a service dog (SD) can have numerous benefits for children with Autism Spectrum Disorder (ASD). While this integration take place within a family, little is known concerning the dynamic of those benefits and their impacts on this whole family microsystem. Our study's aim was thus to propose a more systemic perspective, by traditionally investigating the benefits of SD integration, but also by exploring the relationships between children with ASD's improvements, parents' emotional outcomes, parenting strategies and child-dog relationship quality.

Nineteen parents of children with ASD were followed before, 3 and 6 months after SD integration (from the Mira Foundation or the Handi'Chiens Association). At each follow-up, parents completed an online survey including: Autism Behavior Inventory (ABI), State-Trait Anxiety Inventory (STAI_Y), Parenting Stress Index Short Version (PSI-SF), Monash Dog Owner Relationship Scale (MDORS) and Parenting Styles and Dimensions Questionnaire (PSDQ).

First, repeated measure ANOVAs revealed that both children's ASD symptoms (ABI; $p=.001$) and parents' anxiety (STAI-Trait; $p=.037$), decreased significantly after SD integration. Additionally, Spearman correlations revealed that the more ASD symptoms decreased (ABI), the more parental stress and anxiety also decreased (STAI-Trait and PSI-SF) (all $p<.05$). Second, child-dog relationship quality appeared to contribute to those benefits. For example, higher children's emotional closeness with their SD (MDORS) correlated with a higher reduction of their ASD symptoms (ABI; $p=.004$) and a higher parent's stress reduction (PSI-SF; $p=.032$) after 6 months. Interestingly, parenting strategies seemed to adapt according to those benefits and to child-dog relationship quality. For example, parents resorted less to authoritarian strategies when their child had a less costly relationship with the SD ($p<.001$ after 3 and 6 months).

Throughout a more systemic perspective, this study highlighted that integration of a SD involved reciprocal and dynamic benefits for children with ASD and their parents, and that it may also have effects on parenting strategies.

173 Child and Animal Emotion-Recognition and Empathy Scale (CARES): A novel measure of empathy towards people and animals across development

Laura Wauthier, Monja Knoll, Joanne Williams

University of Edinburgh, Edinburgh, United Kingdom

Introduction: Empathy is a complex construct, and low empathy is a criterion for many externalising disorders and is linked to animal cruelty. Currently there are no validated measures of animal-directed empathy for use in childhood, so the aim of this study was to develop a new measure of human- and animal-directed empathy.

Methods: The novel, picture-based measure explores empathy towards children and animals and covers cognitive, affective, and behavioural dimensions. Using 14 images, it counterbalances basic emotions (happy, sad, scared, angry, and neutral), cats and dogs, and girls and boys. The full set of images was tested with a sample of 835 adults using a self-report online questionnaire, alongside existing measures of human-directed (Basic Empathy Scale; BES) and animal-directed empathy (Animal Empathy Scale; AES). A subset of four images was tested with a sample of 156 primary school children ages 5-11 using coded free-response in a pencil-and-paper questionnaire.

Results: The adult study showed good convergent validity: child-directed cognitive and affective empathy correlated with cognitive ($r=0.175$, $p<0.001$) and affective BES dimensions ($r=0.316$, $p<0.001$). Animal-directed cognitive ($r=0.172$, $p<0.001$), affective ($r=0.304$, $p<0.001$), and behavioural ($r=0.497$, $p<0.001$) empathy all correlated to AES score. Regressions show differences between males and females, pet-owners and non-pet-owners, and those with and without children. The child sample had good test-retest reliability across the six dimensions (all $r's>0.25$, $p's<0.01$). Girls scored higher than boys on affective empathy (child-directed: $t(134)=-2.053$, $p=0.042$; animal-directed: $t(134)=-3.522$, $p=0.001$) and cognitive empathy towards animals ($t(134)=-2.713$, $p=0.008$). Child- and animal-directed cognitive and behavioural empathy increased with age (all $r's>0.33$, $p's<0.001$), but affective empathy did not.

Conclusions and Implications: This is a promising new tool for the measuring how child- and animal-directed empathy dimensions change through development and with demographic factors.

102 Children's behaviour towards pets: the role of behavioural and emotional problems and attachment to pets

Unaiza Iqbal, Joanne M Williams, Monja A Knoll

University of Edinburgh, Edinburgh, United Kingdom

Introduction: This study aimed to investigate the association between children's behavioural and emotional challenges and their treatment of animals. Furthermore, it investigated the mediating role of children's attachment to pets (and behavioural and affective components of attachment) on the association between children's behavioural and emotional challenges, prosocial behaviours, and their treatment of animals.

Methodology: The data was collected using online parent-report measures by a sample of 675 ($M=36.65$, $SD=8.20$) parents who provided information on their children. The measures included the Strengths and Difficulties Questionnaire (SDQ), the Pet Attachment Scale-parent report and the Children's Treatment of Animals Questionnaire (CATQ).

Results: Children's total attachment to pets ($\beta=-.18$, $p<.05$) and behavioural and affective components of attachment ($\beta=-.18$, $p<.05$) significantly mediated the association between externalising problems and children's treatment of animals. By contrast, children's total attachment to pets (and behavioural and affective

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components of attachment did not mediate the association between internalising problems and children's treatment of animals. Finally, the results showed that children's prosocial behaviours had a significant indirect effect on children's treatment of animals through the mediators of total pet attachment ($\beta = .39, p < .05$) and the behavioural and affective components of attachment ($\beta = .41, p < .05$).

Implications: Higher externalising problems are associated with weaker attachment to pets and poorer treatment of animals. Higher levels of prosocial skills were associated with higher levels of pet attachment and more positive treatment of animals by children. Children's poor treatment of animals could reflect underlying behavioural or emotional difficulties and low attachment to pets. Efforts to promote positive childhood behaviour towards animals need to engage with children's behavioural and emotional difficulties.

Thematic Oral Presentation Session: Shelter Animals & Pet Adoption

09:00 – 10:30 Friday, 16th June, 2023

Location Prestonfield

Chair Emma K. Grigg

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

126 Home-to-home rehome: Predictors of successful diversion of cats and dogs away from animal shelter intake through a self-rehoming website

Lexis H Ly, Alexandra Protopopova

University of British Columbia, Vancouver, British Columbia, Canada

Introduction: As animals experience distress in animal shelters, leaders call for increased efforts to divert intake of companion animals away from shelters. One novel intake diversion strategy is supported self-rehoming, where owners find new homes for their animals without surrendering to a physical shelter. This study aimed to identify predictors of successful diversion of animals through the AdoptaPet.com 'Rehome' online platform.

Methodology: Data for dogs ($n = 100,342$) and cats ($n = 48,484$) listed on 'Rehome' from January 1, 2017, until May 21, 2021, were analyzed through logistic regression to assess the association between both animal-related (e.g., age, breed, behavioural tendencies) and owner-related (deadline for rehoming, reason for rehoming) factors and diversion versus relinquishment to a shelter.

Main Results: Overall, 87.1% of dogs and 85.7% of cats were successfully diverted from animal shelters, out of which, 37.8% of dogs and 35.3% of cats were kept by their original owner. Multiple animal-related factors predicted increased odds of diversion (e.g., younger, smaller). Dog and cat owners who set a longer rehoming deadline (i.e., > 8 weeks) were over twice as likely to keep or adopt out their animal. Dog owners who surrendered for owner-related reasons had increased odds of diversion in comparison to animal behaviour issues.

Implications for Field: We conclude that online supported self-rehoming platforms provide pet owners with an alternative to relinquishment that may reduce the intake of animals to shelters; however, owners with animals that are not preferred by adopters may have to decide whether to keep their animal or relinquish their animal to a shelter or rescue. These results provide guidance for animal shelter professionals on the likelihood of successful diversion programs given certain animal and owner characteristics.

References: Ly, L.H. & Protopopova, A (2023, In Press). Predictors of successful diversion of cats and dogs away from animal shelter intake: Analysis of data from a self-rehoming website. *Animal Welfare*.

13 The motivations of foster caregivers at animal shelters

Lauren Powell, Roxy Ackerman, James Serpell, Chelsea L Reinhard, Brittany Watson
University of Pennsylvania, Philadelphia, PA, USA

Introduction: Animal shelters often use foster care programs, where volunteers temporarily house shelter animals, to improve animal welfare and maximize their capacity to save animals' lives. Despite these benefits, foster care programs also demand a great deal of time for staff to train, manage and support foster caregivers. The goal of this study was to explore the motivations and expectations of foster caregivers to aid animal shelters in recruiting new caregivers and better supporting existing caregivers.

Methodology: Between March–December 2022, 97 foster caregivers from six animal shelters in the United States completed an online survey up to seven days before taking a foster animal/s home. We then used ordinal logistic regression models to investigate associations between caregivers' motivations for providing foster and their prior foster experience, pet ownership history, age, gender, and foster animal species.

Main results/findings: The most common motivations for providing foster care were animal- or community-based, such as the desire to provide a good home for an animal or do something positive for the community. Human-related motivations, such as the need for companionship and emotional support, were less common but showed significant associations with human and animal characteristics. The highest odds of expecting companionship (OR 7.84, 95% CI 2.48–24.81) and emotional support (OR 4.45, 95% CI 1.41–14.09) were seen among 18–29-year-old caregivers compared with those aged 50 or older. Dog foster caregivers and non-pet owners also showed greater odds of expecting companionship and emotional support.

Principle conclusions and implications for the field: This study highlights the importance of animal- and community-related benefits for foster caregivers and provides useful direction for shelters wanting to expand their foster care programs. Caregivers varied in their expectations for human benefits which could impact their satisfaction with the foster care experience and their willingness to provide care for future shelter animals.

90 The effect of daily gabapentin on behaviour modification progression and signs of stress in fearful shelter cats rescued from hoarding environments

Bailey H Eagan¹, Karen van Haaften², Alexandra Protopopova¹

¹Animal Welfare Program, Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC, Canada. ²American Society for the Prevention of Cruelty to Animals, Toronto, ON, Canada

Introduction. Minimizing negative affective states is critical to cat health and welfare in a shelter. This study aimed to evaluate the impact of daily gabapentin on behaviour modification progression and signs of stress in fearful shelter cats from hoarding environments.

Methodology. 32 healthy fearful cats (*Felis catus*) were entered into group 1) gabapentin or 2) placebo upon intake. Both groups received daily standardized behaviour modification, aiming to decrease fear of humans and increase positive human interaction. Cats received 10mg/kg of gabapentin or placebo every 12 hours. Daily measures of Cat Stress Score, latency to emerge from hiding, general in-shelter behaviour, and urine suppression were collected. Post-adoption surveys assessed cat social behaviour. A Cox proportional-hazard

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model was used to evaluate the effect of gabapentin on time to behaviour modification graduation. Mixed-effect modelling was conducted to assess the effect of gabapentin on the Cat Stress Score, latency to emerge, and general-in-shelter behaviour. To assess the impact of gabapentin on urine suppression, a Wilcoxon-signed rank test was conducted.

Main Results. 28/32 (87.5%) cats graduated in a median of 11 days (range 4–51). Gabapentin predicted quicker behaviour modification progression (HR=4.03, 95% CI=1.31 – 12.4, p=0.015) and lower Cat Stress Score (OR=0.24, 95% CI=0.07 – 0.79, p=0.019), latency to emerge (OR=0.13, 95% CI=0.03 – 0.59, p=0.008), and urine suppression (p=0.027, r=0.54) compared to placebo. The median time to graduation was reduced by half with gabapentin. No differences were observed between groups for general in-shelter behaviour. Among limited survey respondents (n=7), despite showing unsocial behaviour in the first week and among unfamiliar people, cats showed social behaviour one-year post-adoption.

Principal Conclusions and Implications. Fearful cats from hoarding environments can be successfully treated with behaviour modification +/- daily gabapentin within an animal shelter. Daily gabapentin was beneficial in behaviour modification progress and reduced signs of stress in shelter cats.

194 Adopting a rescue dog from Romania: a cross-sectional survey to identify factors that reduce the likelihood of the dog being a 'perfect fit' for the adopter's household

Parizad Baria-Unwalla¹, Carri Westgarth², Louise A Buckley¹

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²Institute of Infection Veterinary and Ecological Sciences, University of Liverpool, Liverpool, United Kingdom

Introduction

Importation of rescue dogs from Romania to the UK to be rehomed as pet dogs is a growing trend that has concerned animal professionals and led to failed adoptions. Therefore, this study aimed to identify characteristics that reduce the likelihood of the dog being perceived as a perfect fit for the adopter's household and lifestyle.

Methodology

A cross-sectional open survey with a social media-based convenience sampling method was disseminated in 2019 and targeted UK adults who had adopted a rescue dog from Romania during the previous five years. A 4-point Likert-type scale assessed the 'fit of the dog' from perfect fit to terrible fit. This was converted to a binary outcome (perfect fit versus less than) for risk factor identification via multivariable logistic regression analysis.

Main results/findings

Of 1727 usable responses, 59.2% reported that the dog was a perfect fit for their household/lifestyle, 34.7% had some manageable issues, 10.7% struggled, and 1.7% said the dog was a terrible fit. Pre-adoption risk factors for being a less than 'perfect fit' included: not being given the full behavioural picture of the individual dog (p<0.001) and not being provided sufficient information across five key standardised indices combined (cats/dogs/children/familiar and unfamiliar people) (p=0.008). Post-adoption risk factors included aggressive (p=0.001) or fearful (p<0.001) behaviour, negative interactions with other dogs (p=0.003) or causing damage/inconvenience to the adopter's property (p=0.001). Finally, adopters taking one week or longer to make the adoption decision (p<0.001) or the dog being larger than small-sized (p<0.001) were associated with being a less than 'perfect fit'.

Principal conclusions and implications for the field

The Romanian dog rescue process needs to include behavioural assessments to identify the most suitable dogs for the UK pet market, and provide sufficient behavioural information to allow prospective adopters to make informed decisions regarding the right dog for them.

Cats-Human Relationships

13:00 – 14:30 Friday, 16th June, 2023

Location Pentland

Chair Roxanne Hawkins

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

137 More than one way to feed a cat: human-cat relations and cat feeding in the Anthropocene

Virginia Thomas

University of Exeter, Exeter, United Kingdom

Introduction: My research explores human-cat relationships in Britain as mediated through food and feeding. Human-cat interactions are a product of the way cats are categorised but also contribute to the categorisation process. Cats range along the wild-domestic spectrum with the European wildcat at one end and the domestic cat at the other, while hybrid and feral cats occupy a liminal space between the two poles. I examine how the wild-domestic status of cats is both a determinant and a result of how they are fed.

Methodology: I conducted semi-structured interviews with stakeholders involved in the reintroduction of the European wildcat to Britain to tease out drivers and consequences of conservation feeding of cats, whether of wildcats as part of captive breeding programmes or of feral domestic cats for trapping purposes. Interviews were thematically coded using NVIVO and analysed via theories of boundary work, biopolitics and companion species.

Findings: Wildcats involved in captive breeding programmes are fed in elaborate and sophisticated ways to foster positive yet distant human-cat relations, nurture hunting instincts and promote natural behaviour. Meanwhile feral domestic cats are fed in order to lure them into traps so that they can be neutered and vaccinated to minimise the threats they pose to wildcats through interbreeding or disease transmission. In each case food and feeding are brokering human-cat relationships which involve very different kinds of care depending on how the cats involved are classified.

Conclusions: As the traditional wild/domestic dichotomy is increasingly blurred in the Anthropocene we find ourselves coexisting with animals in new ways and the act of feeding allows us to demonstrate care for and about these animals in very different ways. This creates the opportunity for us to rethink human-animal relations in ways that allow for mutual flourishing in the Anthropocene. Further research could explore these relationships with other species and/or in other countries.

37 When the cats come out to play: Factors associated with play and human-cat interactions

Julia SL Henning, Torben Nielsen, Eduardo J Fernandez, Susan Hazel

The University of Adelaide, Adelaide, South Australia, Australia

Introduction: Play is a common behaviour that may have numerous benefits, including social cooperation and inter-species communication. Little is known about human-cat play interactions and how it impacts both cats and their guardians. The current study aimed to investigate play times in human-cat dyads, play factors associated with cat welfare and human wellbeing and guardian perceptions of play.

Methods: An online survey was developed including demographic information, questions related to play times and types, resources available to the cat, “games” played with the cat, free text questions and the validated measures: cat quality of life (QOL), the cat owner relationship scale (CORS) and the human adult playfulness trait scale (APTS). Regression analysis was conducted using SPSS 26. Guardian perceptions of play were assessed using reflexive thematic analysis.

Main Results: Responses were completed by 1591 cat guardians from 55 countries. Higher cat playfulness scores and greater number of games played were significantly associated with higher cat QOL scores while longer amounts of daily play, greater number of games, both cat and guardian initiating play and higher guardian playfulness scores were all significantly associated with higher CORS scores. Behavioural changes associated with distress in cats were reported when play was absent. Themes identified in the free text responses included Play and ageing, What is play anyway?, Play as ritual or routine, and, Bonding through play.

Principal conclusions and implications for the field: Play is a behaviour that may assist in establishing and maintaining healthy human-cat relationships, which in turn may improve cat welfare and human wellbeing. Further research into the mechanisms of how play impacts human-cat dyads and how this behaviour can be applied functionally in practice is needed.

117 Did anyone ask the cats? Using speculative fiction to explore the feline perspective on guardianship and agency

Kris Hill

University of Exeter, Exeter, United Kingdom

Introduction:

Using a case-study approach, I asked how different cats (*Felis catus*) might respond to key themes that emerged from the first phase of my study on urban cat-human relations (presented previously). Namely, notions of guardian responsibility and feline agency.

Methodology:

Case-studies comprised of six multi-species families and two examples of relationships formed with roaming cats. Feline biographies were reconstructed from unstructured interviews, supplemented with photos and videos, and informed by feline personality assessments. By employing elements of narrative ethology and philosophical ethology, I applied ‘speculative fiction’ as a research method. Originally defined as a literary super-genre, speculative fiction asks the question, ‘what if?’ I asked, what if I could look through the feline lens and translate that to other humans?

Main results/findings:

My previous research described different styles of ‘pet parenting’ that viewed cats on a spectrum from child-like dependents who need protecting to free-agents who should be able to roam freely. Grounded in a knowledge of the individual cats I speculated that some would reject any attempts to confine them, while others sought out home comforts from humans. The reflexive practice I employed while engaging with speculative fiction also provided insight into how I engage with and form relationships with cats.

Principal conclusions and implications for the field:

I present an alternative and complementary way of examining research related to feline welfare and cat-human relations. A species-wide approach to welfare often overlooks the individual and their unique circumstances. By dropping the pretence of being factual or accurate, speculative fiction can be used to interrogate normative notions about reality. As a research method, speculative fiction encourages attention to be focused on an individual. As such, it has the potential to be used in educational contexts to foster empathy with other animals or in practice to assess individual welfare needs.

50 The “Aunty-Phenomenon” – Distinctive Caring Behaviors and its Effects on the Human-Animal Bond

Christine Krouzecky, Birgit Ursula Stetina

Sigmund Freud University, Vienna, Austria

Introduction. Studies report increasingly contradictory results regarding the bio-psycho-social effects of animals on humans, and it seems that they are particularly evident in times of crisis. Findings indicating no effect or even a negative effect inevitably confront us with the question of whether we have so far overestimated the positive effects of animals on humans (see Pet-Effect-Paradox, Hal Herzog, 2020). But how do previous findings on animal assisted work (including our own research) fit into that picture? What do we need to investigate the ambiguity of human-animal relationships? What is the role of external stressors (challenging circumstances)?

After a series of studies searching for the concurrent answers, we propose an explanation we call the “Aunty-Phenomenon”.

Methodology. Using mixed-methods designs, several online surveys were conducted over the course of the last four years to investigate how animal caregivers perceive their relationship with pets during a period characterized by multiple stressors (e.g., COVID-19 pandemic and Long-Covid). Additionally, bio-psycho-social effects that might be associated with the human-animal bond were calculated. A total of 842 datasets were included in statistical and qualitative analyses.

Results. Overall, the results show that animal companionship might create an additional burden, especially when confronted with external stressors. The quantitative results are contradicted by our qualitative findings, indicating that individuals experience their animals as relevant bio-psycho-social resources.

Principal conclusions and implications for the field. It appears that the level of responsibility is of particular importance for various effects of the human-animal bond. Animal husbandry and AAI or short-term interactions with animals vary with regards to responsibility. Animal companionship can even be associated with stressors that cannot be verbally symbolized. We introduce the term “Aunty-Phenomenon” to illustrate this dynamic within the human-animal relationship.

Farm Animal-Human Interactions

13:00 – 14:30 Friday, 16th June, 2023

Location Prestonfield

Chair Steve Loughan

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

181 Feathered ambassadors: Stories of how backyard chickens are causing a shift toward a kinder coexistence.

Ashley J McFalls, Margaret Mailey, Alivia Fritz, Rachel Casella, Igor Osadchyi

Lebanon Valley College, Annville, PA, USA

Introduction: The act of owning animals often elicits a sense of wonder and a recognition of sentience. Indeed, interaction with an animal has been shown to predict empathy towards that species. The aim of this study was to investigate whether having chickens causes a person to make more ethical food consumption choices and the factors that predict this relationship

Methodology: Our survey included questions regarding egg, chicken and meat consumption before and after chicken ownership, awareness of chickens to experience emotion before and after ownership, personality factors, level of attachment, and participants' attitudes towards animal exploitation. We also asked open-ended questions that allowed participants to write about the impact of having chickens on their life and food choices.

Main results/Findings: Chicken ownership was associated with a significant change in the awareness of chickens to experience bonding ($d=0.83$), fear ($d=0.46$), contentment ($d=0.66$), pain ($d=0.3$) and frustration ($d=0.56$) ($ps<0.001$). Fifty-three percent of participants reported purchasing more ethically-sourced eggs after owning chickens compared to 16% before owning chickens. Only 8% of participants continued to buy the "least expensive" eggs. Thirty-five percent of participants either stopped eating chicken or switched to more ethically-sourced chicken and meat. Chicken owners also reported greater awareness of the sentience of farm animals and discomfort with factory farming, a desire to eat more ethically and sustainably, enjoyment of chickens as family members, and increases in mental and physical health. Level of bonding and the shift towards more ethically sourced food was independent of political ideology.

Principal conclusions and implications for the field: Although many chicken keepers initially acquired chickens for eggs, many reported surprise at how the experience has positively impacted their quality of life and has made them more aware of the importance of living in harmony with other species. As backyard chicken keeping grows, chickens may serve as ambassadors for kinder treatment of all farm animals.

60 Changes in management and care of rural cats in Denmark help to explain decrease in number of unowned cats – a survey study from 1998 repeated in 2022

Peter Sandøe¹, Ulrike Gade², Bryndis Wöhler², Marianne Lund Ujvári³, Henrik Meilby⁴, Søren Saxmose Nielsen²

¹University of Copenhagen, Department of Veterinary and Animal Sciences & Department of Food and Resource Economics, Copenhagen, Denmark. ²University of Copenhagen, Department of Veterinary and Animal Sciences, Copenhagen, Denmark. ³National Park Kongernes Nordsjælland, Græsted, Denmark. ⁴University of Copenhagen, Department of Food and Resource Economics, Copenhagen, Denmark

Introduction: Over past decades, there seems to have been a decrease in the number of unowned, stray or feral, cats in Denmark. Since rural cats are often viewed as the main source of homeless cats, we aimed to determine whether this decrease could be explained by changes in management and care of owned cats in rural areas.

Methodology: At all properties in a 47 km² area typical of the Danish countryside, and on 23 farms outside the area, inhabitants were presented with a questionnaire in 1998, repeated in 2022.

Main results/findings: In 1998, 92% of 511 properties responded, while in 2022 it was 70% of 539 properties. The estimated total number of owned cats went down from 949 to 664 (30% decrease), the proportion of cats living on full time farms went from 35% to 12%, and there was a corresponding increase of cats living in single-family detached houses. While the use of contraceptive pills and euthanasia for population control went down dramatically, the proportion of neutered female cats with indoor access doubled (from 44% to 85%), while it tripled from 19% to 65% for female barn cats. Correspondingly, the number of castrated male cats with indoor access went up (from 61% to 90%), and for barn cats it increased (from 13% to 70%). The estimated total yearly production of kittens was more than halved in the period (from 411 to 193). Finally, the proportion of owners who chip- or earmarked all their cats increased from around 1% to 62%.

Principal conclusions and implications for the field: The way cats are kept and managed in rural Denmark has shifted towards fewer farm cats, much more control of reproduction and more marked cats during the past 24 years. This helps explain the drop in number of unowned cats in Denmark.

88 Shifting Values; How a television drama put donkeys at the center of a billion-pound industry that is driving them towards extinction

Dr Michelle Whitham Jones

The Donkey Sanctuary, Sidmouth, Devon, United Kingdom

Throughout history, nations have quite literally been built on the back of donkeys. NGO's attempting to raise welfare standards for working equids have long recognised the intersections of labour between human and animals across low-and-middle-income countries. The 'value' of working donkeys was often measured by the tasks that they could perform to aid their human handlers, who were in turn, economically vulnerable.

Interventions frequently focused on raising the value of healthy, cared for donkeys by providing support for their co-worker humans.

But across Africa, Asia and Latin America, that value has changed.

The donkey skin trade, the process of harvesting donkey skins to produce Ejiao, a traditional Chinese remedy, has decimated the global population of donkeys. A simple Chinese period drama revived the use of Ejiao and by 2018, triggered a 77% reduction in the Chinese donkey population forcing traders to find new sources around the globe. There are an estimated 50 million donkeys in the world, but the demand for Ejiao causes nearly 5 million of them to be slaughtered each year. Donkeys suffer at every point of the skin trade. From source to slaughter, brutal and inhumane conditions are a hallmark of this industry.

With the shifting value of donkeys, NGO's have joined together to stop the skin trade. We have found that women and children often pick up the additional workload when their donkeys are sold or stolen. The slaughter and transportation process has become a ticking timebomb for zoonotic disease that threatens ecosystems, other animals, and humans across the globe. Our research further highlighted the link between the donkey skin trade and wildlife crime from 2016.

The skins trade is a billion-pound industry. It is fast-moving, and the landscape is ever-changing, however, there is one clear prediction, that without an interruption to the trade, donkeys will be lost within the next ten years.

Children, Young People, & Pets

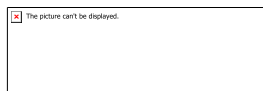
14:45 – 16:15 Friday, 16th June, 2023

Location Pentland

Chair John-Tyler Binfet

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

Sponsored by:



97 Relationships between adverse childhood experiences (ACEs) and pet-related variables among a sample of children and adolescents in the US

Kerri E Rodriguez, Samantha A Brown

Colorado State University, Fort Collins, CO, USA

Introduction: Adverse childhood experiences (ACEs) have been shown to negatively affect child health and development. Children exposed to maltreatment and violence are at risk for concomitant exposure to pet maltreatment, but adversity-exposed children may also turn to their pets for support. Our objective was to describe the associations between pet ownership, positive child-pet interactions, and child exposure to pet abuse with different types of ACEs (maltreatment, household, and community).

Methodology: Using a cross-sectional design, N=382 caregivers of a child or adolescent (Mage= 9.12) in the US were recruited from Amazon MTurk and the local community. Caregivers reported on their child's ACEs, categorized into maltreatment (e.g., abuse, neglect), household (e.g., divorce, domestic violence), and community (e.g., bullying, neighborhood violence). Among families with a pet (n=305), caregivers completed standardized measures of positive child-pet interactions and the child's exposure to pet abuse. Poisson regressions modeled ACEs while logistic regressions modeled child-pet interactions and pet abuse. Child age, family income, and minority status were considered as covariates.

Results: After controlling for covariates, having a pet in the home was associated with more ACEs ($p<0.001$), including more community ($p=0.002$), household ($p=0.009$), and maltreatment ACEs ($p=0.011$). Among pet-owning families, ACEs were not significantly associated with positive child-pet interactions, but were predictive of negative pet interactions. Specifically, the odds of having above-average exposure to pet abuse increased by 45% for each community ACE ($OR=1.45$, $p=0.017$) and 165% for each child maltreatment ACE ($OR=2.65$, $p<0.001$).

Discussion: Findings add to a growing but scarce body of research examining the relationships between childhood adversity and child-pet interactions. Results confirm a relationship between child maltreatment and pet maltreatment, but also suggest a link to community adversity. Future research is necessary to investigate the role of pet keeping and pet abuse longitudinally in relation to ACEs.

156 Parenting profiles in parents of children with Autism Spectrum Disorder (ASD) and the effects of service dogs on these profiles

Margot Poirier¹, Marine Grandgeorge¹, Mira Fondation², Handi'chiens Association³, Nathe François², Florian Auffret³, Pierrick Plusquellec⁴, Nicolas Dollion^{1,5}

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Parents of children with Autism Spectrum Disorder (ASD) manifest parenting profiles that differ from parents of typically developing children. Introduction of a service dog (SD) at home has been demonstrated as having multiple effects for these parents. Our aims of this exploratory study were to investigate if (a) specific parenting profiles can be identified during parents' interactions with their child with ASD using ethological methods, and (b) to investigate the effects of the placement of a SD on these profiles.

Firstly, behavioral coding was performed on videos recorded at home by 19 parents of 6-to-12-yo ASD children before SD placement. They were asked to record a 10min. video of them and their child with ASD while making a puzzle. Secondly, 13 of these parents performed a second similar recording 3 to 6 months after SD integration. Data were analyzed using Principal Component Analysis, Hierarchical Cluster Analysis and non-parametric tests (e.g. Kruskal-Wallis tests).

Three parenting profiles emerged from the PCA: Parents Involved in the Task (PIT), Parents Relaxed in the Interaction (PRI), and Parents Disengaged from the Interaction (PDI). For example, PIT differed from the other groups by making more vocalizations of regulations and focusing gestures (i.e. attempts to focus child's attention or regulate child's engagement in the activity) ($p=.002$). Interestingly, analysis performed after SD integration revealed that while groups still diverged on certain parenting behaviors (e.g. PIT expressed more focusing gestures than the PDI, $p=.038$), they also diverged in the evolution of their parenting behaviors (e.g. PIT decreased their vocalizations of regulations while PDI increased them, $p=.044$).

This study is, to our knowledge, the first to demonstrate that behavioral observations using ethological methods can highlight different parenting profiles. Furthermore, it seems that parenting behaviors not only evolve after SD placement, but in different ways according to parents' initial parenting profile.

30 The Human-Animal Bond in Young People's Self-Management of Mental Health Difficulties

Roxanne Hawkins, Charlotte Robinson

The University of Edinburgh, Edinburgh, United Kingdom

Young adulthood is considered a peak age for the onset of mental health difficulties with approximately 75% of mental health disorders being diagnosed between the ages of 18 and 25 years. Anxiety and depression are the most common, and the problems that emerge in young adulthood can persist long-term over the life course. Evidence suggests both benefits and risks of the human-pet relationship to mental health, yet the potential mechanisms underpinning such individual differences are not yet fully understood. Through two interrelated studies, this project aims to explore understudied variables that may underpin the benefits of pet dogs and cats for depression and anxiety in a young at-risk UK population. The first study aims to statistically quantify the effects of human-pet compatibility and pet behavioural problems, on the relationship between human-pet attachment type, mental health (anxious and depressive symptoms), and pet welfare through an online survey.

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Additional effects of pet type (dogs vs cats) and covariates (e.g., social support) will be explored. The second study aims to understand young adults lived experience of pets for the self-management of anxiety and depression through interviews. The findings will be presented at the conference. This study will provide valuable insight into the value of pets in young people's lives as well as individual differences in the potential capability of pets to either reduce or exacerbate mental health symptomology in this population. The findings will have relevance for the development and evaluation of mental health interventions and treatment protocols aimed at young adults with depression and anxiety, where pet attachment may prove to be a useful tool for mental health improvement. This study may also identify factors that may lead to negative impacts on mental health and pet welfare that will be important for future prevention and intervention.

35 **"A companion animal... it knows you and you know it": Children's conceptualisations of different types of animals and friends**

Christine Yvette Tardif-Williams, Sandra Leanne Bosacki, Renata Roma
Brock University, St. Catharines, Ontario, Canada

Introduction: Few studies in the field of human-animal interactions explore how children conceptualise friends and animals, and if these conceptualisations differ as a function of type of animal (Melson, 2014). To address this knowledge gap, we explore school-aged children's understandings of friends and different types of animals (i.e., companion, farm, and wild) as represented by their use of mental state language.

Methodology: Sixty-one children (38 girls; 23 boys; aged between 7-15 years) responded to open-ended interview designed to elicit their conceptualisations about friends and different types of animals (e.g., "What is a friend and companion/farm/wild/animal?"). A qualitative content analysis was applied to identify salient themes (Hsieh & Shannon, 2005), and children's responses were coded for use of mental state language (i.e., behavioural and emotional) and for specific references to emotional relations or connection (i.e., friendship and caring expressions).

Main Results/Findings: Children used emotional language to describe their friends (79.7%) and companion animals (43.3%). In contrast, emotional language was observed in only 15% and zero of the responses for farm and wild animals, respectively. Children used behavioral language to describe wild (93.3%) and farm (18.3%) animals. Behavioural language was observed in only 18.3% and 6.8% for companion animals and friends, respectively. Children used friendship and caring expressions to describe friends (73.7%) and companion animals (31.1%); no child used the word friendship or caring expressions to describe farm or wild animals.

Principal Conclusions and Implications for the Field: Our findings suggest that children conceptualize friends and companion animals similarly, but differently from wild and farm animals. These findings are discussed within the context of research on children's belief in animal mind (Hawkins & Williams, 2016), and can inform the design of initiatives aimed at leveraging children's interactions with animals to foster children's pro-social attitudes and treatment toward a variety of animals.

Veterinarians Perspectives on Human-Animal Interaction

14:45 – 16:15 Friday, 16th June, 2023

Location Prestonfield

Chair Patricia Pendry

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

186 Pathways to the Veterinarians Compassionate Self: First Results of the Austrian Vet-Studies 2022 and 2023

Birgit Ursula Stetina, Christine Krouzecky, Jan Aden, Armin Klaps, Lisa Knoll, Zuzana Kovacovsky, Lisa Emmett
Sigmund Freud University, Vienna, Austria

Introduction:

Veterinarians, a high-risk group for mental health problems, work within a stressful triad including the animal (the patient), the animal handler and the professional. To analyze their subjective views and needs the authors conduct a yearly “Vet-Study” in cooperation with the Austrian Veterinary Chamber. During the last years major burdens were identified (including pandemic specific aspects) in combination with a maladaptive coping style and a misalignment of job demands and resources (eg Emmett et al, 2019, Stetina & Emmett, 2021). Therefore, the current objective is the identification of potential resources, strengths of veterinarians, to develop interventions for the professional field, starting with the evaluation of self-compassion as potential starting point.

Methodology:

Using a cross-sectional design 328 veterinarians (2022: n=191: 142 female, 44 male, 1 other, 4 na; 2023: n=137, 87 female, 49 male, 1 intersex) were surveyed online using a self-report test battery with open-ended questions, a coping style inventory (SVF-120 Stressverarbeitungsfragebogen (Erdmann & Janke, 2008), the Beck Depression Inventory (BDI-II, Beck et al, 1996) and the Veterinary Job Demands and Resources Questionnaire (Vet-DRQ, Mastenbroek et al., 2013) and the Self-Compassion Scale (Neff, 2003). Statistical analysis included descriptive methods, correlations, t-tests and Cohen's d as concurrent effect size measure.

Results:

Higher values in self-compassion in veterinarians are significantly related to less depressive symptoms (2022: $r = -.640, p < .001$, 2023: $r = -.647, p < .001$), less negative coping strategies (2022: $r = -.749, p < .001$, 2023: $r = -.732, p < .001$) and more positive coping strategies (2022: $r = .401, p < .001$, 2023: $r = .351, p = .004$). In general veterinarians score at least similar to Neff's original sample (2003) in the sum-score and in many subscales even more preferable (eg Isolation (2022: $t(182) = -6.43, p < .001, d = -.48$, 2023: $t(67) = -4.62, p < .001, d = -.56$)).

Principal conclusions and implications for the field:

Self-compassion can help individuals to regulate their emotions, and improve their psychological well-being and overall resilience. Results confirm the potential usefulness of self-compassion as starting point for interventions.

167 'Good' killing: Situational Analysis as a Method for Critically Reflecting Veterinarians' Understanding of Farm Animal Killing Practices

Marc J. Bubeck

LMU, Munich, Germany

Introduction. The status of farm animals has been the subject of polarizing social debates for several years. At the same time, animal husbandry practices are part of cultural, institutional, and technological change. Most farm animals do not die "naturally" but are actively killed for food production or to relieve pain and suffering. In both cases, veterinarians are involved. In their decision-making, veterinarians must weigh the interests of the animal against economic efficiency, despite their self-description as animal advocates. The literature on veterinary ethics speaks of a triad of actors: the animal, the veterinarian, and the farmer. But what do veterinarians understand as a "good" killing for a farm animal? What role do practices and discourses play in their understanding?

Methodology. The analysis of twelve semi-structured interviews with veterinarians follows the mapping strategies of situational analysis (Clarke et al., 2018) with boundary work (Gieryn, 1983) as a sensitizing concept.

Main Findings. Veterinarians play a remarkable role in the network of actors. In their self-description, they represent and seek to unite the interests of the animal and the owner. Examining the relationships between the different actors reveals what constitutes a "good" killing for farm animals. The understanding varies in terms of medical, economic, legal, and relational considerations. Veterinarians use boundary work to differentiate between these forms of reasoning and to distinguish their work from other areas, such as the laboratory or small animal clinic.

Principle Conclusion. The meaning of a 'good' killing for farm animals varies as a result of the ambiguous position of veterinarians in the situation.

73 "All I do is fight fires": Qualitative exploration of veterinarians perceived role in pre-purchase consultations regarding brachycephalic dogs

Rowena MA Packer, Lauren E Pound, Michelle L Farrow

Royal Veterinary College, Hatfield, Hertfordshire, United Kingdom

INTRODUCTION: Public demand for brachycephalic (flat-faced) dogs has dramatically increased over the past decade, despite growing evidence of the associations between brachycephaly and severe, chronic disease (e.g., breathing problems). Evidence suggests that post-purchase, positive attitudes towards brachycephalic dogs may become intractable, facilitated by normalisation of breed-related disease (e.g., abnormal respiratory noise, exercise intolerance), and strong dog-owner bonds. Veterinarian-led pre-purchase consultations (PPC) have been encouraged to influence prospective brachycephalic dog owners' acquisition decisions. This study aimed to explore veterinarians' attitudes towards and experiences of engaging in brachycephalic-PPCs.

METHODOLOGY: Online, semi-structured interviews were conducted with 13 UK-based small animal veterinarians. Following verbatim transcription, interviews were analysed using reflexive thematic analysis.

MAIN FINDINGS: Veterinarians described practical barriers to engaging in brachycephalic-PPCs, including insufficient time and staffing, leading to a reactive rather than proactive approach to brachycephalic health, necessitating prioritisation of sick patients. Anticipation of antagonistic interactions in brachycephalic-PPCs elicited fears of losing clients, putting brachycephalic-PPCs in conflict with business needs. Perceived wider

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negative public perceptions of the veterinary profession further demotivated engagement, including public distrust regarding veterinarians' alleged financial motivations, and limited influence of veterinarians upon owner decision-making. The latter was considered particularly problematic in brachycephalic breeds, with clients perceived as selectively ignorant towards breed health. Although a spectrum of approaches to brachycephalic-PPCs were expressed, from outright dissuasion to supporting clients to find healthier brachycephalic dogs, some veterinarians felt they had to censor their authentic views, leading to frustration and professional dissatisfaction. While some veterinarians felt a sense of duty to engage in brachycephalic-PPCs, others felt placing this responsibility upon already-overstretched veterinarians was inappropriate and lay with other stakeholders implicated in perpetuating brachycephalic health problems (e.g., registration bodies, online-influencers).

CONCLUSIONS: Significant profession-wide, practice, client and internal barriers currently inhibit veterinarians' engagement in brachycephalic-PPCs, some of which may be intractable, leading to moral stress.

189 Your dog as a guinea pig: exploring veterinary professionals' perceptions of undertaking clinical research in client-based veterinary practice

Tamzin Furtado, Elizabeth Perkins, Debbie Archer
University of Liverpool, Liverpool, United Kingdom

Like human medicine, veterinary medicine aims at making evidence-based decisions; however, the evidence base for animal intervention relies predominantly on small, laboratory-based studies of safety and efficacy, rather than "real-life" studies with patient populations. Therefore, many routine interventions are built upon a poor evidence base. However, conducting real-life research, necessitates veterinary professionals conducting research as part of their practice, with clients' pets. Thus far, veterinary perception of practice-based research has been overlooked as a field of study, and this novel project therefore sought to explore this issue, using qualitative research.

20 semi-structured interviews were carried out with veterinarians (15) and veterinary nurses (5) across small animal, mixed, and equine practice. Respondents varied in their levels of experience of clinical research. Interviews explored participants' perception of evidence-based medicine, and research studies with client-owned animals. Three case studies of different types of studies facilitated discussion. Interviews were audio recorded, transcribed, anonymised, and analysed using a constructivist grounded theory approach. Participants perceived evidence-based medicine as the bedrock of veterinary practice, prizing a mindset of "professional curiosity" involving continual learning, questioning, and changing practice in response to new evidence. However, when considering clinical studies with client populations, both vets and nurses were cautious, describing concerns about maintaining animal welfare and service provision. As such, studies were favoured when risks to animals involved were almost negligible; for example when comparing the efficacy of two licensed, routinely used medications. Additionally, structural concerns such as a shortage of time and lack of vets were a barrier to professionals learning about, or undertaking, research in practice.

While veterinary professionals were passionate about evidence-based medicine, conducting research in client-owned animals was considered problematic. Support is required for veterinary professionals and clients alike in undertaking research in veterinary practice in an ethical, sustainable and welfare-based manner.

16:30 – 18:00 Friday, 16th June, 2023

Location Pentland

Chair Steve Loughan

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

25 How Much Do Dogs Care About People?

Clive D. L. Wynne, Joshua Van Bourg

Arizona State University, Tempe, AZ, USA

In two experiments we explored dogs' readiness to help a human apparently in distress. In the first, dog owners (N = 60) entered a box and cried out in Distress or Read calmly while their dog was nearby. In a Control condition, a treat was dropped into the box. 20 dogs rescued their owner in the Distress test, 16 in the Reading test and 19 retrieved treats in the Control task. After accounting for ability to open the box to obtain food, dogs released their owner more often in the Distress condition than the Reading condition ($\chi^2(1, N = 60) = 36.35, p < .0001$). In a second experiment we pre-trained dogs (N = 60) to open the box. 44 dogs opened in the Distress test, 43 in the Reading test and 42 in an additional Silent condition. These differences were not significant ($\chi^2(2, N = 60) = 2.60, p = .27$), however there were significant differences in latency to open the box ($\chi^2(2, N = 60) = 0.98, p < .0001$) with dogs opening slower in the Silent test than the Distress ($z = 2.94, p < .01$, or Reading tests ($z = 4.65, p < .001$). Opening latencies did not significantly differ between the Distress and Reading tests, ($z = -1.74, p = .20$). These results will be discussed in the context of inter-species prosocial behavior and the evolution of dogs to human cohabitation.

170 The impact of self-expansion, perceived pet responsiveness, perceived pet insensitivity, attachment, and animal attitudes on variability of wellbeing outcomes in pet owners

Annalyse E Ellis, Steve Loughnan, Sarah Stanton, Roxanne Hawkins

University of Edinburgh, Edinburgh, United Kingdom

Introduction: Research on the impact of pets on wellbeing has been both vast and inconclusive, with past studies providing contradictory results. Through an initial study and a replication study, the present research explored whether a relationship with a pet provides wellbeing benefits by applying four human relationship science concepts to the human-animal context: self-expansion, attachment, perceived pet responsiveness, and perceived pet insensitivity. Mental health outcomes included depression, anxiety, positive and negative affect, and loneliness.

Methodology: 450 British adult participants completed a questionnaire consisting of the four relationship science concept measures and all mental health measures in the initial study. 294 participants completed the same survey in the replication study with an additional Animal Attitudes Scale. Data were analyzed via correlation, multilinear regression modeling, and path mediation modeling.

Main results/findings: Results revealed that we can reliably measure human relationship science concepts in the context of human-companion animal relations. Analysis of Study 1 data indicated that perceived pet insensitivity was a significant predictor of all four outcome variables, that perceived pet responsiveness predicted lower levels of anxiety, that self-expansion predicted higher levels of positive affect, and interestingly, that attachment predicted lower levels of positive affect. Furthermore, loneliness mediated the

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links between perceived pet insensitivity and all other outcome variables. Analysis of Study 2 data indicated that self-expansion remained a significant predictor of higher levels of positive affect, and that attitudes toward animals predicted higher levels of depression and anxiety, and lower levels of positive affect. The other effects did not replicate.

Principal conclusions and implications for the field: These findings indicate that there may be benefits to incorporating human relationship science concepts into the study of human-animal relationships. The findings further indicate that not only are the concepts explored in this research measurable within a human-animal relational context, some of these concepts may also play a role in mental health outcomes.

93 Which Psychological Factors are Beneficial in our Relations with Pets? Correlational and Experimental Evidence

Catherine E Amiot¹, Christophe Gagné¹, Liane Poliquin¹, Brock Bastian²

¹UQAM, Montreal, Quebec, Canada. ²The University of Melbourne, Melbourne, Victoria, Australia

Introduction: Going beyond a comparison of pet vs. non pet owners, the current studies investigate the nature of the psychological link that operates between humans and pets, and test which psychological factors experienced in the human-pet relationship contribute to pet owners' well-being. The following factors were put to the test: Unconditional support and acceptance, mindfulness, social connections with humans, and identification with animals.

Method: Using a correlational design, Study 1 (N=1,220) was conducted online among Canadian pet owners. Participants completed measures assessing the extent to which their pet provides unconditional support and acceptance, and promotes mindfulness and social connections, along with diverse scales of psychological well-being. Using an experimental design, Study 2 (N=327) was also conducted online among Canadian pet owners. Participants were randomly assigned either to the pet presence (video about pets in the pandemic) or control condition (video about architecture). They then completed measures assessing situational mindfulness, feelings of social connections, identification with animals (solidarity, pride, similarity), and well-being.

Results: Study 1 revealed a particularly clear role for mindfulness felt in the presence of one's pet in predicting more positive well-being on each well-being measure in the multiple regression analyses (β s ranged from $-.55$ to $.45$, $ps < .001$). Perceiving that one's pet encourages social connections and accepts us unconditionally predicted more positive well-being on some of the measures (e.g., vitality: $\beta = .11$, $p < .001$; stress: $\beta = -.07$, $p < .05$, respectively). In Study 2, participants in the pet presence condition reported lower animal pride ($F(1, 325) = 4.46$, $p = 0.04$, $\eta^2 p = .014$) and intentions to help ($F(1, 325) = 5.97$, $p = 0.02$, $\eta^2 p = .018$) in the ANOVAs.

Conclusions: These findings confirm the importance of investigating the specific psychological factors experienced in human-pet relations, and how the presence of pets can be beneficial to human well-being. The challenges associated with conducting experimental research on human-pet relations and well-being will be discussed.

59 Dog interactions and psychophysiology in adolescents with social anxiety

Erin K King^{1,2}, Eli D Halbreich³, Eric C Anderson^{4,5}, Megan K Mueller^{1,2}

¹Cummings School of Veterinary Medicine at Tufts University, North Grafton, MA, USA. ²Tisch College of Civic Life at Tufts University, Medford, MA, USA. ³Texas Tech University, Lubbock, TX, USA. ⁴MaineHealth Institute for Research, Scarborough, ME, USA. ⁵Tufts University School of Medicine, Boston, MA, USA

Introduction: Adolescence is a key developmental period for the onset of social anxiety, and there is a need for understanding factors within the family environment that can contribute to adaptive coping. Companion dogs may attenuate the effects of social stressors and anxiety for youth through reducing physiological arousal and providing social support. The purpose of this study was to pilot test simultaneous assessment—with continuous peripheral physiology—of adolescents' daily interactions with their dogs and peers.

Methodology: Participants were 40 dog-owning adolescents; 35 with high social anxiety, and 5 with low social anxiety. Participants completed a survey and two 24-hour periods of ecological momentary assessment (EMA), where they reported their interactions with their dog and other humans. Electrodermal activity (EDA) was collected using an Empatica wristband.

Results: Adolescents interacted with their dogs for an average of 102 minutes (range 3–744 min) across the two-day period. Youth had social interactions with other humans for an average of 275 minutes (range 2–900 min), and the average valence of these interactions was positive ($M=4.06$; range 1 [negative] to 5 [positive]).

Participants reported frequently coping with stress by spending time with their pet ($M=3.87$, ranging 1 [low frequency] to 4 [high frequency]). EDA was visually mapped onto EMA data to descriptively assess changes in physiological arousal before and after interactions (presentation will include data visualizations as a key component of the results).

Conclusions: Results suggested frequent interaction between youth and dogs, and the valence of human social interactions was positive. Physiological and EMA data were successfully integrated to visually understand the physiological correlates of daily interactions with dogs and peers. These results indicate that using EMA is an effective tool for assessing youth–dog relationships in the context of anxiety and support the use of this approach in future hypothesis testing.

Pets & Crime

16:30 – 18:00 Friday, 16th June, 2023

Location Prestonfield

Chair Jo Williams

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

47 Animal Crime in Context: An Examination of Community-Level Correlates of Animal Welfare Offenses and Violent Crime in Finland

Keri Burchfield¹, Fred Markowitz¹, Tarja Koskela²

¹Northern Illinois University, DeKalb, IL, USA. ²University of Eastern Finland, Joensuu, Finland

INTRODUCTION

There is little research that provides a truly sociological assessment of the structural correlates of animal crime. In this study, we examine correlates of animal crime across Finland. Taking advantage of data on reported animal crime for 294 municipalities over a ten-year period, we compare community-level predictors of violent and animal crime and examine whether there is a relationship between violent crime and animal crime.

METHODOLOGY

Our data include reported animal crimes and predictor variables in 294 municipalities over a 10-year period (2010–2019), yielding a municipal-level panel dataset with a total of 2940 observations. We estimate a series of fixed-effects and random-effects multiple regression models for the partial relationships between each of our predictor variables and animal and violent crime rates.

MAIN RESULTS

Our main findings include the following: alcohol sales ($\beta = .190$, $p < .001$) and the presence of young males ($\beta = .372$, $p < .001$) are associated with violent crime, violent crime is not associated with animal crime ($p > .05$), and that the number of farms is inversely related to violent crime ($\beta = -.023$, $p < .001$), but positively related to animal crime ($\beta = .002$, $p < .001$)

CONCLUSIONS AND IMPLICATIONS

Our study is the first to examine macro-level predictors of animal crimes using a panel of municipalities for an entire country. Guided by a social disorganization framework, our aim was to compare the correlates of violent and animal crime, and to assess any differences in these relationships between the U.S. and Finland. We found that the only common correlates of both violent and animal crime in Finland were economic factors. We intend for this research to spark needed inquiry into the applicability of criminological theories of violence to the study of animal crime, and whether this approach is generalizable across nations.

32 Could cats help solve crime?

Heidi A Monkman¹, Roland A H van Oorschot^{2,3}, Mariya Goray¹

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Introduction: There is a limited understanding of how domestic animals can affect or alter a crime scene. Currently, this means that they are overlooked by crime scene officers when processing scenes or interpreting DNA profile data. In general, multiple areas of crime scenes are sampled to gain perspective as to who was present at a scene and how they may have interacted with it. The high sensitivity of DNA techniques raises the possibility of detecting DNA of a person of interest on pet cats transferred during the commission of the crime. Additionally, pets may pick up and relocate owners' and persons of interest's DNA within the scene.

Method: This study investigated cats as reservoirs and vectors for human DNA transfer. Samples from different areas (head, back and sides) of 20 cats from 15 houses were collected to understand the prevalence and transfer of human DNA on cats. The transfer of human DNA to and from the cat was examined by conducting controlled contacts by a non-household member with two areas (top of the neck, under chin) that were subsequently sampled.

Results: The study showed that human DNA is readily recovered from all areas of the body sampled largely originating from household members. Further, the controlled contact scenarios showed that DNA is readily transferred to and from cats after a brief contact. The interactions of a cat with humans and their environment were also evaluated, showing that a cat's behaviour and history of contacts may contribute to the relative presence and amounts of an individual's DNA on cats.

Conclusions and implications: These insights will help determine how DNA is transferred to the cat and if the DNA found on the cat is from general cohabitation or if it could be related to a crime.

21 The Experiences and Needs of Dog-owners Affected by Dog-theft

Akaanksha Venkatramanan, Lindsey Roberts

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Introduction: Pet ownership is empirically evidenced to improve mental and physical health, with research suggesting an anthropomorphic bond between owners and dogs that equal familial relationships, including children. However, bereavement of dogs, and especially dog-theft, garner scarce interest, leaving a huge population to suffer disenfranchised grief unsupported. This study aims to validate the overlap of emotional value in familial and owner-dog relationships, and grief between dog-theft victims and those with missing loved ones. The study explores the needs of owners suffering ambiguous loss, how they cope with it, and the role of social media in this process, to grow existing literature on the topic and guide psychological support resources.

Design: Qualitative semi-structured interviews were conducted and secondary data was collected from participants' Facebook and Instagram posts in accordance with BPS Code of Ethics and Conduct.

Methods: Four primary caregivers for their dog who had experienced dog-theft were recruited through social media. Hour-long interviews were conducted over Teams and social media posts were collated post informed

consent. Audio recordings were transcribed and primary and secondary data were separately analysed through a critical-realist onto-epistemological approach, using reflexive thematic analysis.

Results: Five superordinate themes from primary data, and two from secondary were extracted that evidenced an anthropomorphic relationship and associated intensity of grief within victims of dog-theft. Correlations were found between grief and coping with missing loved ones and dogs, and additionally feelings of disenfranchisement. Social media is reported as safe and popular for expressing and processing complex emotions and building a reliable social community.

Conclusions: Dog-theft is traumatic for owners and the lack of knowledgeable support exacerbates suffering. Psychological research should aim to inform best-practice resources providing suitable help managing grief, social disenfranchisement, and other psychological or physiological consequences of this trauma.

135 The Psychological Impact of Dog Theft on Human Well-being: Development and Testing of the Dog-Theft Impact Scale (DTIS)

Malki Nathasha Hindurangalage Don, Lindsey Helen Roberts

University of Buckingham, Buckingham, Buckinghamshire, United Kingdom

Objectives: Human-animal interactions are considered imperative for the mental and physical wellbeing of people. However, when this relationship is broken due to dog theft, people undergo an excruciating experience. There is sparse literature available to demonstrate how people psychologically suffer following the loss of a companion animal. Therefore, the present study aims to explain the mental and physical impact of dog theft on their human guardians through the development and testing of a novel questionnaire.

Design: The study employed a quantitative non-experimental research design using Exploratory Factor Analysis.

Methods: Primary data collection method involved the completion of a questionnaire via an online survey platform. A total of 42 participants took part in the study.

Results: The questionnaire items were subjected to a Principal Component Analysis (PCA) which revealed six themes; 'Distress and inability to cope with new reality', 'Lack of closure', 'Emotional turmoil', 'Social identity', 'Unwanted resolution', and 'Adjustment'.

Conclusions: It is not surprising that people who have had their dog stolen experience distress, but what is surprising is the degree to which people are distressed, and this is why research needs to be conducted to support them. Health care providers could focus on designing interventions related to grief/distress counselling in order to help people effectively cope with the distress caused due to pet loss.

Benefits & Challenges of Pet Ownership

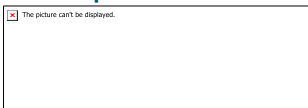
13:00 – 14:30 Saturday, 17th June, 2023

Location Pentland

Chair John-Tyler Binfet

Session to feature oral presentations each 15–minutes in length followed by 5–minutes of Q&As.

Sponsored by:



151 Developing baseline data in order to measure the health of indoor cats to facilitate health equity between aged care residents and foster cats

Carmel Nottle, Neil Bretana, [Young Janette](#)

University of South Australia, Adelaide, South Australia, Australia

Introduction

A growing body of research is providing evidence as to the positive impacts that interactions with animals can have on human health and wellbeing. However multi–species justice requires that human–animal focussed research and projects should not only include monitoring and documentation of human wellbeing, but also that of the animals involved. To date there has been little work on developing baseline data and tools to monitor the wellbeing of cats, hence when designing an action research project exploring cat fostering in aged care it was deemed important to seek to fill this gap so that multi–species outcomes could be understood.

Methodology

In this study the health index of 104 indoor cats was monitored using FitBark™ – a collar–attached accelerometer device developed for tracking dog health calibrated using data from dogs. The majority of the cats were adults and identified as domestic shorthair. Each cat was monitored over the period of two – four weeks.

Results

Data was downloaded and imported into Tableau. Data included hourly data on activity, energy expended, a sleep score, distance travelled, overall health index, and the number of other cats in the same household. While there were no sex differences identified, the health index (based on sleep and activity patterns) of cats declined with age. Key results that emerged were a di–urnal activity pattern of cats, an average movement of 2.88 kilometers per day and a substantial impact on all scores with an increase (above 4) of the number of cats in a household.

Conclusions

The findings of this study provide a baseline for comparison of indoor cats in a diversity of settings, so that cat wellbeing can be monitored as part of ensuring multi–species health equity in feline including human–animal projects.

* This research was funded by Waltham

58 Pet Ownership and Maintenance of Cognitive Function in Community-Residing Older Adults: Evidence from the Baltimore Longitudinal Study of Aging (BLSA)

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³Intramural Research Program, National Institute on Aging, Baltimore, MD, USA

Background and Objectives Pet ownership is associated with health in individuals with existing disease or disability. In experimental studies, pet presence improves cognitive function. Little research addresses pets and longitudinal changes in cognitive function. We examined the relationship of pet ownership to maintaining cognitive function within generally healthy community-dwelling older adults in the Baltimore Longitudinal Study of Aging (BLSA). We hypothesized less deterioration among pet owners, dog owners, and cat owners, than non-owners; no differences in deterioration between dog and cat owners; and less deterioration among dog-owners who walk their dogs than those who don't.

Methods In this longitudinal observational study 637 women (55.9%) and men aged 50–100 years ($M=68.3$, $SD=9.6$) completed a pet ownership questionnaire and physical and cognitive assessment every 1–4 years over 1–13 years ($M=7.5$, $SD=3.6$). Linear mixed models with time varying pet ownership examined changes in cognitive function according to pet ownership.

Results Pet owners ($n=185$) were younger ($p<0.001$) and healthier ($p=0.030$) than non-owners; thus, age and comorbidities were included as covariates. Deterioration in cognitive function with age was less severe for pet owners than non-owners (California Verbal Learning Tests (CVLT) Immediate Recall: $p<0.001$, CVLT-Short Recall $p=0.018$, CVLT-Long Recall: $p=0.040$; Trail Making Test (TMT) A: $p<0.001$, TMT B: $p<0.001$, TMT B-A: $p=0.042$; Boston Naming Test: $p<0.001$; Digit Symbol Substitution Test: $p=0.002$); dog owners than non-owners (CVLT-Immediate Recall: $p=0.19$, CVLT-Short Recall: $p=0.049$, Benton Visual Retention Test: $p=0.035$, TMT A: $p=0.025$; TMT B: $p=0.009$; Boston Naming Test: $p=0.024$; Digit Symbol Substitution Test: $p=0.018$); and cat owners than non-owners (CVLT-Immediate Recall: $p=0.021$, CVLT-Short Recall: $p=0.042$, CVLT-Long Recall: $p=0.014$; Boston Naming Test: $p=0.016$; Pegboard Non-dominant: $p=0.033$). Among dog owners ($n=73$), dog-walkers experienced less deterioration than non-walkers (TMT B: $p=0.001$; TMT B-A: $p<0.001$; CVLT-Short Recall: $p=0.015$).

Implications This study provides the first longitudinal evidence that pet ownership and dog walking may contribute to maintaining cognitive function among community-dwelling generally healthy older adults as they age.

104 The nature and impact of challenges currently experienced by pet owners in the UK

Joanne M Williams¹, Laura Wauthier², Janine C Muldoon¹, Johanna Neufuss³, Tracy Genever³

¹University of Edinburgh, Edinburgh, United Kingdom. ²University of Edinburgh, Edinburgh, United Kingdom. ³Blue Cross, Oxford, United Kingdom

Introduction. Research on 'pet effects' on human wellbeing rarely considers stress relating to pet ownership. This study used novel nationally representative UK data to identify who is experiencing greater challenges with their pets, and the key stresses experienced by pet owners.

Methodology. An online Qualtrics survey was administered via Prolific. The sample of 500 adult pet owners was nationally representative in terms of geographical area, access to means-tested benefits, foodbank use, age

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and sex. The online survey included a 22-item measure to assess different types of pet challenges/stress, questions probing specific challenges with dogs and cats, and factors relating to relinquishment. Main results/findings. Principal Component Analysis identified four stress factors: (a) pet's behaviour ($\alpha = 0.82$), (b) pet's health issues ($\alpha = 0.75$), (c) owner's financial concerns/stress ($\alpha = 0.59$) and (d) social/environmental challenges ($\alpha = 0.86$). Men scored higher than women on animal behaviour challenges ($t(494) = 1.977, p = 0.049$), those using foodbanks scored higher on financial concerns ($t(14.13) = -2.549, p = 0.023$), those on receipt of social benefits reported higher social/environmental stress ($t(90.93) = -2.623, p = 0.018$). Poor human health affected financial ($F(3, 494) = 4.927, p = 0.002$) and social/environmental pet stress ($F(3, 494) = 5.195, p = 0.002$). Key challenges with dogs were behavioural issues, financial costs of treatments, and challenges of dog care. Key challenges with cats were behavioural issues (including toileting), aging-related health issues, and injuries. Pet relinquishment was related to pet health issues, pet behaviour issues, accommodation issues, and levels of stress experienced by owners.

Principal conclusions and implications for the field. These findings suggest that there are serious concerns around affording pet care and the cost-of-living crisis. Pet behaviour challenges faced by pet owners are common, can be complex, and often lead to pet relinquishment.

83 The potential impact of dog-related activities on owners' well-being: A four-week prospective cohort study

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Introduction. Despite numerous qualitative reports indicating that dog-related activities can impact owners' well-being, there is limited empirical evidence of these impacts. This prospective cohort study aimed to assess potential links and the cause-effect of 17 dog-related activities (e.g., tactile interactions, dog walking, dog training) on six well-being outcomes (i.e., depression, anxiety, loneliness, suicidal ideation, hedonic well-being and eudaimonic well-being) in dog owners.

Methodology. Weekly over a four-week period, an international sample of 709 dog owners (18-84 years old) reported the occurrence of each dog-related activity (e.g., the number of times they trained their dogs) and completed validated well-being scales. Random intercept cross-lagged panel model (RI-CLPM) and a significance threshold of 0.001 were used to test the association between the activities and well-being outcomes.

Results. Six activities were correlated ($p < 0.001$) with poorer well-being outcomes (i.e., aggressive dog behaviour, fearful dog behaviour, poor dog health, failure to provide for the dog, lack of control over the dog, and dog presence). Only the activity 'friendly conversation with others due to the dog' was correlated ($p < 0.001$) with better well-being scores. Causal links were not found between the frequency/occurrence of activities assessed and the six aspects of well-being.

Discussion. The significant correlations suggest that negative events in the dog-owner relationship (e.g., dog behaviour problems, dog health issues) may have detrimental psychological impacts on owners, whereas the social lubricant effect of dogs could help improve owners' mental health. The lack of significance in the test of causality does not mean that dog-related activities do not affect human well-being. These impacts might be

captured using a different methodology, such as a longer longitudinal study. Longitudinal investigations over a longer period of time and randomised controlled trials are needed as the next investigative stage.

Dog Behaviour & Responses

13:00 – 14:30 Saturday, 17th June, 2023

Location Prestonfield

Chair Catherine Amiot

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

57 Dog Behaviour Traits Associated with Scent Task Performance in Biological Odour Discrimination Paradigms

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Introduction: Mechanisms by which humans and dogs interact are expanding. A growing research area involves dogs detecting human health conditions from samples (breath, sweat, urine, etc.) via their sense of smell. This "bio-detection" paradigm has been used previously to assess conditions including epileptic seizures, stress, hypoglycemia, cancer, and COVID-19. It is important to monitor factors contributing to this paradigm as the field continues to expand. Of key relevance is the performance of these dogs during training, as inconsistent results impact research conclusions. Further, training dogs who ultimately cannot perform this role is costly and time-consuming. The aim of this study was to investigate whether demographic or behavioral factors are associated with bio-detection training performance.

Methodology: The performance records of dogs (N= 21) in training to become operational bio-detection dogs were associated (using Pearson's correlations) with their behavioral characteristics (determined by the C-BARQ). This was carried out in two bio-detection dog cohorts trained using comparable methodology, with different target odors (Queen's University Belfast: dogs detecting acute psychological stress and Penn Vet Working Dog Center: dogs detecting ovarian cancer).

Results: The dog's performances during training ranged from 30.00% to 95.00% (M = 69.63, SD = 21.25). Findings to date show that the age of the dog, their score for excitability, and their score for attachment and attention seeking are significantly correlated ($p < .05$) to performance in a bio-detection research paradigm.

Conclusions: Results suggest that certain characteristics are associated with success in the bio-detection role. This is the first study of its kind to collect data from multiple groups of bio-detection dogs and provides a basis of information for future assessments utilizing larger samples across further study sites. Findings from this study may lead to the development of tools that could maximize time and efficiency when assessing prospective bio-detection dogs, improving the quality of data obtained by such studies.

72 Association of dog owner temperament with dog-owner relationship and dog behavior

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Introduction. Dog owner characteristics influence the dog behavior and human-dog interaction. However, as previous studies are diverse in their focus, we aimed to clarify the interconnections of dog owner temperament, dog-owner relationship, and dog behavior.

Methodology. 440 dog-owner dyads participated in the study. Dogs underwent behavioral tests (object choice, cylinder test) and their owners answered a questionnaire sampling the owner temperament (revised adult temperament questionnaire, ATQ-R factors negative affectivity, extraversion, effortful control, orienting sensitivity) and dog-human relationship (Monash dog-owner relationship scale, MDORS). The correlations between ATQ-R, MDORS and dog behavioral test results, and linear models to predict the dog-owner emotional closeness (MDORS-EC) and perceived costs (MDORS-PC) were constructed in the SPSS software.

Main Results. Owner temperament (ATQ-R) correlated with dog-owner relationship (Spearman's Rho; MDORS-EC: negative affectivity $p = 0.233$, $p < 0.001$; orienting sensitivity $p = 0.199$, $p < 0.001$; effortful control $p = -0.118$, $p < 0.05$; MDORS-PC: negative affectivity $p = 0.174$, $p < 0.001$; effortful control $p = -0.281$, $p < 0.001$; extroversion $p = -0.130$, $p < 0.01$). Extroversion also correlated with dog cylinder test results ($p = 0.106$, $p < 0.05$). Owner negative affectivity and orienting sensitivity increased (linear regression; $T = 4.5$, $p < 0.001$; $T = 3.0$, $p < 0.01$, respectively) and higher number of children decreased MDORS-EC ($T = -2.3$, $p < 0.05$), whereas owner effortful control, extraversion, higher number of dogs and dog male gender decreased MDORS-PC ($T = -6.1$, $p < 0.001$; $T = -2.2$, $p < 0.05$; $T = -2.8$, $p < 0.01$; $T = -3.2$, $p < 0.001$). Linear models explained 9% of the variance in MDORS-EC and MDORS-PC.

Principal Conclusions and Implications for Field. Our results confirm that dog owner temperament affects the dog-owner relationship and the dog behavior, highlighting the human contribution for the dog-owner interaction.

176 Dogs' attachment insecurity towards the owner affects their physiological response to a standardized veterinary procedure

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Dogs can show different attachment patterns towards their caregivers, mainly depending on the quality of the owner's caregiving behaviour. Attachment insecurity has been associated to an altered physiological response to stress in dogs. Ninety-seven adult dogs classified as either securely or insecurely attached to their owners, according to their behaviour during the Strange Situation Procedure, participated to a standardized veterinary procedure, which comprised: collecting saliva with a cotton swab, measuring blood pressure and heart rate with an oscillometer, assessing respiratory rate, measuring rectal temperature, shaving hair from the hind limb with an electric razor. Throughout the procedure, dogs were scored for signs of fear, aggression and compliance to manipulation, while owners were scored for supportive behaviours towards their dog. Both parametric and nonparametric statistics were used to investigate differences in dogs' physiological and behavioural

parameters, as well as owners' supportive behaviour, as a function of dog attachment style. Spearman correlations were performed to investigate the association between owner supportive behaviour and the dog's physiological and behavioural response to the veterinary procedure. Results suggest that owners of secure dogs acted significantly more supportively than owners of insecure dogs ($U=296.5$, $p=0.009$). Furthermore, dogs' heart rate ($t=-2.294$, $p=0.024$) and the percentage of tachypneic subjects ($p=0.012$) were significantly higher in the insecure group. Finally, owners' supportive behaviour towards the dog was inversely correlated with the dogs' rectal temperature ($p=-0.270$, $p=0.044$), scores for fear ($p=-0.374$, $p=0.002$) and compliance to manipulation ($p=-0.460$, $p<0.001$). These findings suggest that the quality of dog-to-owner attachment may affect dogs' capacity to face stressful events. Owners' ability to function as a source of emotional support may play a major role in establishing the quality of dog attachment and reducing dogs' emotional discomfort in times of distress. These findings also provide useful hints to alleviate dog stress during veterinary consultations.

20 Context Matters: Human Biases in the Perception of Dog Emotions

Holly G Molinaro, Clive D. L. Wynne

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Introduction:

This two-part study investigated the influential role of situational context on human perception of dog emotions.

Methodology:

Videos of a dog and his human were recorded in assumed positive (e.g., treat) and negative (e.g., vacuum) situations. For Study 1, videos were edited to remove all context around the dog: Study 2 videos were edited to create mismatched situations between dog and human. Participants (Study 1; $N=383$, Study 2; $N=485$) watched videos in an online survey, rated the dog's valence and arousal from 1-10, and provided free responses describing the dog's emotions, which were coded to indicate levels of valence, arousal and anthropomorphism. ANOVAs and nonparametric tests were used for data analysis.

Results:

In Study 1, context impacted participants' ratings, with valence responses being greater without context ($F_{1,381} = 6.60$, $p < .05$) and larger to positive situations ($F_{1,381} = 286.50$, $p < .05$) while arousal responses were higher to positive situations ($F_{1,380} = 135.07$, $p < .05$). Free response analysis revealed positive situations with context had the highest valence ($X^2(3) = 1071.62$, $p < .05$), positive situations without context had the highest arousal ($X^2(3) = 1091.72$, $p < .05$) and negative situations without context had the lowest anthropomorphism ($X^2(3) = 70.98$, $p < .05$). In Study 2, videos in which the human was doing something positive had higher levels of valence and lower levels of arousal, regardless of the dog's situation ($F_{5,480} = 269.48$, $p < .05$; $F_{5,480} = 107.73$, $p < .05$). Free response analysis revealed original unedited videos with a positive situation had the highest valence ($X^2(5) = 2143.36$, $p < .05$), arousal ($X^2(5) = 2098.54$, $p < .05$), and anthropomorphism ($X^2(5) = 69.07$, $p < .05$).

Principal conclusions and implications for the field:

People rely strongly on the situational context to interpret dog emotions. This has lasting implications for human-animal interactions and animal emotion research.

Physiological Assessment in Human-Animal Interaction Research

13:00 - 14:30 Saturday, 17th June, 2023

Location Holyrood

Chair Kerri Rodriguez

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

207 A longitudinal analysis of the cortisol awakening response in a population of military veterans with and without psychiatric service dogs for posttraumatic stress disorder (PTSD)

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Introduction: Literature suggests that service dogs may be a valuable complementary intervention option for PTSD among military veterans due to the potential influence on hyperarousal. The aim of this study was to empirically evaluate the physiological effects of service dogs on post-9/11 US military veterans with PTSD through a longitudinal analysis of a measure of hyperarousal, the cortisol awakening response.

Methodology: We conducted a clinical trial (ID NCT03245814) that assessed the cortisol awakening response at baseline and three-months follow-up across an intervention group (service dog, n=88) and control group (usual care, n=73). A total of N=161 veterans collected passive drool samples immediately upon waking, 30 minutes after waking, and 45 minutes after waking on three consecutive weekdays at baseline and again at follow up.

Analyses were implemented in SAS 9.4 using the mixed model repeated measures (MMRM) procedure. The model had a fixed effect of the intervention group (service dog or control) and covariates including time of awakening, sleep duration, sleep efficiency, prior day experiences as measured via ecological momentary assessment, traumatic brain injury, age, gender, ethnicity/race, socioeconomic status, smoking status, alcohol use, physical health, and body mass index.

Main Results/Findings: A total of 2,613 salivary samples were collected. Results from the MMRM procedure indicate that veterans with a service dog had a significantly higher cortisol awakening response, including the area under the curve with respect to both increase (AUCi, $\beta=1.46$, $p=0.046$) and absolute increase (AINC, $\beta=0.05$, $p=0.035$).

Principal conclusions and implications for the field: Findings suggest that veterans with service dogs may have a cortisol awakening response more similar to healthy adults without PTSD in comparison to veterans receiving usual care alone. Understanding this potential physiological mechanism, and its mediators and moderators, may help researchers and clinicians further understand and refine the service dog intervention.

77 Healthy test-persons' immediate physiological response to different intensities of contact with a dog

Lene H Fuglsang-Damgaard¹, Sigrid Juhl Lunde², Janne W Christensen¹, Lene Vase², Poul B Videbech³, Karen Thodberg¹

¹Department of Animal and Veterinary Sciences, Aarhus University, Tjele, Denmark. ²Department of Psychology and Behavioural Sciences, Aarhus University, Aarhus, Denmark. ³Centre for Neuropsychiatric Depression Research, Mental Health Center Glostrup, Glostrup, Denmark

Introduction: Studies have investigated the effect of animal assisted interventions in humans with different health status and under various conditions. The studies vary regarding methodology and the intensity of the dog contact is often not well defined. This has led to contradicting results, making it difficult to compare studies and conclude.

The present study compared immediate physiological responses in healthy humans when exposed to different intensities of dog contact.

Methodology: Thirty-three healthy participants (both sexes, >18 years) were, in random order, exposed to four different test-situations with well-defined dog contact intensities: looking at a dog (LOOK), petting a dog (PET), performing tricks with a dog (TRICK) or no dog present (CONTROL). Each test-situation lasted 10 minutes with a 30-minute break between. Heart rate (HR), heart rate variability (HRV) and galvanic skin response (tonic level; GSR) were continuously recorded. Blood pressure (BP) and salivary cortisol (SC) were taken before and after each test-situation. Heart Rate, HRV, GSR and SC were log-transformed and all data were analysed using Linear Mixed Models (SAS software).

Main results: Comparing the last five minutes of each test-situation, we found no difference in average HR, HRV and GSR and neither in SC after each test-situation.

Test-situations affected the change in systolic BP ($p < 0.01$) which was higher in TRICK compared to CONTROL (CONTROL: 3.8 ± 1.51 vs TRICK: 5.3 ± 1.52 ; $p < 0.001$), and also in diastolic BP ($p < 0.001$) where it was higher in PET compared to CONTROL and LOOK ($p < 0.05$; $p < 0.01$, respectively) and in TRICK compared to LOOK ($p < 0.01$) (CONTROL: -0.8 ± 1.08 ; LOOK: -3.0 ± 1.09 ; PET: 3.3 ± 1.08 ; TRICK: 3.1 ± 1.08).

Furthermore, test order affected HR ($p < 0.0001$), diastolic BP ($p < 0.05$), systolic BP ($p < 0.01$), SC ($p < 0.0001$) and GSR ($p < 0.0001$).

Conclusions: The immediate physiological response at different intensities of dog contact could not be measured in HR, HRV, SC and GSR, but an effect was found regarding BP.

79 Salivary cortisol response to pain and stress tests with or without the support of a dog

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Introduction. Implementation of animal-assisted support during painful or other stressful situations requires more basic knowledge; particularly on how to measure humans' responses non-invasively using validated methods. Our objective was to compare salivary cortisol responses during standardised pain and stress tests with or without a dog present.

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Methodology. Sixty healthy persons were enrolled (both sexes, > 18 years) and randomly allocated to one of two treatments: DOG, No-DOG. Firstly, all were subjected to two pain test situations in a balanced order (i: human and dog support (DOG) or human support (No-DOG); ii: No support (DOG, No-DOG). Secondly, all were subjected to a stress test (MAST: Maastricht-Acute-Stress-Test) with either a dog and a person (DOG) or only a person (No-DOG) present during testing. Twelve saliva samples were obtained throughout, and log-transformed cortisol levels analysed using Linear Mixed Models (SAS software).

Main results. Higher cortisol levels were found after the first pain test compared to the second, regardless of the test situation ($F_{1,55} = 59.29$, $p < 0.001$), persons in DOG had lower levels than No-DOG ($F_{1,55} = 5.25$, $p = 0.026$), whereas testing without support resulted in lower levels, compared to with support, regardless of treatment ($F_{1,55} = 4.32$, $p = 0.04$). Cortisol levels immediately after MAST were higher than before the test ($F_{6,329} = 66.5$, $p < 0.001$, but not affected by treatment (DOG; No-DOG), as were the levels during the wash-out period.

In conclusion, being allocated to DOG lowered salivary cortisol during a pain test, whereas this was not the case during a stress test. Our findings suggest that situations with high stress levels, as those we see in the MAST test, will reduce the effect of animal-assisted support.

203 Capturing Heart Rate Variability for Children with ADHD during Animal Assisted Intervention: Feasibility, Acceptability, and Relevant Preliminary Findings

Cassie Zeiler¹, Rachel Azar², Annamarie Stehli¹, DeWayne P. Williams³, Julian F. Thayer³, Elissa Monteiro⁴, Lydia A. Steinhoff¹, Rachel Y. Stokes¹, Sabrina E.B. Schuck¹

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Introduction: Individuals with Attention Deficit Hyperactivity Disorder (ADHD) experience autonomic nervous system dysfunction, marked by an increase in heart rate (HR) and decrease in heart rate variability (HRV)¹. Animal-assisted intervention (AAI) has been found to improve HRV in some populations², but little is known about its cardiac impact for children with (ADHD). We describe the feasibility and acceptability of capturing meaningful cardiac responses in children with ADHD.

Methodology: Twenty-two (22) children with ADHD, aged 7–9 years (18 males, 4 females), participated in the initial cohorts of a randomized clinical trial pilot study examining physiological measures thought to be responsive to AAI. At a baseline lab visit, cardiac responses were recorded during high and low activity settings using a wearable heart rate monitoring device (FirstBeat™). Beat-to-beat HRV was analyzed via Kubios HRV Analysis software. HR was calculated in beats per minute and the root mean square of successive differences was calculated and used as our primary measure of HRV.

Findings: Twenty-one of the 22 participants agreed to wear the device for approximately 3 hours. Despite frequent movements, the recordings obtained were robust to such routine artifacts and allowed for meaningful analysis. For this group ($n = 21$), two baseline measures of interest were calculated, Mean HR (103.18, SD 9.38) and HRV (30.19, SD 6.74).

Conclusions: Preliminary evidence indicates capturing reliable cardiac measurements utilizing a wearable device in children with ADHD is acceptable, feasible, and yields meaningful data. While acceptable for the majority, planning for participant refusal in this population will minimize the threat to power. Key issues include

carefully logging physical activity, using a robust device, and careful post-hoc inspection/correction of the HR series. Cardiac metrics in this group compared to typical populations, in addition to preliminary data on the impact of AAI on these metrics, will be discussed.

The Human-Animal Bond and Welfare

14:45 – 16:15 Saturday, 17th June, 2023

Location Prestonfield

Chair Steve Loughan

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

36 Rescuer Attributions of Responsibility for Companion Animal Suffering

Lori L. Jervis, Laura Bray

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Introduction

Companion animal rescue is not value neutral but occurs within culturally informed explanatory systems. In recent years, shelters and rescue groups have increasingly turned to animal transport as a means of reducing unnecessary euthanasia, creating extensive networks that move animals from high-kill areas in the southern US to more affluent communities in the north. This presentation examines rescuers' attributions of responsibility for companion animal overpopulation and substandard treatment.

Methodology

Our findings are based on 54 semi-structured interviews with individuals involved in animal transport from a larger study on the movement of animals across the US.

Main Findings

Rescuers present two prevailing frameworks for understanding companion animal suffering—structural and moral. Structural explanations are commonly offered by national and non-southern organizations and focus on regional differences of wealth, policy/laws, and climate. Moral explanations are most common among southern shelter staff and rescuers, and stress inferior southern attitudes (e.g., viewing animals as property), “poor” animal care (e.g., keeping animals outside), and irresponsibility/self-centeredness (e.g., allowing animals to freely breed due to ignorance or enjoyment). Moral evaluations extend to community members, other rescuers, and themselves. They are also applied to regions, with the north seen as more evolved than the south. Moral explanations help rescuers make sense of a lived world characterized by inexplicable animal suffering, but run the risk of “blaming the (human) victim.” Structural explanations focus on how the larger struggles of humans harm animals, a perspective with powerful explanatory power that may minimize human agency, potentially further disempowering local community members.

Conclusions and Implications

Explanatory frameworks impact how rescuers interact with communities as well as conceptualize solutions. A framework that acknowledges the confines imposed on human behavior by structural factors while making room for human agency might better facilitate efficacious processes and strategies for reducing companion animal suffering.

112 The human–animal bond and adherence to veterinary services: the role of commitment and emotional closeness

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Abstract

The goal of veterinary professionals is to enhance the wellbeing of their patients. In order to do this, they need to understand how and why the human–animal bond develops and changes over time. This study attempted to relate a practical model of describing interpersonal relationships with perceived social support and adherence to veterinary care.

Methodology

An online 4–part questionnaire was distributed in Spanish veterinary clinics. The first part included a previous adaptation of Rusbult’s interpersonal relationships theory questionnaire to human–animal relationships. The second part measured perceived social support. The third and fourth parts were estimations of declared and real adherence to veterinary care.

Main results/findings

We collected complete questionnaires from 739 dog–owners and 226 cat–owners. Eighty–six percent were women, 60% were aged between 30 and 50 years old and 66% had a college degree. High levels of commitment and satisfaction were reported (8.1/10 and 7.4/10) with no differences between dog and cat owners. The results were consistent with Rusbult’s model, with rational significant correlations in every dimension; 0.32 for satisfaction, 0.40 for perceived cost and –0.42 for alternatives (Spearman correlation, $p < 0.0001$). Commitment correlated with all dimensions of perceived social support; stated support, availability, shared activities, self–disclosure, physical contact, and opportunities for caregiving ($p \leq 0.0078$). Forty–two percent of cat owners and 38% of dog owners had gone to the veterinary clinic for a preventive visit in the last year. Perceived social support correlated positively with declared adherence to veterinary care ($p \leq 0.0036$).

Principal conclusions and implications for the field

Perceived social support correlated with commitment to the relationship and general adherence to healthcare services. Understanding this relationship could help veterinary professionals in carrying out interventions to strengthen the human–animal bond and to provide better healthcare.

31 “I would know if my dog was overweight” A qualitative exploration of dog owner’s recognition and understanding of canine obesity.

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Introduction

Obesity is one of the top welfare concerns facing pet dogs. Owners are often unable to recognise their dog’s condition, and commonly disagree with a veterinarian’s diagnosis of obesity. This study’s aim was to appraise people’s perceptions, attitudes and decision–making around canine obesity.

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Methodology

Data comprised: an ethnographic diary; 450 online fora comments from 15 threads and 637 YouTube comments from 5 videos; interviews with 27 owners of 40 dogs (14 overweight and 26 a healthy weight at the time of the interview); 4 focus group discussions with 11 canine professionals and 6 dog owners; and 7 week-long diaries completed by interview participants. Anonymised data were analysed inductively using thematic analysis.

Main findings

Owner recognition and understanding of excess weight was complex. Owners used a wide variety of lay judgements to assess their dog's condition, with varied success. Further, owners also expected to be informed by canine professionals if their dog was overweight. There were also varied beliefs about how the body condition of a healthy dog should look and feel, which often did not align with veterinary advice. Due to changes in physical appearance and behaviour after weight reduction, owners could struggle to accept their dog's new identity.

Principal conclusions and implications

These findings provide insight into why owner judgements about body condition often do not align with the view of veterinarians, which could make accepting a diagnosis of obesity more challenging. Veterinarians should discuss appropriate methods of assessing condition and weight status with all dog owners, for instance using puppy growth charts, weighing and body condition scoring.

193 “Moving a problem from A to B”: A qualitative analysis of health problems in imported rescue dogs and their implications for the dogs, owners, and other stakeholders

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¹University of Liverpool, Liverpool, United Kingdom. ²VetPartners, York, United Kingdom. ³University of Edinburgh, Edinburgh, United Kingdom

Introduction

The number of overseas rescue dogs being imported into the UK has increased significantly in recent years. Since there is a lack of research into the health implications for imported dogs, and the potential for disease transmission within the UK, the aim of this study was to investigate stakeholder and owner experience of health problems seen in imported dogs.

Methodology

Participants were recruited using purposive sampling through social media and targeted emailing. 23 interviews and 3 focus groups were conducted with overseas and UK rescue representatives, dog trainers, pet transporters, veterinary surgeons, animal health officers, government representatives and dog fosterers and owners in the UK. Descriptive thematic analysis of the transcripts employing inductive coding enabled the creation of three main themes.

Main results/findings

The first theme was non-compliance. Illegal landings occurred when dogs were transported without the correct paperwork, heavily pregnant and as underage puppies. Despite being signed off as fit for transport, dogs were reportedly transported with recent surgical or open wounds, pre-existing traumatic injury and disabilities, and exotic diseases including leishmaniasis, echinococcosis, and brucellosis.

The second theme was welfare during transportation, which included injuries, infectious disease and parasite spread, gastroenteritis, pancreatitis, dehydration, and poor body condition reported by new owners.

The final theme was owner expectations, as these often did not align with reality after the dog arrived and led to costly surprises, including infectious disease screening and extensive veterinary care.

Principal conclusions and implications for the field

Some dogs are imported with known and unknown health issues. Owners can struggle if they were not expecting this or supported in dealing with it, and veterinary professionals were fearful of zoonotic risk. Greater education and support for both owners and veterinary professionals are recommended, alongside improved monitoring of transport processes to protect animal welfare during transit.

Behavioural Challenges in Canine Companionship

14:45 – 16:15 Saturday, 17th June, 2023

Location Holyrood

Chair Roxanne Hawkins

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

84 Exploring social inequalities in dog-related injuries within Scotland using administrative data sources

Jade E Hooper, Paul Lambert, Hannah Buchanan-Smith, Tony Robertson

University of Stirling, Stirling, United Kingdom

Studies across England and Wales have found increasing rates of hospital admissions due to dog-bites, with rates highest in the most deprived areas. In Scotland, thus far there has been no rigorous empirical investigation into social inequalities in dog-related injuries. This study aims to address this gap through analysis of linked administrative health data.

Records from NHS24 calls, A&E attendances and SMR01 hospital admissions involving dog-related injuries (bites or strikes) were linked to 2011 Scotland Census micro-data. A random sample of individuals were extracted from the Census as a control group. Logistic regression models were used to model the likelihood of having a health record for a dog-related injury between 2011–2018 (NHS24 & A&E) or 2007–2018 (SMR01). Measures of social circumstance were considered at the area and individual/household level. Additional control variables included an estimate of dog populations, age, gender, household composition and ethnicity. In all three health data sets, the likelihood of an individual having a record for a dog-related injury was higher for individuals residing in the 10% most deprived areas of Scotland compared to the 10% least deprived areas ($p < .001$). The odds of having an NHS24 record were 1.52 (95%CI=1.38–1.66) times higher, an A&E record 1.39 (95%CI=1.25 – 1.55) times higher and a SMR01 hospital admission 1.76 (95%CI=1.52–2.04) times higher. A household (scale) measure of social (dis)advantage also showed the odds increasing with levels of social disadvantage ($p < .001$) for each the NHS24 (OR=1.00, 95%CI=1.00–1.00), A&E (OR=1.01, 95%CI=1.00–1.01) and SMR01 (OR=1.01, 95%CI=1.00–1.01) data.

Rates of dog-related injuries were higher in circumstances where individuals may be seen as more socially disadvantaged at the area and individual/household level, with a clear social gradient. Social/legal policies related to dog-bites typically don't consider social disadvantage in any meaningful way. These results show the importance of doing so – especially given the current economic crisis.

38 "If you have a dog, you sort them yourself": Barriers to seeking professional dog-training

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Sarah K Weidman, Lauren K Harris, Katherine L Anderson, Kevin Atkinson Hughes-Gandy, Kirsty Britton, Kirsty MacQueen, Rachael Marley, Molly Maunders, Michelle Moat, Zoe Morris, Isaac Simpson, Jennifer Terris, Abigail Ward, Robert M Christley
Dogs Trust, London, United Kingdom

Introduction: Engaging in professionally led dog-training can have substantial benefits for dogs and owners, including increased safety and dog-owner bond. However, only a portion of owners seek professional training. This study aimed to (a) determine the proportion of UK owners that have attended training sessions and (b) increase understanding of why owners choose not to engage with professional trainers.

Methods: This mixed-methods study will review training-related data from two data sets: a large-scale survey of UK dog-owners (n= 384,458) and qualitative responses from 170 ad-hoc interviews with the public carried out across the UK.

Results: Only 36.2% of survey respondents attended any sort of professionally led training session with their current dog(s). However, many owners reported engaging in training without professionals—preferring to rely on their own experience (36.4%), or to do their own research (13.3%). A further 7.7% of owners reported that their dog did not need training. A qualitative framework-analysis of the interview data led to the identification of attitudes motivating these responses. Specifically, attitudes related to training without professional advice included: (1) pride in training without help (2) feeling that classes are not suitable/accessible (3) belief that classes need to be attended only once per owner (4) valuing online/media information and (5) poor previous experiences with a professional. Attitudes related to the belief that their dog did not need training included: (1) acceptance and accommodation of dog behaviour (2) belief that training is only necessary for severe problematic behaviour and (3) feeling that ‘pets’ should not be trained.

Conclusion: This data provides us with a clearer understanding as to how many UK dog-owners engage with professionals, and why many choose not to seek professional advice. We argue that this is a crucial step in designing future initiatives to effectively address these barriers.

113 Well-behaved, but... Caregiver acceptance and management of unwanted behaviours in dogs.

Lauren K Harris, Sarah K Weidman, Kevin Atkinson Hughes-Gandy, Kirsty Britton, Kirsty MacQueen, Rachael Marley, Molly Maunders, Michelle Moat, Zoe Morris, Isaac Simpson, Jennifer Terris, Abigail Ward, Robert M Christley
Dogs Trust, London, United Kingdom

Introduction- Behaviour perceived as problematic can be detrimental to human and dog welfare and is often cited as the most common reason for dog relinquishment. Attending training classes can reduce the risk of relinquishment and escalation of problems, however, many dog caregivers do not engage in formal training. This study aimed to explore how caregivers live with and manage problem behaviours, as an alternative to engaging with training.

Methods- Data from 170 ad-hoc interviews conducted with dog caregivers across the UK were analysed qualitatively using the framework method to create themes.

Results- An overarching theme that emerged was accommodation, which encompassed two major sub-themes: 1) “management, not training” - whereby caregivers employed strategies to live with problem behaviours, which ranged from minor changes in routine to major lifestyle changes like relocation, and, 2) “acceptance” -

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characterised by caregivers embracing (at least to some extent) certain behaviours as a facet of their dog's personality. A turn-of-phrase often used to discuss situations involving accommodation was "well behaved, but...", which included the prefacing or acknowledgement of positive traits when talking about problematic behaviours. Many caregivers expressed that their love for their dog drove their acceptance or tolerance of unwanted behaviours. Together these themes encapsulate situations where dog caregivers accommodate specific behavioural characteristics of their dog in order to navigate their lives together. However, there may be negative impacts on one or both lives, for example restriction (or in some cases complete absence) of off-lead exercise and caregiver anxiety when the dog is allowed off-lead.

Conclusion- While dog caregivers who accommodate problem behaviours are not necessarily at risk of relinquishment, the welfare of both human and dog may be impacted. Therefore, it is important to find a way to make training and other support available and accessible where needed.

82 "It's time he needs": A qualitative analysis of behavioural problems in imported rescue dogs and their implications for the dog and owner

Alisha Murphy¹, Lisa Wallis¹, Louise Buckley², [Carri Westgarth](#)¹

¹University of Liverpool, Liverpool, Merseyside, United Kingdom. ²University of Edinburgh, Edinburgh, United Kingdom

Introduction

The number of overseas rescue dogs being imported into the UK has increased significantly in recent years. However, there is a lack of research into this phenomenon and implications for canine welfare and owner wellbeing. The aim of this study was to investigate the experience of adopting an imported dog in terms of behavioural problems exhibited after adoption and advice sought.

Methodology

18 threads from 3 publicly available online forums were identified through searches and selected using purposeful sampling, in order to encompass a range of behaviours and contexts. A focus group was also conducted with behaviourists/trainers. Qualitative inductive coding using thematic analysis identified three main themes.

Main results/findings

The first theme was novelty, as some dogs were reported to encounter difficulties with new environments, objects or strangers. The second theme was autonomy, where some dogs found the lack of control over their new environment and ability to choose challenging, resulting in escape, difficulties being confined, and predatory behaviour. The final theme was owner expectations, where these often did not align with reality after the dog arrived. This was often felt to be due to the dog not being well-matched for the household or lifestyle, or displaying unexpected behaviours. The rescue organisation was perceived to have moral responsibilities to provide accurate information and pre-and post-adoption support. Owner patience in giving the dog time to adjust was also stressed.

Principal conclusions and implications for the field

The ability of imported rescue dogs to adjust to their new environment and lifestyle can lead to behavioural challenges, and owners can struggle if they were not expecting this or know how to deal with it. The impact of

pre-and post-adoption knowledge and support requires further investigation in order to better understand these concerns and their implications for dog welfare and owner wellbeing.

Human-Equine Interactions

16:30 – 18:00 Saturday, 17th June, 2023

Location Pentland

Chair Clare Thomas-Pino

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

96 Horse agency and welfare: Insights from experienced horse sector participants.

Julie M Fiedler, Josh D Slater, Margaret L Ayre, Sarah M Rosanowski

University of Melbourne, Melbourne, Victoria, Australia

Introduction. The Five Domains Model changes the approach to equine welfare because it recognises sentience and agency. Changing welfare policies and practices to include agency presents a challenge in highly managed environments such as racing and equestrian sports and will require an understanding of attitudes towards agency from participants. **Methods.** We surveyed participants in horse-related activities about current welfare practices, sentience, agency, anthropomorphism and social licence. Eligible responses were received from 681 participants: the majority were Australian (91%) and had considerable experience in the sector (56% were aged 50 or older and 86% had more than 20 years' experience), with half (46%) identifying as professionals. **Results.** Most respondents (93%) believed that horses have the capacity for agency. Responses to a question about how agency relates to welfare identified two themes. The first was Talking about agency which provided insight into respondents' understanding of agency and how it relates to welfare. Explanations of agency included 'making choices' and 'gaining control'; whilst agency 'allows horses to look after their own welfare'. The second theme was Promoting agency which identified opportunities for developing agency-informed welfare practices in relation to training. These included adaptive training methods to 'seek collaboration with the horse' and 'guide the horse to make the desired behaviour'. Welfare gains from such approaches included 'reducing the need for harsh handling'. Promoting agency was considered to 'keep horses and humans safe' by 'aligning training cues with how horses learn'. Implementing agency-informed practices required 'horse people to recognise the different behaviours of their horses' because people were recognised as enablers of horse agency. **Conclusion:** this survey suggests there is good understanding of agency and its relevance to welfare in experienced members of the horse sector. **Implications:** changing equine welfare policy and practice to include the Five Domains Model should be achievable.

147 Human Ability to Classify Horse Affective States Depicted in Media via an Online Survey

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¹University of Guelph, Guelph, ON, Canada. ²Campbell Centre for the Study of Animal Welfare, Guelph, ON, Canada

Introduction: Human recognition of horse affective state is imperative to fostering positive horse-human interactions. This study investigated human ability to classify horse-human interactions from the horses' point of view and if their interpretations related to personal emotional awareness.

Methodology: Using an online survey, participants (n=534) classified 31 media clips depicting a positive, likely positive, neutral, likely negative, or negative scenario. Participants described characteristics used to classify the scenarios and completed a questionnaire (MAIA-2) to assess their level of emotional awareness. Chi-squared analyses compared expert classifications (considered 100% correct) to participant classifications and a mixed model determined the effect of fixed factors (age, gender, education, level of experience with horses) on classifications and MAIA scores. Open-ended comments were analyzed qualitatively using a priori themes.

Results: Participants did not match expert classifications any better than chance (52.5%; $p < 0.0001$). However participants were better at identifying clearly positive (65%) and negative (64%) horse-human interaction scenarios relative to subtle positive (38%) and subtle negative (42%) scenarios. Higher education was associated with higher scores in classifying subtle positive scenarios ($p > .03$) and more horse experience was associated with higher scores in classifying clearly positive ($p > .03$) and negative ($p > .002$) scenarios. Women outperformed men in matching expert classifications of clearly positive ($p = .0223$) scenarios. Qualitative comments for both positive and negative scenarios referred to body parts of the horse (i.e. ears, eyes) and how the horse interacted with the human (engaging, avoiding). There was a trend for participants with higher scores only on the MAIA-2 noticing scale to better match expert classifications ($p = .0852$).

Conclusions: Humans were unable to determine the valence of horses' affective states in various positive and negative horse-human interaction scenarios compared to expert classifications. Human emotional awareness did not appear to influence how humans interpreted a scenario, but gender, education and experience with horses did.

45 Management of Overweight Horses in Prince Edward Island, Canada: Horse Owner Perspectives

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Introduction: Equine obesity is considered a significant animal welfare problem. The role Canadian horse owners play in horse weight management is not well understood. This study aims to: 1) explore the attitudes, beliefs, and perceptions of owners with overweight horses regarding their horses' weight and, 2) to understand the motivators and barriers for horse owners to implement and improve weight management-related strategies.

Methodology: A semi-structured question guide based on the Theoretical Domains Framework was developed. Qualitative interviews were conducted with 24 horse owners in Prince Edward Island, Canada, whose horse(s)

were previously classified as overweight by a veterinarian. Interviews were analyzed using template analysis, where patterns in the data were organized in a codebook to develop overarching themes.

Main findings: Horse weight management was considered important and constructed by owners in complex ways, incorporating unique aspects of horses' daily life and background. Horse owners considered themselves knowledgeable in the realm of weight management. However, strategies used to manage overweight horses were not always deemed effective, or owners were unwilling to give up other aspects of their horse's welfare, such as turnout or herd living. Owner emotions played a role in their common preference to manage horses as "slightly overweight" compared to "slightly underweight" despite their belief that horses' physical health is typically better when managed at "slightly underweight". Further, participants believed that societal norms encompass a paradigm that accepts overweight horses and often perceives them as healthier than horses that are "slightly underweight".

Principal conclusions and implications for field: These findings indicate that owners consider horse weight important, but perceived barriers make implementation of weight management strategies challenging. Strategies to manage weight may benefit from an increased understanding of their effectiveness. Further, shifting the paradigm of what a healthy horse looks like will facilitate healthy weight management practices.

27 Contradiction and complexity in equestrians' horse keeping and training practices

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Introduction

While the ideal horse-human relationship is built on mutual respect and trust, high rates of poor ridden horse welfare suggest this ideal is rarely achieved. Understanding the motivations behind equestrians' horse keeping and training practices may allow strategies to be developed to improve horse welfare. This study explored the motivations underlying equestrians' horse keeping and training practices.

Methodology

Part of a larger mixed methods project, this qualitative study included semi-structured interviews of nineteen recreational and/or sport horse riders (17 female, 2 male) from Victoria, Australia. Interviews were between 35 to 90 minutes duration and covered a range of topics, including riders' choice of equipment, their opinion on the welfare of ridden horses and preferred training practices in relation to four commonly encountered equestrian scenarios. Interviews were audio-recorded, transcribed, and thematically analyzed using abductive coding within a self-determination theory (SDT) framework.

Main results/findings

The overarching theme to emerge from the data was that many horse keeping and training practices are motivated by human needs, rather than horse needs. Examples include, equipment selection to comply with competition rules; desire to achieve fast or instant training results; convenience; and maximizing profit from selling horses. Equestrians' acknowledgement of the human-centric motivations underlying their chosen practices was uncommon. While equestrians talked about partnership and the importance of the horse-human relationship, in practice equestrian goal achievement and control of the horse were prioritized.

Principal conclusions

While most equestrians stress that horse welfare is their highest priority, they regularly employ practices that are contrary to good horse welfare. Strategies that engage equestrians to critically reflect on their horse-human relationship and the motivations underlying their chosen practices, may facilitate the re-balancing of horse keeping and training priorities so that both horse needs and human needs are addressed.

New Directions in Canine-Assisted Interventions

16:30 - 18:00 Saturday, 17th June, 2023

Location Prestonfield

Chair Megan Mueller

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

157 Exploring a range of dog-assisted interventions using robotics, virtual reality, and videos.

Luke T Argyle, Kerstin Meints

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Introduction: Animal-assisted interventions (AIs) can provide beneficial effects to human wellbeing, with such effects also being shown for participants watching dog-videos. So far, further areas of AI application have remained unexplored, including integration of alternative intervention technologies. There is also a lack of longitudinal studies. The current study is part of a larger project assessing dog-assisted interventions (in-person and remotely) compared with robotic-dogs, Virtual-Reality (VR), and video conditions. The current study presents first results from short-term and longitudinal intervention effects using VR-dogs, robotic-dogs, and a dog video across a range of psychological measures in adults.

Methodology: Randomised controlled trials with repeated measures were utilised with 72 participants to assess effects of different intervention types before and after a 10-minute intervention, and after 1 month. The study includes 4 testing conditions with 3 experimental intervention groups: 1) robotic-dog, 2) VR-dog, or 3) dog video, 4) no-treatment control group (reading a newspaper).

Main Results: ANOVAs of Condition (robotic dog/VR-dog/video/control) by Time (before/after interventions) showed significant improvements and beneficial effects: State and Trait Anxiety ($F(1,68)=20.17, p<0.001, \eta^2=0.23$) and ($F(1,68)=12.19, p=0.001, \eta^2=0.15$) respectively; Mental Wellbeing ($F(1,68)=12.03, p=0.001, \eta^2=0.15$); Stress ($F(1,68)=19.57, p<0.001, \eta^2=0.22$) and Loneliness ($F(1,68)=6.26, p=0.015, \eta^2=0.08$). Improvements were not maintained after 1 month. Further results and implications will be discussed.

Principal Conclusions and Implications for Field: The present study is the first to explore effects of multiple types of dog-assisted interventions across a range of wellbeing assessments. Current results highlight the usefulness of alternative technologies on human wellbeing. These can be applied with those who cannot work with real dogs due to allergies, are located too remotely from dog handler access or cannot benefit from dog exposure due to setting or other restrictions. Further research will compare these results with real and online-dog interventions.

63 Virtual connections with canines: Therapy dogs reducing undergraduate student stress

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¹University of British Columbia, Kelowna, BC, Canada. ²Brock University, St. Catharines, Ontario, Canada

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Introduction: Interacting with therapy dogs has been found to bolster well-being, especially in college students seeking to reduce their stress (Huber et al., 2022). Preliminary research suggests virtual canine-assisted interventions (CAIs) are effective in reducing viewers' pre-to-post stress (Binfet et al., 2022). Many in-person CAIs, especially those on college campuses, use a drop-in format allowing visitors to interact informally with therapy dogs. The aim of this study was to offer a virtual drop-in CAI that was low-barrier, easy-to-access, and accessible at students' discretion.

Methodology: Participants (N = 897 students) were recruited from undergraduate psychology courses at a mid-size Western Canadian university and self-selected to participate. Participants were predominantly female (79%, 20% male, 1% non-binary) and were randomly assigned to one of four 5-minute videos with a therapy dog and handler. Participants completed a single-item stress measure prior to- and after watching the asynchronous video.

Main Findings: A paired-samples t test revealed that participants reported lower stress levels after the virtual CAI (M = 2.50, SD = 0.97) compared to before (M = 3.31, SD = 1.05), $t(896) = 30.84$, $p < .001$, $d_z = 1.03$. Controlling for pre-intervention stress, men (n = 170, estimated marginal mean = 2.64, 95% CI [2.53, 2.74]) had higher post-intervention stress levels compared to women (n = 713, estimated marginal mean = 2.46, 95% CI [2.41, 2.51]), $d = 0.14$. There was not a significant effect of international vs. domestic student status, controlling for pre-intervention stress ($F(1,280) = 1.12$, $p = .29$).

Conclusion and Implications: Results corroborate findings from emerging virtual CAI research attesting to the stress-reduction benefit of having college students spend virtual time with therapy dogs. Implications include how to train dog-handler teams and how to create digital CAIs. This modality holds potential to reach geographically remote or marginalized students who otherwise could not partake in CAIs.

214 Developing School Facility Dog Guidelines: An Action Research Project

Stacie Baumbarger¹, Suzanne Reinhart¹, Janet Hoy-Gerlach²

¹Assistance Dog at The Ability Center, Sylvania, Ohio, USA. ²OneHealth People-Animal Wellness Services, Ottawa Hills, Ohio, USA

Introduction: Youth across the United States and internationally face myriad and increasing academic, social, and emotional challenges in schools. School facility dogs working full-time in schools alongside their human partners are gaining increased attention as a wellness strategy. However, there are not established guidelines or best practices for school facility dog programs. Through funding from the Scaife Foundation, Assistance Dogs (Assistance Dogs International accredited), a program at The Ability Center in Ohio, brought together a stakeholder team to collaboratively co-create guidelines for school facility dog programs.

Methods: Using IRB-approved participatory action research methods, a stakeholder group created guidelines for school facility dog programs. The group included: two facility dog trainers at an ADI facility; twenty-nine school facility dog handlers (including principals and superintendents); and a HAI researcher with experience in collaborative methods. The entire team met at the beginning and end of the project; stakeholders separated into five smaller work groups to accomplish tasks. Through iterations of communication within and between the workgroups, participants: created a project timeline; identified domains of a school facility dog program; developed questions; conducted self-led focus groups on the questions; analyzed responses; and used findings to create guidelines.

Results: The team co-created a publication, *School Facility Dog Program Guidelines (2022)*, which is freely available to guide and inform school facility dog program development and implementation. The Guidelines publication is divided into two primary sections: pre-dog placement guidelines and post-dog placement guidelines.

Conclusion: Using the guidelines to align the work and activities of school facility dogs with the school's goals and needs, rather than operating in isolation as a particular classroom or staff initiative, was identified as critical by the stakeholder group. Proactively maintaining the dog's welfare was likewise identified as paramount.

129 An Online Dog-Assisted Intervention Across the Lifespan

Holly Tyers, [Kerstin Meints](#)

University of Lincoln, Lincoln, United Kingdom

Introduction:

Animal-Assisted Interventions (AAI) with dogs have been shown to benefit human wellbeing, with touch as one potential trigger for beneficial biopsychosocial effects. As the COVID-19 pandemic highlighted problems with accessibility of AAI, particularly for older age groups, this study therefore aimed to explore if an interaction with a dog and handler in a virtual setting without the possibility of physical touch still improves individuals' wellbeing.

Methodology:

A randomised-controlled trial with 91 healthy adult participants (2 age groups: 18–25 and 45+ years) was conducted via Microsoft Teams. We compared effects of a 10-minute intervention on participants' anxiety, positive and negative affect, loneliness, and wellbeing. Participants were randomly assigned to remote intervention conditions: (a) dog-assisted intervention, (b) watching a dog film or (c) reading a neutral newspaper article. A mixed ANOVA of Age Group x Condition x Time was carried out to analyse the data.

Main findings:

The dog-assisted intervention significantly reduced anxiety ($p = .001$, $d = -.89$) and negative affect ($p = .002$, $d = -.96$) when compared to the reading, but not to the dog-video intervention ($p = .723$, $d = -.11$; $p = .344$, $d = -.30$ for anxiety and negative affect respectively). Decreases in negative affect following AAI were stronger for older than younger people ($p = .035$, $d = .74$). Participants' positive affect, wellbeing and loneliness scores did not differ significantly across conditions.

Principal conclusions and implications for the field:

This is first evidence that remote AAI and dog videos both significantly reduced anxiety and negative affect in healthy adults, with older adults showing more benefits in negative affect than younger adults. Hence, these practices are beneficial for hard-to-reach populations and those who have to self-isolate for health reasons. Future research should evaluate dosage to investigate further improvements in more detail and longitudinally.

Human-Animal Interaction in Cultural Context

16:30 – 18:00 Saturday, 17th June, 2023

Location Holyrood

Chair Steve Loughan

Session to feature oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

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119 The Health of Working Dogs in Conservation in Africa

Nicola Earnshaw¹, Neil Anderson¹, Jill Mackay¹, Megan Parker²

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The Health of Working Dogs in Conservation In Africa.

Introduction: Dogs are employed for conservation purposes worldwide for wildlife population research, monitoring, management and in preventing and enforcing wildlife crime. In Africa, they work closely with their handlers in challenging environments with unique health risks which have not been investigated until now. This research was conducted to understand the challenges that handlers and dogs face to develop and maintain a functioning conservation dog unit.

Methodology: Semi-structured interviews were conducted with participants that used working dogs in their conservation programmes. Thematic analysis of the interview data generated five themes and recommendations were made based on these themes.

Main results/findings: Three affective themes influenced how participants responded to the challenges associated with having a successful conservation dog programme. The acknowledgement of the challenging environment were pivotal to maintaining dog health. Heat stress and African trypanosomiasis were regarded as the biggest threats to the conservation dogs' health. A strong handler-dog attachment was an essential component in maintaining the health of the dogs. Handlers that had a good working relationship with their dogs were able to identify changes in performance that were early indicators of poor health. Proficient handler training was key to fostering the handler-dog bond, especially as handlers were not accustomed to handling dogs before receiving training. Two themes related to the difficulties in managing these programmes and how veterinary support interacts with the management choices being made.

Principle conclusions and implications for the field: To have healthy conservation dogs, current and future programmes should focus on fostering the handler-dog attachment and provide continuous handler training. Handler training should follow an evidence-based approach and future research should focus on areas where evidence base is lacking. Programmes should develop a good working relationship with a veterinarian that has access to evidence-based veterinary medical information.

19 Pet Demographics, Reliability and Country Differences: Impact on HAB Theorizing.

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¹WellBeing International, Potomac, Maryland, USA. ²Vier-Pfoten, Vienna, Austria

The number of pet dogs and cats in a particular region or country is an important base-line statistic for many analyses of human-animal interactions. However, obtaining a reliable estimate of pet demographics and the factors that influence how many pets and which types particular households contain is far from simple. In the USA, there are three regular surveys of pet demographics. The American Veterinary Medical Association (AVMA) has conducted surveys every five years. The American Pet Products Association (APPA) has conducted surveys every two years. Simmons (a market research firm) conducts annual surveys. Each produces different estimates of the rate of pet dog and cat keeping in the country but there is almost no considered discussion of these differences. Two Washington Post journalists looked at the differences and reported the following

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estimates of US household pet, dogs and cat ownership: AVMA – 57%, 38%, 25%; APPA – 68%, 48%, 38%; Simmons – 53%, 38%, 24%. The APPA estimates are much higher than those reported by the AVMA or Simmons. There also appear to be systematic differences in the estimates derived from surveys using different survey technologies (online surveys appear to produce the highest estimates while surveys using pre-existing household panels produce the lowest pet ownership estimates). There are also large and stable differences in pet ownership from one country to another and from one region of a country to another. Very few investigations of the reasons for these differences have been undertaken. For example, over the past forty years, Swedish, UK and USA estimates of dog ownership have been stable at around 80, 135–140 and 220–240 dogs per 1,000 people. These different rates presumably reflect different human–animal interaction tendencies.

51 Compassion fatigue among animal shelter volunteers: role of social cognition, attachment, social support, and workload.

Javier López-Cepero¹, Rafael Martos-Montes², Jesús García-Martínez¹, Francisco J. Rivera De los Santos¹

¹Universidad de Sevilla, Sevilla, Andalusia, Spain. ²Universidad de Jaén, Jaén, Andalusia, Spain

INTRODUCTION: Compassion fatigue (CF) is a prevalent problem among healthcare professionals, comprising Burnout and Secondary Traumatic Stress (STS). Previous studies have analyzed the presence of CF among veterinarians and veterinary nurses, but there are few data on the experience of volunteers who collaborate in animal shelters. **METHODS:** A total of N=130 volunteers (86% women; M=42 years) from southern Spain participated. Participants completed questionnaires on occupational quality of life (Professional Quality of Life-5), attachment (Lexington Attachment to Pets Scale), social cognition (Animal Anthropomorphizing Questionnaire, Brief Interpersonal Reactivity Index), social support (Support Towards Animal Protection Labor questionnaire, Support in Animal Care Organizations questionnaire) and workload (weekly hours of dedication, involvement in euthanasia). **RESULTS:** 27.8% of the participants presented moderate indicators of STS and 36.8% presented signs of Burnout. The linear regression analysis showed that the measures of social cognition (empathy and anthropomorphizing) and care load were precursors of STS (variance explained $R^2=44.9\%$), while burnout was related to empathy and workload (positive relationship) and to social support inside and outside the shelter (negative relationship; $R^2=35.1\%$). **CONCLUSIONS:** CF is a prevalent problem among animal shelter volunteers. Organizations can protect their staff by attending to risk factors and establishing work plans adjusted to the psychosocial characteristics of their volunteers.

70 A comparison of attitudes towards zoo animal welfare between British and Japanese zoo visitors

Yumi Yamanashi^{1,2}, Moe Honjo³, Yuko Ikkatai⁴, Nahoko Tokuyama², Rie Akami⁵, Duncan Wilson⁶, Hannah Buchanan-Smith⁷

¹Center for Research and Education of Wildlife, Kyoto City Zoo, Kyoto, Kyoto, Japan. ²Wildlife Research Center, Kyoto University, Kyoto, Kyoto, Japan. ³Graduate School of Fisheries and Environmental Sciences, Nagasaki University, Nagasaki, Nagasaki, Japan. ⁴Faculty of Social Science, Kanazawa University, Kanazawa, Ishikawa, Japan. ⁵Japan Monkey Centre, Inuyama, Aichi, Japan. ⁶Department of Psychology, Graduate School of Letters, Kyoto University, Kyoto, Kyoto, Japan. ⁷Psychology, Faculty of Natural Sciences, University of Stirling, Stirling, Scotland, United Kingdom

Scientific evidence should form the basis for policy and practice decisions concerning animal welfare but cultural attitudes inevitably influence decision-making processes. Understanding similarities and differences across cultures is important to devise effective strategies to improve animal welfare. We conducted a survey of general attitudes towards zoo animal happiness and live prey feeding between British and Japanese zoo visitors (1,580 visitors, aged over six years from two Japanese and one British zoo). We used the word “happy” as the concept of “animal welfare” is not prevalent amongst the Japanese public. We focused on live prey feeding as viewpoints differ depending on whether people side with prey or predator. Additionally in Britain, illegalizing live feeding of vertebrate prey in zoos is under discussion, while Japan has no equivalent movement. We asked participants about their general attitudes towards animals, concepts of animal happiness, and acceptance of using a range of vertebrate and invertebrates as live prey. Overall, both British and Japanese people are very concerned about the happiness of animals. However, when considering what is important for animal happiness, Japanese people mostly limited responses to basic factors such as food and sociality, whilst British people referred more to stimulation in the captive environment and positive emotions. The level of tolerance regarding live prey feeding was similar between countries, except for octopuses. Respondents differed in their reasons for this distinction. Japanese people often referred to personal preference when deciding which prey is acceptable to live feed, while British people often referred to their intelligence or ability to experience pain and suffering. Overall, the views of Japanese and British people showed many similarities, but Japanese people tended to show more subjective decision making than British people. These findings may inform visitor interpretation within zoos, based on science, and lead to discussions on policy and practice.

Symposium

What's the Story? Measurement and Mechanism of Change in Equine-Assisted Interventions

14:45 – 16:15 Saturday, 17th June, 2023

Location Pentland

Chair Angela K. Fournier

Discussant Dr. Clare E Thomas-Pino

The symposium features a 10-minute introduction, three 15-minutes oral presentations, a 10-minute discussant presentation, and then followed by Q&As.

131 Approach and Response – Recording HAI Behaviors in Equine-Assisted Interventions

[Angela K Fournier](#), Megan French

Bemidji State University, Bemidji, MN, USA

Equine-assisted interventions inherently include human-animal interaction (HAI). Yet our understanding of the interactions between horses and humans during psychotherapy and learning interventions is limited. Research tends to address client outcomes (e.g., Perez-Gomez et al., 2020; Trzmiel et al., 2019) more than intervention processes. Self-report data on HAI within these interventions suggests a range of behaviors occur, and may be initiated by the humans or animals involved (Fournier et al., 2018). Ethograms are a useful tool for measuring animal behavior and some researchers are employing them to study animal-assisted work (Ng et al., 2014; Wijnen & Martens, 2022). This presentation shares findings from a field study employing an ethogram with both horse and human interactive behaviors – referred to as an anthrozooethogram. Through sequence sampling, researchers recorded 267 instances of approach and response between horses (n = 6) and humans (n = 30). Humans were most likely to reciprocate horses' approach behavior (64% of sequences), while horses were most likely to ignore (61% of sequences) or avoid (24% of sequences) humans' approach behavior. The research sessions were video recorded, and a subset of participants (n = 10) reviewed their video with researchers to share their subjective experience. Participant reports suggest approach-response sequences may be interpreted by clients in a variety of ways. Findings will be discussed in the context of equine-assisted story transformation theory.

66 A theory for how change happens in equine-assisted intervention including psychotherapy incorporating horses

[Noreen W Esposito](#)

University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

Introduction. One challenge facing clinicians and researchers in the field of equine-assisted intervention is a lack of theory explaining mechanisms of change. Theory gives us a common language to explore how the presence of a horse, whether in direct interaction with a human or from afar, influences experience. Theory stimulates research questions, guides design and shapes clinical practice. The purpose of this presentation is to offer Equine Assisted Story Transformation (EAST), a theory that can be used to explain what happens for humans and horses during equine-assisted interventions such as psychotherapy incorporating horses.

Methodology. EAST is based on clinical observations, interviews and the literature. It is constructed from the science of different disciplines, with an assembly of working theories that when integrated, help to explain dynamic processes within and across species.

Main Focus. EAST is organized through physiological, sensory, symbolic and cognitive domains of experience. This perspective builds on the out-of-sight, but ever-present influence of body-state on human thought, experience, story and meaning. It considers the horse as a social mammal with wisdom, a drive to connect and an intelligence that is different but equally as important as the humans. EAST emphasizes the integration of the mind-body experience, the reciprocity of nervous systems across species, and lends credibility to the human perception of connectedness during an encounter with another social mammal. EAST minimizes the objectification of horses while acknowledging that the horse can also serve as a concrete, embodied, physical experience through which the human can come to a deep understanding of an abstract thing. EAST offers an explanation for how the human's perspective and story changes.

Conclusion: EAST gives us a mechanism of change that will offer researchers and clinicians a common theoretical perspective thus filling a critical gap in the field of equine-assisted interventions and psychotherapy incorporating horses.

149 "What's the Story? Measurement and Mechanism of Change in Equine-Assisted Interventions"

Elizabeth A. Letson, MS, LPCC¹, Dr. Sarah E. Cronin, PhD, LP²

¹Eagle Vista Ranch & Wellness Center, Bemidji, MN, USA. ²Bemidji State University, Bemidji, MN, USA

This presentation will describe a quasi-experimental field study designed to examine the efficacy of a socioemotional learning program for youth that incorporated horses and other animals. The research involved gathering data on Horses Empowering Youth (HEY), a community program aimed at building youth mental health and peer relationships. The program was delivered through a partnership between a community private practice and the local Boys and Girls Club. Participants (n=66) were either "Juniors" (grades 4 and 5) or "Tweens/Teens" (33 youth in grades 4-6 and up through 12) who were enrolled in summer programming at the Club. Thirty-six youth attended animal-assisted learning sessions involving animals during the Summer of 2022. Researchers gathered self-report and teacher-report data at pretest and posttest from youth who attended the animal-assisted learning sessions (n=40). They also gathered the same self-report and teacher-report data from Club members who consented to research but did not attend the animal-assisted learning intervention (i.e., control group; n=26). Variables of interest included resilience; measured with the Resilience Scale – 10 (Wagnild, 2014) for Children and human-animal interaction measured with the Human-Animal Interaction Scale (Fournier et al., 2016). The findings show significant correlations between human-animal interaction activities and resilience scores. For example, playing with horses during the sessions were positively associated with authenticity, $r = .655$, $p < .01$. Training horses during sessions was inversely associated with resilience, $r = -.642$, $p < .001$. Difference scores were calculated between the pretest and posttest scores. There was a significant difference in purpose between the Juniors and Tweens/Teens. Specifically, The Tweens/Teens showed greater improvement in feeling a sense of purpose ($M = 0.48$, $SD = 0.11$) compared to the Juniors ($M = -0.25$, $SD = 0.78$), $t(15) = -1.42$, $p < .05$. Discussion will occur about application of these findings as well as challenges of measurement and data collection methods for partnerships with youth programs.

Stand Alone Oral Presentations

Stand Alone Oral Presentations A-1

08:00 – 10:25 Friday, 16th June, 2023

Location Holyrood

Chair Steve Loughan

Session to feature stand alone oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

145 Exploring Diversity, Equity, and Inclusion Perceptions Among Leadership in the Field of Human-Animal Interaction

[Clare L. Jensen](#)¹, Jennifer Ogeer², Alan M. Beck¹, Marguerite E. O'Haire³

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³University of Arizona, Oro Valley, Arizona, USA

Introduction.

The field of human-animal interaction (HAI) has grown substantially in scientific rigor and public awareness, yet the role of human diversity has been sparsely considered. Efforts to promote diversity, equity, and inclusion (DEI) in HAI are both timely and necessary for the field's ongoing advancement. As one of the first steps to advancing DEI is to understand present conditions, this study pursued two questions: (1) What is the representativeness among field leaders (i.e., directors of HAI research and education centers), and (2) What are their perceptions about the status and importance of DEI in the field?

Methodology.

This study was conducted in conjunction with the 2021 Centers for Human Animal Bond Conference. Surveys completed by center directors included measures of demographics, and multiple choice, Likert-type, and free-response items regarding perceptions of diversity and DEI initiatives in the field. Themes from DEI-focused conference discussions with expert panels were used to interpret the survey results, understand their implications, and recommend next steps for the field to actively promote DEI.

Main Results.

Results included a 75% response rate (n=21). Most center directors self-identified as white and cisgender (100%), not Hispanic/Latinx (89%), heterosexual (83%), non-disabled (78%), and female (72%). There was low perceived diversity among field professionals and communities served, but diversity in HAI was considered by most (76%) to be very important. Qualitative results showed varied levels of understanding regarding barriers to DEI in HAI, and inconsistent utilization of DEI initiatives.

Principle Conclusions and Implications for Field.

Findings suggest limited representativeness and a need to improve DEI initiatives in the field, but also that field leaders view DEI as highly important. This study provides a baseline quantification to inform future research, in addition to describing resources from DEI experts which may be applicable for continued promotion of DEI in HAI.

92 The creation of a systematic framework to identify differences in dog laws across the nations of the United Kingdom

Sarah Weir, Lynsey McDevitt, Clare Andrews, Sharon E Kessler

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Law is an integral part of daily life of humans and their dogs. As law aims to reduce harm, who is being protected by legislation can highlight governments' prioritisation of various groups' interests. Dogs are popular in the United Kingdom (UK) where 33% of households have dogs. However, this popularity varies across the 4 nations (England, Scotland, Wales and Northern Ireland) which also vary politically, demographically and culturally. Because dog law is often enacted at this regional level, who these governments prioritise is also likely to vary. The perception of difference makes campaigning for legislative change challenging for dog charities with finite resources. This study aims to create the first systematic method to compare different legal jurisdictions to determine whether this perception is correct.

This study created a systematic, conceptual framework to compare laws across jurisdictions by measuring the level of protections key groups gain. Using content analysis, we analysed 332 laws identified through a systematic search of legislation.gov.uk, the official database of UK law hosted by The National Archives. We categorised the law area and if legislators intended to benefit dogs and their owners or the general public. The framework was successful in enabling jurisdiction comparison. Results indicate that there is little difference in the prioritisation of beneficiary group interests across UK nations. Devolved nations often duplicated existing laws passed by the central government. All nations legislated similar proportions of law that manage dogs in public (7% difference across nations), dog protection (5% difference) and economic activity (4% difference). A similar pattern was found for law protection (difference between 1%–7% across nations). These results have implications for organisations who wish to lobby governments by identifying the government that leads law creation. The framework enables future studies to create systematic understandings of dog law in countries with different governmental systems that can then be compared internationally.

42 Exploring Gender Differences in Stress Reduction of University Students Attending a Canine-Assisted Intervention

John-Tyler Binfet, Freya L. L. Green, Rebecca J. P. Godard, Camille X. Rousseau, Madisyn M. Szypula, Jordy Decker

University of British Columbia, Okanagan, Kelowna, BC, Canada

Introduction: Researchers have established that providing opportunities for university students to interact with therapy dogs is beneficial to students' wellbeing (Pendry & Vandagriff, 2019; Sokal & Martin, 2021). Across studies, participant samples skew predominantly female and there is a need to understand how canine-assisted interventions (CAIs) differentially impact students by gender. This skewed gender distribution is evident across studies (e.g., 70% female in Sarrafchi and colleagues, 2022; 74% female in Trammell, 2019; 78% female in Ward-Griffin et al., 2018; and 73% female in Wood et al., 2018). Additionally, meta-analytic findings reveal low non-binary representation (Manville et al., 2022). The aim of this study was to assess whether there are gender differences in well-being outcomes as a result of participating in an on-campus CAI.

Methodology: Self-identified men, women, and non-binary/two-spirit/gender fluid participants (N = 163; Mage = 20.6 years (SD = 3.2) were recruited via campus-based social media. Participants (males, n = 54, 33%; females, n = 80, 49%; non-binary/two spirit/gender fluid, n = 28, 17%) self-selected their gender group and completed a series of well-being measures before and after a 20-minute CAI.

Main Findings: Results indicated that participants across all conditions experienced significant pre-to-post reductions in self-reports of stress, loneliness, homesickness, anxiety, and negative affect and significant increases in connection, happiness, positive affect, and optimism (all $p < .001$). Effect sizes were moderate to very large; however, these were not dependent on gender group. For all outcome variables, there was not a significant effect of gender group (all $p > .30$, $h^2 \leq .01$).

Principal conclusions and implications for the field: This study assessed the effects of an on-campus CAI on self-reports of well-being in university students of varying genders and found a 20-minute CAI did not differentially benefit students by gender. Findings are discussed within the broader context of HAIs.

40 How Young People Manage Undesired Behaviours Exhibited by their Dogs

Renata Roma, Christine Tardif-Williams, Shannon Moore

Brock University, St Catharines, Ontario, Canada

Introduction. Research exploring the impact of undesired dog behaviours on young people's daily experiences can offer a nuanced understanding of dog ownership and shed light on the pet effect (Herzog, 2021; 2011).

However, few studies have explored how undesired dog behaviours impact young people's experiences with their dogs. This qualitative study addresses this gap in the human-animal interactions literature by exploring young people's insights into how they handle stressful situations with their dogs.

Methodology. Seven participants aged between 17–26 years engaged in semi-structured one-on-one interviews about their experiences with their dogs when handling undesired dog behaviours. A qualitative content analysis was applied to identify salient themes (Hsieh & Shannon, 2005), and participants' responses were coded for connection, kinship, behaviours, reaction and communication, emotional reactions, coping styles, and what they hope to change when responding to these stressful situations.

Main results/findings. Participants handled their dog's undesired behaviours in unique ways. Three themes were identified. First, Attachment Patterns (e.g., "We have a close connection," "He is like a baby") was supported by the codes connection, kinship, and behaviours. Second, Synchrony/Lack of Synchrony (e.g., "He seems to feel my mood") was supported by the codes reaction and communication. Third, Response to Challenging Situations (e.g., "I wish I had handled things better") was supported by the codes emotional reactions, coping styles and what they hope to change when responding to these stressful situations.

Principal Conclusions and Implications for the Field. Our findings suggest that young people experience challenging situations with their dogs, including undesired behaviours, that they handle these behaviours in unique ways, and that such challenging situations sometimes negatively impact the quality of the relationship they share with their dogs. This information can inform efforts designed to foster positive interactions between young people and their dogs and reduce dog surrenders.

191 What's unique about the social support people get from their dogs?

Jonathan Bowen^{1,2}, Aubrey Fine³, Jaume Fatjo¹

¹Affinity Foundation Chair for Animals and Health (Department of Psychiatry and Forensic Medicine – Autonomous University of Barcelona), Barcelona, Spain. ²The Royal Veterinary College, London, United Kingdom. ³California State Polytechnic, Pomona, Pomona, California, USA

Introduction

In previous work using a repurposed human-animal bond scale (MDORS) we gained insights into the social support people obtain from their dogs. However, further information was needed to identify all the dimensions of social support. A qualitative study was designed to characterise and confirm the multi-dimensionality of social support from dogs, as an initial phase in the development of a dedicated scale (the Social-Support-and-Affinity-Dog-Scale; SOS-ADS).

Methodology

A thematic analysis approach was applied to a set of open-text questions that were devised with an expert panel of psychiatrists and social scientists, and responses were scored according to the resultant scheme. Exploratory factor analysis was used to identify associations between themes. Respondents also answered a question about the quality of their relationship with the dog, compared with humans.

Main results/findings

Of the 197 complete responses collected, 67.5% respondents rated the relationship with their dog being as important as any relationship they have had with a person.

We identified themes, including using factor analysis, that appear to be unique to support from dogs. These included being an empathic confidant that is non-judgmental and not distressed by the content of what is disclosed, being a source of stability and distraction from stressors that is also unmoved by those same stressors, and being an always-available solution to loneliness.

Seven percent of participants reported that the dog helped them overcome suicidal thoughts or attempts. In all but one of those cases, responsibility for caregiving was indicated as the main barrier that prevented the person from committing suicide.

Principal conclusions and implications for the field

We have found evidence that support from dogs is a multi-dimensional construct, with some of the themes or combinations of themes that we identified forming dimensions that are unique or almost unique to dogs.

26 Veterans and their dogs: A nationwide survey examining dog functional types, human-dog relationships, health and wellness

Cheryl A. Krause-Parello¹, Erika Friedmann², Christine Spadola³, Jacquelyn Baldwin¹, Joy Sessa⁴

¹Florida Atlantic University, Boca Raton, FL, USA. ²University of Maryland, Baltimore, MD, USA. ³University of Texas, Arlington, TX, USA. ⁴Florida Atlantic University, Boca Raton, Florida, USA

Introduction

Dog ownership may be a feasible, non-pharmacological approach to improve veterans' health and wellness. Veterans' dogs consist of functional types including service dogs (SD; working dogs with specialized training), emotional support dogs (ESA; trained for individuals with psychiatric disabilities and impairments), and companion dogs (CD; non-specialized personal dogs). Despite the potential benefits from dogs, no studies to date evaluated the relationship of veteran demographic characteristics, dog functional type, or intensity of the

human-dog relationship to characteristics of the veterans who have them or to their association with changes in veterans' health and wellness.

Methods

This cross-sectional portion of a longitudinal study uses a convenience sample to describe the relationships of veteran demographics, dog functional type, intensity of the human-dog relationship, health, and wellness. ANOVAs or chi squares evaluated differences in demographic and health characteristics among the three dog functional types with Bonferroni corrections for multiple comparisons.

Results

Demographics did not differ significantly among veterans according to dog types. Military characteristics also did not differ except combat exposure ($p=0.003$) which was most common among SD (46%), intermediate among ESA (39%), and least common among CD owners (25%). Veterans with a SD ($n=81$) had greater PTSD symptom severity, higher anxiety, and poorer physical health outcomes than those with a CD ($n=81$). SD owners also had greater dog interactions, closeness, and care costs than CD owners ($p's < 0.001$) and ESA owners ($n=80$; $p's < 0.005$).

Conclusions/Implications

Differences in functional types of dogs veterans own are related to the veteran's symptoms and characteristics. Generally, the SDs are with veterans with the most and the CDs with those with the least severe symptoms/limitations. This suggests appropriate placement of dogs. Longitudinal data will be helpful for examining differential reduction in negative veteran health outcomes among functional dog types.

43 Understanding handlers' perspectives: Under-explored pillars supporting canine-assisted interventions

Camille Xinmei Rousseau, John-Tyler Binfet, Amelia Alice Willcox

University of British Columbia, Kelowna, BC, Canada

Volunteer dog handlers are essential for optimal program delivery of canine-assisted interventions (CAIs) supporting children. Handlers' insights, perspectives, and experiences are often underreported in AAI research. The purpose of this study was to explore dog handlers' perspectives within the context of CAIs for children. Thirteen experienced handlers (93% female; Mage = 52.28, SD = 10.91) completed an online survey comprised of open-ended questions (e.g., "What priorities, with respect to dog-handler teams, need to be considered when organizing and running CAIs for children?") to understand the needs and experiences of dog-handler teams. Responses were analysed using a thematic approach (Saldaña, 2021) to identify salient themes and subthemes within and across cases.

First, across-case findings revealed that participants emphasized that dog handling is a multidimensional, multifaceted responsibility. Responsibilities included advocating, working as a team, facilitating supporting modeling, rationalizing, and establish rapport.

Second, developing a canine-centered protocol that establishes clear expectations for all stakeholders is essential. Programs should embrace canine welfare education, establish expectations for everyone involved, scaffold introductions to therapy dogs, teach appropriate dog-related behaviours through perspective-taking, and responsively monitor interactions.

Third, prioritizing safety and clear communication is key. This entails having necessary materials, completing rigorous dog and handler assessments, being attuned to canine body language, and providing timely and appropriate communications for children.

Finally, there is value in being intentional in time and location parameters. Participants suggested choosing a familiar space with few distractions, ensuring sufficient time with the dogs, allowing interactions to unfold organically, and terminating activities when canine or child safety is at risk or compromised. Handlers offer a unique perspective and their insights can optimize the quality of CAI programming and the well-being of clients and dog-handler teams themselves. Findings are discussed within the broader context of CAIs, as are the implications for handler recruitment and retention.

Stand Alone Oral Presentations A-2

13:00 – 14:30 Friday, 16th June, 2023

Location Holyrood

Chair Marie-Jose Enders-Slegers

Session to feature stand alone oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

184 An experience sampling study into the role of animal species and behaviour in the pet-effect: it is not who we appraise, but what we appraise

Mayke Janssens^{1,2}, Jannes Eshuis¹, Nele Jacobs^{1,2}, Karin Hediger^{1,3}, Sanne Peeters¹

¹Open University, Faculty of Psychology, Heerlen, Netherlands. ²Maastricht University Medical Center, department of Psychiatry and Psychology, Maastricht, Netherlands. ³University of Basel, Faculty of Psychology, Basel, Switzerland

The contribution of companion animals to human mental wellbeing has received an increasing amount of scientific interest. Research findings concerning this relationship are however mixed. Variability in characteristics of the animal and variation in how humans perceive the animal might explain this heterogeneity. In the present study we examine whether the presence of an animal as well as the appraisal of its behaviour is associated with mental wellbeing in daily life, and whether this effect is different for dogs versus cats. Using the Experience Sampling Method (a signal contingent ecological assessment technique), 90 dog or cat owners reported for five consecutive days, at ten random time-points each day, in the moment whether their dog or cat was present and to what extent they appraised their behaviour as pleasant. At each measurement moment they also reported on their current positive and negative affect, using 11 mood-related adjectives derived from the Positive And Negative Affect Schedule (PANAS).

Multilevel regression analyses showed that positive affect was relatively higher when a companion animal was present (vs. absent) ($B=0.18$, $P=0.002$, 95% CI= 0.07 ; 0.30). In addition, a more positive appraisal of the behaviour of the animal was associated with higher levels of positive affect ($B=0.18$, $P<0.001$, 95% CI= 0.10; 0.25). There was no association between pet presence or the appraisal of behaviour and negative affect and animal species did not moderate any of these associations.

This shows that the presence of a companion animal is associated with aspects of mental wellbeing and that a positive appraisal of the behaviour of the animal adds to this effect. This seems to be a general effect as this association did not differ between dogs and cats.

198 Resource management practices of dog breeders in Canada and the United States and associations with competitive behaviours in puppies: A Cross-Sectional Survey

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Quinn Rausch¹, Samantha White², Jason Coe¹, Tina Widowski³, Jacquelyn Jacobs⁴, Lee Niel¹

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Introduction: Aggressive forms of resource guarding are common in companion dogs and detrimental to canine and human welfare and the human-animal bond. Early puppy experiences have the potential to impact competition and resource guarding development, yet little is known about breeder practices. Our objective was to examine associations between breeder practices and early puppy competition.

Methodology: A cross-sectional survey for Canadian and American dog breeders (n = 292) examined how breeders manage food delivery (e.g., nursing, food bowls) for puppies and asked questions about human and dog demographics, nursing and feeding management practices, responses to different competitive situations, and whether their puppies show competitive behaviour during feeding. Logistic regression models examined factors associated with 1) puppy competition around food (CAF) towards humans, and 2) use of positive punishment (PP) training techniques by breeders.

Results: There was higher odds of breeder-reported CAF with regular removal of the food bowl from puppies during meals (1.97x odds versus no removal; 95%CI 1.07–3.66, p = 0.03), and a reduced odds with puppy intervention during nursing (0.29x odds versus no intervention; 95%CI 0.14–0.57, p < 0.001). A non-linear relationship was found between reported use of PP to deter competition and breeding experience (95%CI 0.997–0.9998, p = 0.02), with use of PP increasing from 0 to 30 years, and then decreasing from 30 to 60 years. Breeders who reported puppy competitive behaviour during nursing and solid food meals had 3.2 times (95%CI 1.52–6.89, p=0.002) and 3.7 times (95%CI 1.92–7.09, p<0.001) higher odds of using PP to deter competition, respectively, than breeders who did not report competitive behaviour.

Conclusions: This cross-sectional study found significant associations between breeder management practices and puppy behaviour and highlights the need for further studies to examine causal relationships between use of PP, types of breeder intervention during meals and puppy competition.

114 Attachment style and social fear in dogs from commercial breeding kennels

Allegra K Stahl¹, Alessia Diana¹, Shanis Barnard¹, Monique AR Udell², Candace C Croney¹

¹Purdue University, West Lafayette, IN, USA. ²Oregon State University, Corvallis, OR, USA

Introduction: In commercial breeding kennels (CBKs), adult dogs have been reported to exhibit moderate signs of fear towards strangers. Social fear is a welfare concern as it may lead to acute and chronic stress in the kennel, and later in homes. Studies on pet and shelter dogs have shown that the type of attachment style dogs have with their caretakers is associated with their social behavior towards strangers. Thus, the aims of this study were to characterize the attachment styles of dogs from CBKs to their caretakers, and investigate possible relationships between the types of attachment styles observed and social fear behaviors in this population of dogs.

Methods: Forty-eight adult dogs were tested from three CBKs in Indiana, USA. Each dog was subjected to a standard battery of tests, including a secure base test to classify attachment styles, and a stranger arena test to measure latency to approach and duration/frequency of key social behaviors toward a stranger.

Results: Twenty-two (46%) dogs were classified as secure (SC), 17 (35%) as insecure-ambivalent (AM), and 9 (19%) as insecure-avoidant (AV). ANOVA tests showed that secure and ambivalent dogs approached the stranger more frequently ($SC=1.34 \pm 0.12$, $AM=1.05 \pm 0.14$, $AV=0.26 \pm 0.19$; $F_{2,45}=11.865$, $p<0.001$) and spent more time in close proximity ($SC=3.36 \pm 0.30$, $AM=3.92 \pm 0.34$, $AV=0.72 \pm 0.47$; $F_{2,45}=15.968$, $p<0.001$) to them than did avoidant dogs.

Conclusions & Implications: These results suggest that there is an association between type of attachment style and fear behaviors towards a stranger in this sample of dogs. Better understanding of this connection may help inform breeders' selection and breeding of dogs as well as their socialization, social interactions, and related management practices. This may help to reduce dogs' social fear and enhance their long-term welfare outcomes.

48 Trainer views of working marine mammals: Bonds, Trust, Individuality, and Welfare

Amber Marie Ramos^{1,2}, Joanne Williams¹

¹University of Edinburgh, Edinburgh, United Kingdom. ²National Marine Mammal Foundation, San Diego, CA, USA

Introduction: Despite a significant body of research in medicine, cognition and behavior of marine mammals in zoos and aquaria, few studies have explored the perspectives and experiences of the trainers who care for these charismatic species. This paper reports on an in-depth qualitative analysis of the lived experiences of marine mammal trainers focusing on their interactions with the animals in their care, their emotional bonds with the animals, and efforts to foster positive welfare.

Methodology: Narratives from ten marine mammal trainers (8 female, 2 male) representing the range of experience levels were collected through semi-structured interviews conducted by an experienced behavioral psychologist. The participants were encouraged to answer questions freely and were able to share tangential stories in support of their answers to the interview prompts. Interviews were audio recorded, transcribed and coded in NVivo 11 to identify themes and subthemes using Interpretive Phenomenological Analysis (IPA). A second researcher carried out a coding audit. Coded transcripts were given back to the participants, allowing them to confirm or reject themes which had been assigned to their statements. IPA was chosen to examine the data, as its double hermeneutic theory acknowledges the researcher's efforts to make sense of the participants as experts who are also trying to make sense of their own unique experiences.

Main Results: Data analysis revealed three superordinate themes which all participants expressed in some form. The dominant theme was the perceived human-animal relationship and bond, with trainers sharing deeply personal stories emphasizing love, emotion and trust. The second superordinate theme of note was that of animal mind, with trainers expressing their views of intelligence, anthropomorphism, and animal individuality and personality. The third theme explores the ways in which fostering the human-animal relationship leads to animal success and positive welfare.

Principal Conclusions and Implications for the Field: This study provides a novel, phenomenological perspective on the vocation of marine mammal trainers and their bonds with the animals they work with. Further exploration could extend this qualitative inquiry with caretakers and trainers of other species, expanding the knowledge base of human-animal relationships with working animals in a range of professional settings.

Stand Alone Oral Presentations A-3

14:45 – 16:15 Friday, 16th June, 2023

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Location Holyrood

Chair Beckie Marsland

Session to feature stand alone oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

152 Exploring Human Animal Relationship in Prehistoric Japan-an review of archeological evidences show changes in the role of dogs from hunter-gathers to rice cultivators

Miki Kakinuma¹, Asami Tsuchida²

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Objective: Prehistoric nomadic hunter-gathers in Japan, called Jomons depended much of their food source on shells, nuts and some wild animals. They created shell mounds around their habitat. They also buried human and dogs along with clay pots and artifacts in the shell mound, which allowed bones to remain in good condition. Analysis of these remains allow us to understand the possible roles or functions of the animal around them.

Method: Analysis based on excavation reports, museum exhibitions and literatures.

Results: Besides shells, human as well dogs, wild bores, deer, birds and fish skeletal evidence are found in shell mounds in middle to northern part of Japan. Skeletal remains of dogs suggest that they were used in hunting wild bores and stayed with human even after they are injured and not fit to hunt. Dogs were found in burial positions, close to human remains. Jomons are known for their elaborated potteries which they used of cooking. Some of the potteries had decorative handles with iconic frogs and other creatuers. They also created human figure, mostly female, with clays. Much less in numbers, but they also created animal figures of wild bores. Only a few clay figures identified as dogs are found.

Discussion: Burial styles suggest dogs lived close to human in Jomon period. However, the artifacts of this period are mainly of wild bores and frogs and not dogs. Lack of dog clay figures may suggest that artifacts in Jomon period may had different functions than modern world in which we keep photos and toys of pets to feel close to them.

Once the rice cultivation takes over with Yayoi, cats join the list of animals found in remains and some dogs become their food sources. Since the basic lifestyle of rice cultivation remains in Japan, the role of cats may not have changed much since the prehistoric period.

16 Enhancing connections, positive emotions and perceptions towards unpopular species through anthropomorphic storytelling videos.

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¹Queen's University Belfast, Belfast, Northern Ireland, United Kingdom. ²Royal Zoological Society of Scotland, Edinburgh, Scotland, United Kingdom

Introduction: People find it challenging to connect with animals that are dissimilar to humans. This study therefore aimed to improve people's emotions, perceptions, and connection with a goby fish and a stick insect via anthropomorphic storytelling videos. It also explored whether level of connection, emotions and perceptions can predict people's willingness to donate (WTD) to care for these animals.

Methods: Participants (N = 594) were recruited for a study in which they watched an anthropomorphic (AV) or non-anthropomorphic (NAV) video of a goby fish or stick insect. A series of scales were subsequently completed to assess connectedness to the focal animals, emotions, perceptions and hypothetical willingness to donate to Edinburgh Zoo to the animals' care.

Results: ANOVAs explored whether participants' responses to the outcome measures were influenced by species (fish, insect) or video condition (AV, NAV). Results revealed no significant effect of species ($p = 0.051$) or video condition ($p = 0.955$) on participants' connectedness to the focal animals. Participants exposed to goby videos felt happier ($F = 44.34, p < .001$), more interested ($F = 12.59, p < .001$) and more love ($F = 32.27, p < .001$) than individuals in the stick insect condition. People who watched the AVs perceived the focal species to be more similar to humans ($F = 15.05, p < .001$) and more able to express emotions ($F = 7.21, p = .007$), than people in the NAV condition. Gobies were perceived to be more similar to humans ($F = 61.71, p < .001$) and more able to have emotions ($F = 13.72, p < .001$) than stick insects. A regression illustrated that higher connectedness scores, more positive emotions and perceptions were predictive of a greater WTD ($F = 13.07, p < .001$).

Conclusions: Results suggest that anthropomorphic videos may have a positive impact on people's perceptions of animals, and, indirectly, increase their willingness to donate to the care of unpopular species.

187 Understanding landlord decisions in relation to pet friendly renting in order to minimise concerns

Luciana Santos de Assis, Sandra McCune, Daniel Mills

University of Lincoln, Lincoln, United Kingdom

The availability of pet friendly housing is clearly an issue in the U.K. Consequently, many tenants must choose between pet ownership and the type of housing they can access. This can have wider impacts since there is evidence that humans can benefit from their interactions with animals.

However, some interactions are negative, and these can have a long-term impact by changing the behaviour, thought and/or emotional response underpinning a specific attitude towards animals. Such experience might drive private landlords of residential properties to exclude pet owners. Accordingly, it is essential to identify the reasons why landlords choose not to accept companion animals in their rental properties to identify solutions to this problem. This study used a qualitative approach (thematic analysis) to investigate the perceptions of 19 U.K. landlords owning rental properties (pet-friendly or not) and one letting agent regarding:

- 1) the main concerns of landlords about allowing pets to live in their rental properties,
- 2) the sources of influence affecting landlords' opinions.

Results grouped into themes are:

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1) the main concerns: property damage although it seems humans generally cause worst damage and pets are given unrealistic high weight as a potential cause of damage. Other concerns were: Anti-social behaviour from the animal; Irresponsible pet ownership; Difficulty evicting the tenant,

2) the main sources of influence for landlords' decisions:

a. the default of letting agencies stating "no pets" on the property listing,

b. previous experience with: tenants' pets, landlords' own pets, tenants in general,

c. whether landlords consider their properties to be the tenants' "home" or "house".

Being a pet-friendly landlord in the UK seems to depend on a wider range of reasons than direct experience with animals. Our results will allow the development of educational material tailored to landlords to mitigate the issues identified and guide preventive programs.

64 A scoping review of campus-based animal-assisted interactions (AAI) programs for college student mental health

Tanya K Bailey

Boynton Health, University of Minnesota, Minneapolis, MN, USA

Introduction. Attending college is a significant development stage for many young adults often fraught with numerous challenges that can lead to high levels of stress. Of the thousands of health promotion programs offered at colleges in the United States, Animal-Assisted Interactions (AAI) has grown in prevalence despite the lack of commensurate empirical support showing they are effective for stress management. This paper presents the results of a scoping review about campus-based AAI programs specifically designed to address two questions: 1) what mental health outcomes have been reported as a result of these programs, and 2) how much of this evidence reported specifically on stress.

Methodology: A scoping review was conducted following steps outlined by JBI and PRISMA-ScR. Eligibility, inclusion, and exclusion criteria guided the search strategy, and three groups of keywords – AAI, college students, and mental health – helped identify empirical articles and dissertations up to October 25, 2020 through Academic Search Premier, PsychINFO, and Web of Science.

Main results: Of the 1,195 publications identified, 37 articles reporting 45 individual studies met eligibility criteria. Adapted from the World Health Organization's (WHO) quality of life model (WHO, 2012), 44 mental health outcomes were synthesized among cognitive, physiological, psychological, or social domains. The majority of AAI sessions were 1 event, and students engaged with 1 dog for 15 minutes. Key findings reported statistically significant (positive) changes in students' mental health, and a reduction in stress was the most frequently recorded outcome followed by anxiety.

Principal conclusions and implications for the field: This study demonstrated that AAI for college student mental health is an emerging interest in research, practice, and education; however, further inquiry is vital to ethically support animals coming to college campuses for increasing and more complex mental health challenges.

References: WHO. (2012). Programme on mental health: WHOQOL user manual.

<https://www.who.int/tools/whoqol>

Stand Alone Oral Presentations B

14:45 – 16:15 Friday, 16th June, 2023

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54 Reactive dogs: using social listening as a research tool in under-investigated areas of HAI

Carla J Hart¹, Davide Uras², Tammie King¹

¹Waltham Petcare Science Institute, Leicestershire, United Kingdom. ²Royal Canin, Aimargues, France

Introduction: The use of data insights captured by social and online listening has increased in healthcare over the past decade. However, its use in animal care has failed to gather the same momentum, despite owners frequently seeking help online. Social and online insights may be particularly useful for informing the direction of investigations into under-researched areas, such as reactive dogs. Dog reactivity as a concept has grown in popularity over recent years, and with it, initial research into this population. Therefore, the aim of the current project was to determine whether social/online listening could be used as a research tool to provide meaningful insights into the perception of reactive dogs and highlight important issues that may warrant additional investigative research.

Methods: Using the Sprinklr platform, insights were captured over a 10-year period (Jan 2012–Dec 2022) for reactive dog mentions online (reactive dog, reactive dogs, #reactivedog, #reactivedogs, #reactive#dog) and dog mentions (dog, dogs, #dog, #dogs) within the UK and globally.

Results: The number of reactive dog mentions increased yearly, and at a faster rate compared to dog mentions. Per capita, these reactive dog mentions were proportionally highest in the UK, followed by the US, Canada and Australia. A greater number of positive sentiment mentions were detected than negative, with happiness being identified as the most prevalent emotion. Related topics for negative mentions highlighted potential problem areas for future investigation, including “children”, “neighbourhood”, “mental health”, “control”, “front door” and “bite”.

Conclusions and Implications: Social listening provided valuable insights into the perception of reactive dogs within the general population, as well as highlighting potential focus areas for future investigation. Its speed, reach and versatility make social/online listening a powerful tool when conducting initial investigations into under-researched areas; however, increasing platform privacy restrictions may reduce its viability in future years.

41 Comparing efficacy in reduction of pulling among four types of dog walking equipment

Anamarie C Johnson, Clive D.L Wynne

Arizona State University, Tempe, AZ, USA

Introduction: Prong collars are a series of linked metal rings with extensions that contact a dog's neck. They are designed to reduce pulling by using negative reinforcement – when the dog pulls against the collar, the prongs cause discomfort leading the dog to stopping pulling. Though banned in certain countries and widely available in others, to date there is no research comparing the efficacy of prong collars to other leash walking equipment.

Methodology: We compared four types of leash walking equipment: a martingale (flat collar as control), a front-attaching harness, a polymer prong-style collar (Starmark), and a standard metal prong collar. Twenty-three dogs were walked on all four types of equipment for five-minutes each. Equipment was attached to a leash

which was connected to a battery-powered strain gauge to measure the dog's pulling force. All walks were video recorded for behavior analysis.

Main Results: There were statistically significant differences among the types of leash equipment in impulse exerted on the leash (Newtons x seconds), ($\chi^2 (2) = 30.6, p < .001$). Post-hoc analysis (Bonferroni corrected Wilcoxon signed-ranks test) revealed significant differences in impulse among the martingale and the other equipment: harness ($Z = -3.69, p < .001$), Starmark collar ($Z = -3.62, p < .001$) and prong collar ($Z = -3.92, p < .001$). No other differences among forms of equipment were significant.

Principal Conclusions and Implications for the field: This research showed that there were significant reductions in pulling for dogs walked on a harness, Starmark collar or prong collar compared to a martingale collar. There were no significant differences in pulling among any of the other equipment types. Future research should compare behavior among equipment types for signs of differential welfare relating to stress.

200 The Development of Materials for Professionals Working with Older Adults, Persons with Dementia, and Caregivers on the Benefits, Challenges, and Resources of Pet Ownership: The Results of Theory-Driven Mixed-Methods Investigation

Jessica Bibbo, Justin Johnson, Sarah Nicolay, Ashley Haas
Benjamin Rose Institute on Aging, Cleveland, Ohio, USA

Introduction: Pets can be an important relationship in the lives of older adults and often factor in older adults' behaviors and decisions. Educating professionals on these issues are likely to improve the health and wellbeing of people and pets.

Methodology: The stress process model was used to develop an online survey on pet ownership issues geriatric professionals (i.e., people working with older adults [OA], persons with dementia [PWD], and/or caregivers[cg]) had encountered in their work. The survey was completed by an interdisciplinary sample ($N=462$) working in healthcare, social services, and private and community-based services (e.g., long-term care, housing). A convergent parallel approach was used. Quantitative data were analyzed with descriptive statistics, t-tests, and repeated measures ANOVAs. Qualitative data were analyzed using a directed content analysis to create codes and themes. The theory was applied to construct three specific models for: 1. older adults, 2. persons with dementia, and 3. caregivers. The findings were translated into materials for geriatric professionals.

Main results/findings: The benefits of pet ownership were wellbeing (e.g., positive mental and physical health) and connections. Pet care was the most common challenge (e.g., basic care, financial), caregiver strain was unique to CGs. Other challenges were planning, safety (e.g., falls, pet behavior) and the pet being a barrier to care. The companionship directly experienced by OA and PWD was the central resource of pet ownership.

Principal conclusions and implications for the field: Issues shaping and stemming from pet ownership are interconnected. The results of this investigation provided insights into the interactions between an owner's functional ability, the home environment, and the health and wellbeing of people and pets. The materials are intended to help professionals utilize the human-animal bond to build rapport, identify potential challenges, and encourage healthy behaviors and routines.

Stand Alone Oral Presentations A-4

16:30 – 18:00 Friday, 16th June, 2023

Location Holyrood

Chair Beckie Marsland

Session to feature stand alone oral presentations each 15-minutes in length followed by 5-minutes of Q&As.

99 An Environmental Scan of Canadian Service Dog Organization Websites

Linzi Williamson, Aliya Khalid, Abu-Hena Mostofa Kamal

Office of One Health and Wellness, Department of Sociology, University of Saskatchewan, Saskatoon, Canada

Introduction: There is an increasing demand but limited supply of Service Dogs in Canada (Canadian Foundation for Animal-Assisted Services, 2020). The purpose of this environmental scan is to provide a snapshot of the resources and support available online for Canadians who want to acquire and/or train a service dog, and to assist them in making informed decisions about their options. Further, this environmental scan provides a snapshot assessment of the quality of available online resources so that organizations can add to and revise their website content.

Methodology: A rigorous review of online content from service dog organizations was verified by multiple researchers from the University of Saskatchewan. The environmental scan was also reviewed by a committee of service dog and animal-assisted human service personnel (e.g., service dog trainers and handlers, organization founders, etc.).

Main findings: A total of 97 service dog-related organizations were identified. Overall, the organizations provided detailed information about the definitions of service dog types, waitlists, services offered, estimated training length, and application process. However, more organizations could consider providing information on associated costs for dogs and training, dog training approaches, the involvement of families, considerations about animal welfare, and specification of service dog trainer training experiences and teaching approaches.

Principal Conclusion and Implications for Field: This environmental scan will be shared with all organizations identified within it and other relevant groups, including Facebook service dog support groups, the University of Saskatchewan's Pawsitive Canine Connections, the Canadian Foundation for Animal-Assisted Services, and the Canadian Association of Professional Dog Trainers. These findings will also inform forthcoming research publications and proposals. Plans are also under way to incorporate information from it into an accessible, user-friendly website.

References: Canadian Foundation for Animal-Assisted Services (CFAS). (2022). The development of a management system for animal-assisted human services (AAHS). <https://www.cf4aass.org/published.html>

172 Evaluation of the Animal Guardians Program: An Intervention for Primary School Children Who Have Harmed Animals

Laura Wauthier¹, Scottish SPCA², Joanne Williams¹

¹University of Edinburgh, Edinburgh, United Kingdom. ²Scottish SPCA, Dunfermline, United Kingdom

Introduction: Childhood animal cruelty can be associated with a range of psychological issues and poor outcomes. This study is an evaluation of Animal Guardians (AG), a targeted educational intervention delivered by the Scottish Society for the Prevention of Cruelty against Animals, for children who have harmed animals. AG is

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a programme for primary school children delivered one-to-one over a 6–10-week period. It targets: (1) an understanding of animal sentience and emotions, (2) knowledge of animal welfare needs, (3) care and responsibilities towards animals, and (4) correct handling and behaviour around animals.

Method: Using a matched-control sample of 48 children (24 referred to AG and 24 matched controls) we evaluated the effectiveness of the intervention through a pre–post-test activity pack measuring a range of constructs, including belief in animal minds, attachment to pets, empathy, and positive and negative behaviour towards animals.

Results: Interaction terms on robust mixed ANOVAs showed that children receiving the AG programme improved significantly more than controls on welfare knowledge ($p < 0.001$), behaviour towards animals ($p = 0.002$), and cognitive empathy ($p = 0.003$). Furthermore, post-hoc tests showed that referred children improved significantly on belief in animal ($p = 0.024$) minds, affective empathy ($p = 0.003$), and behavioural empathy ($p = 0.044$). The intervention was equally effective for girls and boys ($p = 0.697$), and independent of animal harm-severity at referral ($p = 0.771$). Younger children had a marginally greater improvement than older children ($p = 0.049$), and post-hoc tests showed this was because they started with lower levels of welfare knowledge.

Conclusion and implications: These results show that AG is an effective programme and suggests that educational interventions can be a positive way of engaging children and reducing risk of animal harm. More research is required on whether positive changes are maintained over long periods and whether educational interventions might complement psychological interventions.

11 Children's Experiences of Positive Affect with Pet Dogs

Kathryn A Kerns, Carli A Obeldobel, Heather House, Logan B Kochendorfer, Allysia White, Marissa Gastelle
Kent State University, Kent, OH, USA

Introduction. Experiences of positive affect (PA) are common when interacting with animals and, according to the Broaden and Build Theory of positive emotion, may help to build resilience. This study explored how children's relationships with pet dogs, parents, and friends are related to their experiences of PA with their pet dog. In addition, we examined whether greater PA with pet dogs was related to children's thriving.

Methodology. The sample ($n = 115$, 57 girls, 58 boys) included children 9 to 14 years of age who reported the quality of relationships with their pet dog (positive qualities, friction, pets as substitutes), attachment security to parents, and positive and negative friendship quality. PA was assessed with child self-report before and after interacting with their dog, observed child and dog PA during the interaction, and reports of PA when interacting with the dog from a 7-day daily log completed by the children. Children also completed a measure of thriving.

Main results. Children's relationships with parents and friends—but not, for the most part, pet dog relationships—were related to self-reported PA before and after interacting with the dog (significant r s = .21 to .33; in regressions, parent-child attachment a unique predictor). Multi-level modeling (MLM) tests of daily PA showed that relationships with dogs, parents, and friends were all related to daily experiences of PA (p s < .01). Children's experiences of PA in daily interactions with pet dogs also predicted children's thriving ($t = 3.87$, $p < .05$).

Conclusions and Implications. This study highlights experiences of PA as a potentially important aspect of HAI that is related to children's close relationships with dogs and humans as well as to children's thriving. The

findings suggest that experiences of PA may be one mechanism that accounts for the effects of animals on children's development.

161 Rethinking Anthronosis – new pathways of human borne ill-health of animals in modern society

Bruno Beljak, Martina Balaban

ICAH – Institute for the culture of animal health, Zagreb, Croatia

Introduction: Anthropocene, a period in which human has dominated nature, seeks broader views to animal health. Diseases in animals can be divided into those caused by humans (anthronoses) and those whose cause came from nature, such as microorganisms. In this article, I will try to shed light on Anthronosis – human- borne animal diseases.

Methodology: This empirical qualitative study examines pathways in the development of new and emerging outlooks on animal health in modern societies. Through qualitative interviews and participant observation with focus on human-animal bond as cause for ill health changes in pets.

Main findings: Determining quality of animals life is anthropocentric. The way we learn about animal diseases needs updating. Most of the taxonomy, nomenclature, and approach to animal diseases is old. Modern human life style mirrors on pets changing biological mainframes. Deficiency of movement, lack of sexual health, highly processed industrial food, loneliness and other factors cause for a broader definition of what animal health is. Obesity and obesity related diseases, psychological ill health such as depression or anxiety are some of emerging ill health states in modern animals. Is health of animals defined by a human selection of his needs? Did animals change their health because of our culture?

Principal Conclusions and Implications for Field: Re-connecting humans to animals could be a reverse One health equation. As veterinarians, mostly, we take care of animals for food and for leisure. For humans. The same species that causes ill-health of animals. What if the price of animal health is higher than the value? Influencing, being xenobiotical on animals life is something humans can not move away from. To be more specific, there is broader, less visible part of animal health that should be of veterinary concern.

Emerging Topic Oral Presentations

Emerging Topic Oral Presentations A

08:00 – 08:45 Friday, 16th June, 2023

Location Pentland

Chair Emma K. Grigg

Session to feature oral presentations each 5-minutes in length followed by a 15-minute group Q&A at the end.

34 Understanding zoo visitors and non-visitors' knowledge and perceptions toward zoos: Quantitative research in Hong Kong and the UK

Tsz Ting Fok

University of Salford, Manchester, United Kingdom

Problem statement: Recent research understands zoo visitors' perceptions and knowledge about zoos, but there is a lack of studies on how non-visitors perceive zoos. One of the problematic animal welfare conflicts in zoo management is how to create a balanced relationship between zoos and the public, especially non-visitors. The overwhelming majority of zoos in the world depend on visitors for their financial survival. Consequently, the purpose of this research is to fill the gap in the literature by investigating non-visitors and visitors' perceptions toward zoos, using a questionnaire that is distributed to people in Hong Kong and the UK.

Research questions: What is the level of knowledge of zoo visitors and non-visitors about zoos, and what is their perception toward zoos? Is Hongkongers perception toward zoos different from the British?

Methods: An on-line questionnaire was designed using SurveyMonkey and delivered via email, Twitter, and Facebook groups. The survey, consent form, and participation information sheet were developed in traditional Chinese and English (in the same form). A 7-point Likert scale was applied in this study for measuring participants' views toward zoos. R was used for data analysis.

Anticipated challenge: One concern is coverage bias results, due to the inequality of internet access distribution. Another challenge is missing data, due to the average dropout rate in online surveys.

Discussion point: The overarching discussing point is the roles, challenges, and opportunities of zoos in the UK and Hong Kong and any associations between individuals' conceptual knowledge, perceptions and pet ownership, cultural background, and preference for visiting a zoo.

53 Handling Wild Equids: A Safe, Low-Stress and Enriching Approach

Bonny Mealand

Touching Wild, Oban, Scotland, United Kingdom

The Takhi (*Equus przewalski*) showcase zoos' role in biodiversity conservation. For any managed wild species, safe and predictable protocols for routine care and veterinary interventions are essential. The Highland Wildlife Park's (HWP) Takhi share an open 80-acre area with other herbivores. Routine care has previously involved herding the horses into an enclosure followed by darting. These costly and aversive interactions had varying success and were stressful and dangerous for horses and humans.

We aimed to improve Takhi welfare in the park using principles of equine ethology, learning theory, anthrozoology, and interspecies communication to build relationships, focusing on enriching the horses'

experience during any necessary handling. A key element was understanding and interpreting the natural behaviour of the species and individual animals. This was developed through an understanding of species-specific behaviours and learning to interpret the nuances of interactions between individuals, recognising and responding to the needs and communication of each horse, and creating trust based on mutual language and support. This replaced a reward-based approach, which had typically caused increased arousal in the herd. The primary focus was on safety, followed by cooperative care and training with an emphasis on 'horse-led' work. This approach has allowed horses to be handled safely while unrestrained and achievements include hands-on physical examination, blood sample collection, microchipping, hoof trimming, and controlled hand-injection of anaesthetic drugs. The project's success was recognised with a BIAZA Bronze award in 2022. The consistently successful results of this easy to teach method and the long-term integration of these behaviours by the Takhi, which has also been shown in other free-living equids, shows that this type of approach provides a congruent, practical and enjoyable framework within which many interactions become possible. The impact of this project has application in zoos, conservation/ free-living horse projects and the domestic horse world.

130 Human-animal interactions in zoos and aquariums with a focus on a benefit for both

Sabrina Brando¹, Max Norman², Melody Tamayo Moreno³, Patrícia Rachinas Lopes⁴

¹AnimalConcepts, Benissa, Spain. ²AnimalConcepts, Essex, United Kingdom. ³AnimalConcepts, Barcelona, Spain.

⁴AnimalConcepts, Lisbon, Portugal

Over the past decade, there has been an increased interest in the study of Human-Animal Interactions (HAI) in zoos and aquariums (henceforth "zoo"). Compared to HAI research on farm and companion animals, studying caregiver-animal interactions (CAI) and relationships (CAR) in zoos is still relatively new. In this review, we examine the field of CAR in consideration of the types of species and taxa studied and their practical applications for professionals working in zoos.

The quality of bonds shared by zoo animals and caregivers is influenced by a number of factors, e.g., the species concerned, animal and human personality, the quality and consistency of interactions, and the culture and practices surrounding human-animal interactions at different facilities. Many modern zoos have adopted a more "hands-off" approach to animal care, and it remains unclear whether this approach may be detrimental to the enhancement of animal welfare, as well as informal learning and or training we are unaware of.

There is no "one size fits all" approach to CAIs and CARs and what is appropriate for one animal may not be so for another, even within the same species. It is imperative that CAIs and CARs research focuses on the intricacies of HAI in zoos, including respect given to how we can increase our understanding of what animals "want".

Applications to explore include providing opportunities for animals to have choice and control over their interactions with the humans that care for them, such as finding ways to allow animals to "ask" for interactions and activities and expanding the scope of CAI and CAR research to include seldom-studied taxa. Ultimately CAI and CAR research also serves as a foundation for further study of the evolution of interaction into relationships and into caregiver-animal bonds (CAB).

143 Defining Dominance in Domestic Dogs (*Canis familiaris*): A Scoping Review with Recommendations for Human-Canine Interactions

Gia J. da Vinci, Erik D. Fausak, Emma K. Grigg
University of California, Davis, Davis, CA, USA

Research Questions: The topic of dominance in domestic dogs and its relevance to social interactions with humans remains controversial. Our scoping review will explore whether dogs form social hierarchies with other dogs and/or humans, how dominance is defined by canine professionals versus the general public, and the role of dominance theory in training methods that pose a risk to dog welfare and the human-canine bond. We will also track the origins and popularity of dominance terminology over time.

Methodology: We conducted a systematized search with inclusion/exclusion criteria to identify peer-reviewed research and review articles. Results from three databases (CAB Abstracts, PsycInfo, and Scopus) were deduplicated through Zotero citation manager and Covidence systematic review software. Covidence was selected for title/abstract and full-text screenings with two screeners and an arbiter. Software for data extraction includes VOSviewer for visual mapping, Systematic Review Accelerator for word frequency analysis, and Microsoft Excel to organize findings.

Anticipated Challenges: Due to varying perspectives on what constitutes dominance, it can be difficult to evaluate an article's relevance based solely on the title and abstract. This is especially of concern when broad and extensive terms (e.g., "aggression," "social behavior") are used without sufficient context, resulting in a large number of articles requiring full-text screening. Additionally, the accuracy of attributing certain behaviors to dominance (e.g., mounting) is contested.

Discussion Points: Our scoping review is meant to facilitate informative discussions between scientists, canine professionals, and dog guardians. To our knowledge, this is the first evidence synthesis project to systematically evaluate the existing literature about dominance in domestic dogs up to the present day. Given the wide range of information available for analysis, we welcome audience feedback: What unresolved or novel question(s) should be addressed? What subtopics and data could provide deeper insight?

Emerging Topic Oral Presentations B

08:00 – 08:45 Friday, 16th June, 2023

Location Prestonfield

Chair Miki Kakinuma

Session to feature oral presentations each 5-minutes in length followed by a 15-minute group Q&A at the end.

23 Noah's Next Steps: An Integrative Treatment Model for Animal Hoarding Disorder

Katherine O Compitus

New York University, New York, NY, USA

Animal Hoarding is a serious public health issue that often goes untreated with approximately 2,000 new cases in the United States each year. Direct intervention often involves a significant amount of inter-agency coordination from animal rescue groups, legal services, police, and sanitation departments. These interventions primarily target the health issues that result from hoarding and yet, recidivism rates remain high among this population, since interventions rarely include psychological treatment for the animal hoarder. Animal hoarding is distinct from item hoarding due to the affectional bonds that exist with living beings, rather than inanimate objects. A clinical intervention plan is suggested, based on the mixed symptomatology including facets of trauma, obsessive compulsive disorder (ocd) and delusional disorder. Direct psychotherapy and clinical case studies will be the basis for this qualitative study. Challenges include the reluctance to buy into the program from other stakeholders and government agencies who may already be overtaxed and overwhelmed, as well as limited funding. Animal hoarding is likely a distinct mental disorder and, as such, may require a specific integrative treatment model based on building trust, challenging cognitive distortions and addressing issues of bereavement and trauma. To date, no therapeutic treatment model has been developed to treat this disorder, with current models of item hoarding falling short of meeting affectional and relational needs of the client. This model expects to work directly with the animal-hoarder as client, with the ultimate goals of symptom relief, a reduction in recidivism rates, a reduction in animal abuse cases, and to save time and money of already overwhelmed social service agencies.

46 Companion Animals and the Call for Authenticity

Tina Sharifi, Souha R Ezzedeen

York University, Toronto, ON, Canada

Problem Statement and/or Research Questions

Significant research has recognized the profound and powerful implications of the human-animal bond. Humans' relationships with companion animals can lead to an improved sense of self and identity, strengthen meaning and purpose, and act as critical antecedents towards authenticity and the pursuit of one's calling. However, the extant literature has not examined these behaviors in relation to the human-animal bond. Utilizing Bowlby's attachment theory, this research turns its attention to the 'multispecies' framework, and asks—does our relationship with our companion animals encourage us to live authentically and pursue our calling?

Methods

We will investigate animal companionship in relation to authenticity and pursuit of one's calling through a qualitative, narrative analysis, exploring how individuals experience and enact authenticity in relation to their

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companion animals. Open-ended, semi-structured interviews will be utilized to help analyze life stories and encourage interpretation. For example, we will ask participants—how would you describe your experience as a companion animal owner? How have these relationships impacted your work and personal life?

Anticipated Challenges

We acknowledge that question framing may promote participants to solely consider their experiences with companion animals in relation to authenticity and calling. Further, because the conceptualization of authenticity remains highly contested, individuals may utilize various dimensions to assess experiences of authenticity and/or perceive the value of these dimensions differently.

Discussion

Scholars agree that animal attachments can feel as close as attachments to humans. This novel problematization considers how relationships with companion animals can shape and redefine our authentic behaviors and influence calling pursuits. We investigate whether the psychological resources developed through companion animal bonds inspire humans to act in accordance with their authentic self and pursue their calling.

12 How does viewing videos of animals affect the heart rate of freshman college students?

Annie Petersen

Association for Human-Animal Bond Studies, Poway, CA, USA

Problem statement This study will evaluate the effect of viewing animal videos on the blood pressure rates of freshman college students when live animal-assisted interactions are not feasible. This study will demonstrate and document the viability of using video as a tool to decrease heightened heart rates before semester finals, a particularly stressful time of year. This study will propose a study group of 20 students who will view videos of animals and an additional 20 students in the control group who will not view videos of animals.

Objectives The objectives of the study are: (1) to evaluate the effectiveness of using video on lowering heart rates of students before a final exam when live, animal-assisted interactions are not feasible, and (2) to demonstrate and document the viability of using video as a tool without live, animal-assisted interactions.

Proposed methodology In order to compare the effects of both groups, blood pressure rates will be taken after a 30-minute viewing of animal videos before a final for the study group. For the control group, blood pressure rates will be taken before final without a 30-minutes viewing of animal videos.

Challenges With respect to Objective 1, recruitment of student participants may be a challenge given that there are no live animal interactions. Participation may be less than anticipated with the study group.

With respect to Objectives 1 and 2, this study will be designed for in person for the taking of blood pressure rates. This may be impacted by comfort levels regarding Covid and there may need to be accommodations made to virtual participation.

Discussion points This study will examine the use of technology as a lifeline for individuals to support the human-animal bond and new technological resources within animal welfare communities thus, creating a new definition to human-animal connections.

17 Use of Natural Language Processing to Identify Patient Human-Animal Interactions in Human Electronic Health Records

Jennifer W Applebaum, AJ Alvero, William R Hogan
University of Florida, Gainesville, FL, USA

In recent decades, researchers have extensively investigated the impact of human-animal interactions (HAI) on human health. Unknown, however, is whether, and to what extent, healthcare providers are accounting for HAI in the context of patient health. In order to begin to answer several questions regarding HAI, healthcare engagement and access, and human health outcomes, we aim to develop a novel application of large-scale, automated content analysis (i.e., natural language processing; NLP) of free text notes in electronic health records (EHR).

We will compile patient notes for millions of de-identified EHR from 2012–2022 via the University of Florida Health system's integrated data repository. We will use an NLP approach of keyword clustering with word embeddings and grammatical parsers to identify when and how HAI is mentioned in the unstructured text data in patient records. We will also leverage a new large language model (LLM) ("GatorTron"), built specifically to query EHR for further analysis of HAI in human healthcare.

To the best of our knowledge, this is a novel application of NLP to analyze qualitative clinic notes in EHR. Due to the exploratory nature of the first phase of this project, we do not know the number of patient records that will contain any mentions of HAI, nor the nature of the text describing it. Further, the use of an LLM for social science is not well understood and could create unanticipated challenges.

Based on prior literature on HAI and human health, and the popularity of pets in the U.S., we expect that healthcare providers are discussing HAI with patients and this will be noted in qualitative EHR. We plan to explore if and how the HAI mentions are associated with healthcare engagement and access, health conditions and diagnoses, and treatment regimen success or failure.

185 Social provisioning by companion animals: Development of a scale

Jannes Eshuis, Mayke Janssens
Open Universiteit, Heerlen, Netherlands

Although the existence of a so called pet effect is still debated, research shows that interaction with companion animals does have a positive effect on our wellbeing, and that they play an important role in our lives. The exact nature of that role is less clear. We can perceive them as friends that offer an intimate bond, as reliable partners that we can depend on, as children we need to protect and can take care off. In other words: they are part of our social network, especially when other parts of our social network are failing.

To further investigate and specify that role, we are developing a scale that aims to measure in which ways our companion animals provide us with fulfillment of such social needs. The underlying concept is the theory of Social Provisioning, which identifies six fundamental social needs that can be fulfilled by the people in our social network: Attachment, Guidance, Opportunity for nurturance, Reassurance of worth, Reliable alliance and Social integration. Our aim is to identify to what extent our companion animals can be seen as parts of our social network that similarly fulfill those basic needs.

A first version of this scale has been tested, and we are now in the process of validating the adjusted version. During this presentation we would like to present the latest version of the scale, to get feedback from the anthrozoological community on its design and relevance, and discuss possible lines of research that can be pursued.

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Emerging Topic Oral Presentations C

08:15 – 09:30 Saturday, 17th June, 2023

Location Pentland

Chair Jo Williams

Session to feature two series of oral presentations each 5-minutes in length followed by a 15-minute group Q&A at the end.

78 Canine-assisted interventions: considerations regarding suitability and selection criteria-matching suitable candidate dogs to the appropriate CAI

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CAIs (canine-assisted interventions) include 'canine-assisted therapy' in which a therapist sets client-oriented goals, 'canine-assisted activities' with recreational goals, and 'canine-assisted education/learning' in which teachers/coaches create learning goals for clients. Although most definitions of CAIs mention the involvement of a selected and trained dog, no scientific study has yet attempted to show that dogs who pass a behavioral test are more effective in CAIs. This abstract explores the current criteria used to select dogs for CAIs.

Selection tests described by CAI organizations, in legal frameworks, and scientific publications are diverse in procedures and parameters. However, all aim to select dogs that are suitable, reliable, predictable, controllable, safe, and who inspire confidence in clients. Most topics in dog selection tests focus on the human client's safety overlooking the animal's well-being.

Selection test parameters can roughly be divided into four categories: first, physiological parameters such as age, health and prevention of zoonosis; second, basic obedience commands; third, special skills to assist the animal handler during a session; and fourth, the most often tested category is the self-control or inhibitory behavior of the dog which investigates whether dogs can cope with stimuli such as loud noises, strange odors, or clumsy petting.

Selection tests are often completed at the start of a dog's career in CAIs. However, dogs are recognized to alter behavior throughout their career, dependent on many factors such as aging, interaction with their handler, working conditions/environment, and client behavior.

CAI is a multidisciplinary field in which practitioners with different backgrounds have diverse ways of selecting CAI dogs. This diversity is both a topic of discussion and an important opportunity for researchers, practitioners, DVM, MD, and CAI-schooling programs to collaborate and to work together, to create frameworks which only select the dogs who are motivated, comfortable, and suitable for the appropriate CAIs.

52 What does the horse think of a therapeutic riding lesson compared to a normal riding lesson? An equine cognitive bias study

[Kathalijne EK Visser](#)¹, [Bélén EH Van Beekhuizen](#)², [Machteld C Van Dierendonck](#)^{3,4,5}

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Equine assisted interventions are becoming more and more popular in the last decades as an alternative or additional physical and/or mental therapy for humans. Although the benefits for humans are studied in much detail, the effect of the sessions on the horse's welfare have hardly been considered. Common methods evaluating equine welfare include behavioural and physical indicators of stress. In this pilot study a different approach was used: the use of cognitive data to evaluate the affective states of the horses after a therapeutic (TL) and a normal riding lesson (NL). Ten experienced adult horses (7 mares, 3 geldings) were trained in a balanced location task to discriminate a bucket containing either edible food or unpalatable food. Thereafter, horses were tested directly after either a NL or TL lesson in the same location test, including ambiguous locations: near the positive, near the negative and in the middle position. The latency time to feed was recorded and adjusted for walking speed for all trials. This pilot study revealed neither significant differences in latency time to feed at the near positive location (TL: 11.6 ± 1.5 s and NL: 15.3 ± 3.7 s; paired sample T-test on adjusted scores $W=8.500$, $p=0.396$), nor significant difference at the middle location (TL: 16.2 ± 2.5 s and NL: 12.4 ± 2.0 s; $W=14.000$, $p=0.528$) or the near negative location (TL: 137.5 ± 17.1 s and NL: 165.6 ± 14.4 s; $W=19.000$, $p=0.722$). The absence of significant differences may implicate that these horses were neither more optimistic nor pessimistic after a therapeutic riding lesson compared to a normal riding lesson. The experience and the results of this study shows that testing horses in a cognitive bias test to evaluate its affective state related to assisted interventions is a valuable method which need to be explored further more in a larger study.

163 Office dogs: A within-company quasi-field experiment using daily experience sampling

[Joni Delanoëje](#)^{1,2}, [Emma Willemen](#)¹, [Marijke Verbruggen](#)¹

¹Work and Organisation Studies, Faculty of Economics and Business, KU Leuven, Leuven, Belgium. ²Research Foundation Flanders (FWO-Flanders), Brussels, Belgium

Research questions. Organizations may allow dogs in the workplace in order to improve employee functioning. Specifically, dogs may facilitate social interaction and positive affect and boost work engagement and job performance. Yet, features of the dog (i.e., behavior), dog-employee interactions (i.e., interaction type) and co-workers (i.e., attitudes toward dogs) may determine the effects. We therefore aim to investigate within-person and between-person effects of a pilot office dog initiative in a Belgian company on dog-bringing employees and their co-workers in an experimental and a control group.

Methodology. The first part of the evaluation of the pilot concerns a pre-test-post-test study to examine general changes in employee functioning due to the implementation of allowing dogs on site. Therefore, we will collect survey data in 180 employees one month before the start of the pilot (T1—March 2023) and near the end of the two-month pilot (T2—June 2023). The second part of the evaluation will concern an experience sampling study to examine the within-person changes due to having worked in the presence of office dogs on a given day. To examine these daily effects, we will collect daily survey data in 90 employees during eight working days.

Person-level measures include age, gender, partner, dog-owner and attitudes toward dogs. Day-level

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measures include dog present-day, dog behavior, interaction type, psychological stress, social cohesion, work engagement, concentration and positive affect.

Anticipated challenges. It is hard to allocate a within-company control group since employees “not affected” by the pilot initiative cannot be specified.

Discussion points. (1) Would the study benefit from investigating a posteriori groups—i.e., groups who did not interact with office dogs vs. groups who did interact with them—rather than investigating a predetermined control vs. experimental group? (2) How many “dog present” days are optimal given daily data collection during eight working days?

204 Manualizing a Brief Animal Assisted Intervention for Children with Attention Deficit Hyperactivity Disorder; Streamlining the Positive Assertive Cooperative Kids AAI Protocol for Practice

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¹University of California, Irvine, School of Medicine, Irvine, CA, USA. ²University of California, Riverside, School of Education, Riverside, CA, USA. ³The Craig School, Irvine, CA, USA. ⁴California State Polytechnic University, Pomona, School of Education, Pomona, CA, USA

Problem: Research on Animal Assisted Interventions (AAI) consistently indicates these practices are both acceptable and feasible in school settings and benefit a diverse group of children. Standardization of carrying out these practices, however, varies widely across studies, species, and settings. The primary purpose of this brief talk is to describe how a clinical research protocol for AAI with dogs was adapted for a brief (8-week) treatment aimed to standardize safe implementation in an after-school setting for young children with Attention Deficit Hyperactivity Disorder (ADHD).

Method: A formerly conducted randomized-controlled trial examining AAI with dogs, the Positive Assertive Cooperative Kids (PACK) study¹, implemented a standardized treatment protocol for children with ADHD, delivered twice weekly over twelve weeks in a small group settings. More recently, the PACK AAI was adapted for delivery in a once weekly afterschool setting for 8-weeks. Session content and animal activities were modified with the aim of maintaining the same treatment goals (improved social skills and executive function skills) and ensuring the integrity of the child-dog interactions.

Challenges: Challenges and issues encountered during manual adaptation are outlined in this presentation. Primary challenges included limiting time and accommodating smaller group sizes due to the pandemic. Issues that arose centered around the difficulty maintaining treatment integrity in fewer sessions and smaller group sizes.

Discussion: Main points of discussion center around the need to gather consistent and structured feedback from clinical teams when adapting a manualized protocol for delivery in different settings and with diverse populations of children. Additionally, implementing a structured treatment integrity checklist is key for best ensuring the delivery of key elements of AAI in an after-school setting.

211 Describing Canine Stress-Related Behavior during Animal Assisted Intervention (AAI) with Children with ADHD: Exploring Behavioral Coding Methods

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Problem: Research indicates Animal Assisted Intervention (AAI) has beneficial effects on health in humans¹. While human benefit is well described, animal well-being during AAI is not well studied. Methods for assessing animal stress during AAI are indicated. For children with Attention-Deficit/Hyperactivity Disorder (ADHD), there is evidence AAI with dogs improved treatment outcomes². Recent investigation of dog welfare during AAI with this population explored a novel ethogram³. We seek to compare this novel ethogram (Study I) to an established comprehensive ethogram, Behavior Observation Research Interactive Software (BORIS)⁴ (Study II), for measuring stress-response in dogs participating in AAI with this population.

Method: Two certified therapy dogs participated in four separate AAI sessions with children with ADHD (n=4). Sessions were video/audio recorded for coding. For Study I, dog behavior was coded using a novel ethogram³ developed specifically for measuring dog stress during AAI with this population. One-zero interval sampling of ten candidate stress behaviors, for each dog, was conducted every other minute for the session duration (approximately 60 minutes). For Study II, sessions were analyzed, utilizing an established ethogram, BORIS⁴, employing a frequency count for those same stress-associated behaviors. Coders were blind to the aims and met inter-rater reliability on both measures ($r = .90-.96$).

Challenges: For both methods, stress behaviors emerged at low frequency (Study I: “pant,” “lip/self-licking,” “human-licking” and Study II: “pant,” “lip/self-licking,” and “ear back”). For each method 3 of the 10 candidate stressors were noted.

Discussion: Both ethograms captured similar behaviors thought to be associated with dog-stress. This suggest there is concurrent validity of the novel measure and indicates more formal analysis is worthwhile. Of note, the BORIS ethogram captures a more detailed data set (eg. behavior frequency, duration, mean duration, etc.). Pros and cons of AAI specific methods for assessing animal stress are discussed as they relate to the welfare of animals involved.

39 Canine-Assisted Occupational Therapy for Children on the Autism Spectrum: multiple case study
MIRELA DE OLIVEIRA FIGUEIREDO, Lais Riviera Baratela, Roberta Giampá Roiz, Caroline Cristina Bruno
Federal University of São Carlos, São Carlos, São Paulo, Brazil

Introduction: Canine-Assisted Occupational Therapy (CAOT) has been practiced worldwide, producing knowledge about its effectiveness for different populations. This study aimed to verify the components of occupational performance, engagement, and social and emotional behaviors of 8 children with autism spectrum disorder between 3 and 6 years old who underwent CAOT in Brazil but in line with international standards.

Method: Multiple case study. CAOT sessions were individual in a Brazilian rehabilitation institution between January and October 2022 with an average duration of 20 minutes. In each session, a structured activity was carried out in stages corresponding to the therapeutic objectives. The sessions were video-recorded and two investigators separately completed a checklist, prepared by the researcher, to record the components of

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occupational performance, engagement, and social and emotional behaviors of children in each session. A descriptive qualitative analysis of each child's checklist was performed.

Main Results: From the first session, the children showed interest and willingness to interact with the dog and to carry out activities together with the dog. Motivated by the dog's presence, they demonstrated a high level of engagement in the activities, for example, interest, attention, and perseverance to carry out the activities even with sensorimotor or cognitive difficulties. They also demonstrated improvements in sensorimotor and cognitive components and social and emotional behaviors when comparing checklist entries from each session. **Principal conclusions and implications for the field:** The incorporation of the dog in some stages of the activities was positive for the child's engagement, and it was possible to stimulate sensorimotor and cognitive components and positive social and emotional behaviors. These activities may constitute suggestions to be adopted by practitioners of canine-assisted therapy. Future research is needed with a many children to validate a protocol to obtain similar results.

Emerging Topic Oral Presentations D

08:15 – 09:30 Saturday, 17th June, 2023

Location Prestonfield

Chair Nancy Gee

Session to feature two series of oral presentations each 5-minutes in length followed by a 15-minute group Q&A at the end.

95 Healthy as a Horse: Ethnoveterinary Medicine and Human-Horse Relationships

Evelien Deelen

Washington State University, Pullman, WA, USA

Understanding human responses to animal illness is crucial to improving human and animal health and wellbeing. Anthropological studies of ethnoveterinary medicine, however, often lack cultural context about emic understandings of biology, disease, and animal bodies, that presumably underlie ethnoveterinary care (as occurs in human ethnomedicine). My dissertation research in cultural anthropology seeks to determine how people construct and understand animals and their conditions through their ethnozoological and ethnomedical lenses, and how these views shape healthcare on behalf of animals.

I intend to investigate equine ethnoveterinary medicine among rural settler-descendant horse owners in the North American Inland Northwest region (INW). Horses are a 'cultural keystone species' in the historical and contemporary settler colonial INW landscape, and are integrated in a sociocultural multispecies system of work, sport, and leisure. Through an ethnographic mixed-methods approach, including participant observation, free-listing (N=150), and 35 key-informant interviews that include body mapping and self-administered participant video journaling, I intend to determine how INW equestrians (1) conceptualize the workings of the equine body (i.e., ethno-anatomy); (2) construct notions of equine health and illness; (3) share local explanations for illness etiology, progression, and symptoms (i.e., explanatory models); (4) construct lay categories (i.e., cognitive domains) of physical equine health problems, and (5) how different human-horse relationships in the Inland Northwest lead to intercultural ethnoveterinary differences.

My previous ethnographic work among INW equestrians taught me that the community is often wary of outsiders and animal welfarists, and I anticipate initial distrust towards my 'agenda'. Because my methodology partially

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relies on participants to self-report, I also anticipate some bias towards socially acceptable answers, rather than actual illness and treatment reports. I would like to discuss how I can mitigate these challenges, and how I can allow lay people to see and act on the value of my work.

111 Kynographies: challenges regarding canine experiences and participant observation.

Sebastián Pelayo Benavides

Pontificia Universidad Católica de Chile, Villarrica, La Araucanía, Chile. CEDEL UC, Villarrica, La Araucanía, Chile

1) Problem statement and/or research questions

This is a current ethnographic study in two cities of southern Chile, focused on relations between stray dogs and people in the public space. Two of its main research questions are: How are stray dogs configured and understood as "subjects" and social agents based on the relationships established with humans and their mutual influences in public spaces? How can we interpret the position of stray dogs and their experience in relation to this, recognizing them as agents?

2) Methods or proposed methodology

Participant observation and semi-structured interviews have been conducted in a relatively classical anthropological manner, comprising several hours of observation of stray dogs in specific places, together with observations 'on the move', following stray dogs around.

The analysis of the information will use a Grounded Theory approach. Theoretically, it intends to combine "anthropo-interpretivism" (Taylor 2011:265) -acknowledging the inevitability of anthropomorphism but avoiding assumptions of human superiority- with more structuralist elements about categories, classifications and limits, and their connections with broader social understandings. Ingold's (2000) ecological anthropology and biosemiotic approaches are also considered.

3) Anticipated challenges and/or issues

Special attention will be paid to the consideration of stray dogs as active co-constructors of information, with their own perspectives and particular intentions. However, as participant observation is undertaken, doubts emerge in regards to the best ways to achieve this, in concrete methodological ways.

4) Discussion points

How may the canine experience as subjects in the study be better captured/interpreted by participant observation means?

Which theoretical avenues would be better suited for data analysis and discussions?

References:

Ingold, Tim (2000). *The perception of the environment: essays on livelihood, dwelling and skill*. London: Routledge

Taylor, Nik (2011) 'Anthropomorphism and the animal subject', in Rob Boddice (ed.) *Anthropocentrism. Humans, Animals, Environments*. Leiden & Boston: Brill, pp.265-279.

124 Dog Breeds mistreatment and/or abuse: a new phenomenon to manage

Irene Maja Nanni¹, Fiammetta Sofia Di Cocco², Francesca Sorcinelli³

¹University of Bologna, Bologna, Italy. ²Independent researcher, Bologna, Italy. ³Link Italia Association against interpersonal violence and animal mistreatment, Modena, Italy

From the statistics of a big animal protection organization (PETA) and data coming from different Italian shelters has been confirmed that the most abused, neglected and abandoned dog breeds are Pit Bull and Mastiff type, furthermore shelters may have a lack of capacity and they struggle with excess of animals. In order to manage this issue first in Italy but potentially all over the world we should answer at some critical questions. How can these dog breeds be protected from the interest of potential “wrong” owners? What kind of “link” is behind this interest? What is behind the purchase, holding of certain dogs’ breeds by particular personality profiles? Why are some people more attracted to them? This study started focusing on the breeds identified as vicious (Pit Bulls and Mastiff type), because in most of the cases they are owned by people with different socioeconomic disadvantage and legal troubles. We proposed a questionnaire to different Italian shelters to collect a huge number of data about the dogs victim of mistreatment and the social profile of the owner, and what came out was that in most of the cases these dog breeds were owned as a status symbol or used to intimidate people, these behaviours impact negatively on the dog’s subjectivity and subsequently for getting adopted. In order to give to these dogs the consideration they need as violence victims both physical and emotional and correlate also to the link phenomenon, this issue has to be faced with a one health- one welfare approach, for the helping of all the parties involved.

140 Exploring the impact of affiliative behaviors and interspecies communication on horse-human interactions

Emily Kieson

Equine International, Boston, MA, USA

In recent years, research in equine welfare has shifted from addressing poor welfare to promoting better wellbeing. To continue our understanding equine wellbeing and positive welfare, we need to expand our research in how equines create and maintain friendships and how we can use this knowledge to improve handling and management techniques of domestic horses through a greater understanding of affiliative behavior within horse-human interactions. This process begins with studies of free-living and feral-living horses to create a working ethogram of individual and reciprocated behaviors that occur within socially-bonded pairs and groups. We can then compare these behaviors to those expressed by horses during interspecies interactions with humans and examine the contexts in which this takes place to better understand when and how horses willingly express affiliative behaviors with humans to help develop better assessments of equine wellbeing in equine-human interactions. The study involves over 100 hours of video observations of over 200 feral-living horses in the UK and Spain and coding behaviors of affiliative interactions between conspecifics and in interspecies interactions with familiar humans. The study will also include an additional 30 rescue horses in domestic settings and at least 30 horses in traditional equitation settings. The preliminary findings indicate that trust, mutual communication, consent, and choice play a role in building relationships in which affiliative interactions occur and that these interactions occur with individuals who have built relationships with reduced or limited use of operant conditioning. Challenges include having controls for experimental design and controlling for variables. Considerations for implications include adjusted techniques for handling and managing equines, especially in circumstances where operant conditioning has not worked, creating new approaches to horse-human interactions, and how to include training, riding, and equitation into the approach.

174 From bad to worse: Impact of the 'Cost-of Living Crisis' on Canine Welfare in a UK Cohort of Pandemic Puppies

Claire L Brand¹, Dan G O'Neill¹, Zoe Belshaw², Fiona Dale¹, Bree Merritt¹, Camilla L Pegram¹, Kim B Stevens¹, Rowena MA Packer¹

¹The Royal Veterinary College, Hatfield, Herts, United Kingdom. ²EviVet Evidence-based Veterinary Consultancy, Nottingham, United Kingdom

Problem Statement:

The COVID-19 pandemic resulted in a dramatic surge in puppy acquisitions internationally, labelled the 'Pandemic Puppy' phenomenon. Previous work from our Pandemic Puppies team identified substantial deterioration in puppy-purchasing behaviours by owners and deficits in puppy socialisation and/or habituation experiences <16 weeks that resulted in this uniquely vulnerable generation of dogs. Compounding these issues following the acute phase of the pandemic, financial pressures on UK households from the so-called "Cost-of-Living crisis" (COLC) is further threatening the welfare of this already vulnerable population.

Methods:

Commencing January 2022, owners of dogs purchased aged <16 weeks between 23rd March–31st December 2020 (n=2345) were invited to complete follow-on Pandemic Puppies surveys as their dogs reach 21, 24, 27 and 36-months of age. As well as previous metrics including dog health, behaviour, and general dog-owner relationships, including owner-perceived challenges to continued ownership, the 36-month timepoint, launched December 2022, explored impacts of the COLC upon canine welfare and the dog-owner relationship. Statistical analyses will examine COLC-related risk factors for considered and actual relinquishment, and poor welfare outcomes at each time-point.

Results/Challenges:

Responses to date include n=1010 (21 months), n=1275 (24 months) and n=1221 (27 months). At 21-months 3.7% (n=38) of owners indicated that they had considered or were still considering rehoming their dog, whilst 15.1% (n=153) reported their finances were worse than when they first acquired their dog. Given the longitudinal nature of this Pandemic Puppies study, maintaining participant engagement through to the 36-month timepoint (ending 25/11/2023) will be crucial to the studies success; multiple incentivisation/motivational strategies will be explored.

Discussion:

Results will support the wider canine welfare community (e.g., free/discounted services, educational materials) to protect the future wellbeing of this unique canine cohort as they age, in the face of challenging contemporary human circumstances.

178 Lasting lockdown love?: dog-owner bond at age 21 months in the Pandemic Puppy cohort

Bree Merritt¹, Claire L Brand¹, Dan G O'Neill¹, Zoe Belshaw², Camilla L Pegram¹, Fiona Dale¹, Kim B Stevens¹, Rowena MA Packer¹

¹Royal Veterinary College, London, United Kingdom. ²EviVet, Nottingham, United Kingdom

Problem statement: The COVID-19 pandemic resulted in a sudden, large increase in new puppy acquisitions. Desire for companionship largely drove acquisition decisions, facilitated by increased time spent at home. Our Pandemic Puppies team previously described worrying deterioration in acquisition practices and limited early-
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life experiences predisposing puppies to future behaviour problems. Frequent changes to dog and owner lifestyles due to fluctuating, then ceasing, pandemic-related restrictions could further impact the dog-owner relationship. Existing literature shows that these puppies are now reaching an age where relinquishment and behavioural euthanasia risks peak. Exacerbated by increased cost-of-living, owners may now feel increasingly burdened by dog ownership; however, the impact of these challenges on the dog-owner relationship have yet to be explored.

Methods: Participants who consented to further research in the original Pandemic Puppies study of puppies purchased and brought home aged <16weeks between 23rd March – 31st December 2020 (n=2345) were re-surveyed from January 2022, when their dogs reached 21-months of age. This survey included the Monash Dog-Owner Relationship Scale (MDORS), current health and behaviour, training provisions, and how expectations of dog ownership met reality. Potential predictors will be tested for an association with MDORS score, particularly the Perceived Emotional Closeness and Perceived Costs subscores.

Anticipated challenges: As many variables may simultaneously impact the dog-owner relationship (eg chronic ill health and time spent together), complex multivariable modelling will account for potential confounding effects; however, the large sample size (n=794) will likely facilitate this statistical approach.

Discussion points: Results will identify factors from pre-purchase onwards that are associated with a weaker dog-owner bond, and thus promote tailored advice to new puppy owners to prevent the welfare concerns that can arise due to the breakdown of the dog-owner bond.

188 Legal Governance of Dog Rescues: Addressing Post-Pandemic Challenges in a Period of Austerity

Sarah Singh, Marie Fox

University of Liverpool, Liverpool, Merseyside, United Kingdom

Problem statement and/or research questions

Media reports have highlighted how national animal rescues are 'drowning in animals' as the cost-of-living crisis bites and animals are abandoned in unprecedented numbers (Guardian, 17 November 2022). Covid-19 and the subsequent cost-of-living crisis have increased pressures on an unregulated and already vulnerable sector, ill-equipped to cope with an influx of dogs in particular. This study analyses the forms of legislation and other regulatory models being mooted across the devolved jurisdictions of the UK. The empirical strand of our work seeks to ensure our analysis takes account of the views of smaller dog rescues whose views have been marginalised in debates dominated by national charities.

Methods or proposed methodology

Methodologically this project, funded by Research England, combines doctrinal analysis of existing law, law reform initiatives, government consultations etc. with empirical work comprising interviews (by applicants) with 16 small rescues throughout the UK and with Government/DEFRA representatives from each of the devolved administrations. It will be informed by quantitative survey data collected by our collaborators – Battersea Dogs and Cats Home, Association of Dogs and Cats Homes (ADCH) and the Kennel Club.

Anticipated challenges and/or issues

Reaching representative smaller rescues who have not hitherto engaged with the debates about regulatory reform.

Framing a draft model of legislation that can command consensus across the rescue sector and the UK.

Ensuring that this issue remains on policy agendas given competing priorities.

Discussion points

Different approaches to regulation of dog rescue have been mooted across the devolved administrations of the UK. This affords socio-legal animal scholars an opportunity to analyse whether lessons are transferable across jurisdictional boundaries. We will discuss the pros and cons of statutory intervention and assess how far legal regulation can promote the shared interests of dogs and humans across the relevant geo-political and legal boundaries.

182 The Personality Assessment of Domestic Animals – A new standardized screening method

Christine Olsen

International Community of Anthrozoology, Ås, Norway

Problem statement and/or research questions

As the field of animal assisted services expands, more clients are offered some kind of services with animals, which means more and more animals are exposed to close contact with unfamiliar people. But do we actually know how the animal feels about this, what the animal is telling us? How can we make sure that AAI can be of mutual benefit to both client and animal, in keeping with the paradigm of One Health, One Welfare? Most professionals within AAI agree that animal welfare must be ensured and that, in order to do that, we need to screen the animal for its suitability to work in AAI. However, currently, the main emphasis is on dogs, not other species. It is a demanding job for animals to work in AAI, and we must therefore make sure they thrive in the job. They should be safe, harmonious, and happy. Some animals are suitable for AAI, but many are not. It is therefore essential to have an objective assessment of each individual's suitability within different species.

Methods or proposed methodology

I suggest a standardized assessment for animals that potentially will work in animal assisted services, and I will shortly present the «Personality Assessment of Domestic Animals»

Anticipated challenges and/or issues

Will all professionals agree and adopt a screening assessment? Who will evaluate the animals? Who will pay the cost? Who will be in charge to oversee those animals included actually screened AND recommended?

Discussion points

Do you trust that a panel of scientists and practitioners can develop a screening assessment appropriate for animal assisted services?

How can we get this accepted in the world of animal assisted services?

What are the main challenges that you see?

Poster Sessions

Poster Session A

15:15 – 16:45 Thursday, 15th June, 2023

Location Concourse

Session A – ID #: 1 The influence of school dogs on the social structure in the classroom: ,I never thought that my classmate could be as affectionate as he is with Lupo‘

Mona M. Mombeck

Inclusive Education, Educational Science, University of Paderborn, Germany, Paderborn, Germany

Introduction. Teachers work with dogs to improve the social climate. However, the benefits of animal-assisted pedagogy in heterogeneous classrooms in secondary schools have been little studied so far. In this paper, the effects of school dogs on the social inclusion are presented and interpreted from an educational science perspective.

Methodology. Thirty heterogeneous children from four school classes (grades 5–8, average age: 12.52 SD1.74 years) were interviewed about their social situation before and after a school year in which they received animal-assisted education for the first time. At the second measurement point, an additional block of questions on the special features of teaching with dogs was added. The interview method used was the Problem-Centered Interview (Witzel, 2000). The interview data was analyzed using qualitative content analysis (Kuckartz, 2016) with MAXQDA analysis software.

Main Results. The presence of a school dog leads to better social inclusion in class. This can be seen in increased acceptance, more friendships among the pupils, improved well-being and more calmness during lessons. The children perceive each other as friendlier and notice better emotion regulation in themselves and others. The analysis shows that the dog activates the mechanisms of bonding and caring. This leads to the creation of a new social role in which caring for the dog is prioritized: Pupils and teachers interact lovingly with the dog, take care of him and observe others doing so. As a result, positive qualities of the participants become apparent while unfavorable (stereotypical) role models are broken down.

Principal Conclusions and implications for Field. With animal-assisted pedagogy, social structures can be improved because mutual perceptions change.

Kuckartz, U. (2016). Qualitative content analysis: methods, practice, computer support (3rd ed.). Basic texts methods. Beltz Juventa.

Witzel, A. (2000). The problem-centered interview. Forum Qualitative Social Research, 1(1), Article 22, 0–25. <http://nbn-resolving.de/urn:nbn:de:0114-fqs0001228>.

Session A – ID #: 2 A Competition Question: horse welfare, pentathletes, and competitive riding

Aviva Vincent¹, Ruth Burke², Kaylynn Coates³

¹Syracuse University, Syracuse, NY, USA. ²Illinois State University, Normal, IL, USA ³Cleveland Clinic, Cleveland, OH, USA

Equestrian sports vary in degree of human-animal bond and affiliation from catch-ride to perceptions of ownership. The Modern Pentathlon has not garnered mainstream media coverage until the 2020 Olympics in

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Tokyo. Unfortunately, the rise in conversation and coverage was in response and reaction to poor horsemanship, negative behavior, and aggressive coaching. The events of the 2020 Modern Pentathlon were profound in that they highlighted the extreme juxtaposition of competitions that focus on bonded relationships and catch-riding experiences. The implications are far reaching with increased critique of equestrian sports, transparency about the lack of riding training athletes engaged in prior to competition, and the omission of partnership between horse and rider. The Modern Pentathlon is discussed in the context of the human–equine bond. The standards for equine welfare and wellbeing is considered in regards to the role of the rider in supporting their equine partner in the face of competition, including the implications of emotional distress in reaction to disappointment, and tragedy. Additionally, the role of riders when they are not engaged in the competitive sport (e.g. training and general care of their equine partners). Recommendations for the process and guidelines of the sport are delineated, as well as professional opportunities to strengthen the sport.

Session A – ID #: 3 **Community-Engaged Researcher Human Subjects Training for Volunteer Animal-Assisted Intervention Teams**

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Introduction: Community-engaged research incorporates the expertise of university-based researchers with the real-world experience of community stakeholders. We describe a faculty/Institutional Review Board (IRB) collaboration resulting in a human subjects protections training for volunteer dog handlers in a hospital-based canine-assisted intervention research program. We demonstrate how close collaboration between an academic research center and a local university IRB facilitates engagement of community volunteers in human-animal interaction intervention research.

Methodology: Faculty at a medical school-based Center for Human-Animal Interaction and a local university IRB developed a training for volunteer dog handlers who delivered an animal-assisted intervention as part of a randomized controlled clinical trial. Key goals of the education module were to educate dog handlers about informed consent, the rights of research participants, and confidentiality.

Main Results: Fourteen volunteer dog handlers received the training. To date, they have conducted 107 research visits. Research participant feedback indicates that they report positive experiences with the intervention and some have requested to be contacted again for future participation.

Principal Conclusions and Implications for Field: Human subjects training for community-engaged researchers offers a thorough, efficient way to incorporate volunteer human-animal teams in research on the human-animal bond. Benefits of such collaboration between faculty and local IRBs include efficiently teaching human subjects protections concepts to volunteer dog handlers, tailoring the training for relevance to their specific roles, easing the review and approval process using alternative training curricula, and establishing a prototype that can be applied to similarly situated studies. Important considerations include whether local IRB policy allows alternative training curricula and how IRB policy affects the development, delivery, and approval process for those educational tools.

Session A - ID #: 4 **Autism spectrum disorders: when it's easier to read emotions in animals than in humans**

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Introduction: Being phylogenetically close involves greater empathic perceptions towards other species (Miralles et al, 2019). To explore this phenomenon, this study investigates the influence of neurocognitive predispositions, here Autistic Spectrum Disorder (ASD), to empathy on our perceptions of other organisms. ASD is characterized, among others, by weakened communicative and empathic skills. However, decoding animals' emotions seems to be easier for people with ASD than understanding human beings. Is it the same for self-perceived empathic abilities towards all living beings?

Methodology: Our online survey involved 202 raters with ASD and a control group of 1100 raters, who had to make choices to assess their empathic perceptions toward an extended photographic sampling of organisms.

Main results: Our results highlighted that both groups present overall similar trends in their empathic preferences, with empathy scores significantly decreasing with the phylogenetic distance relatively to humans (both linear slopes, $p < 0.001$). However, the empathy score attributed to *Homo sapiens* in the ASD group (0.53 versus 0.87 for controls, $p < 0.001$) represents a striking outlier in the yet very sharp overall correlation between empathy scores and divergence time, scoring our species as low as cold-blooded vertebrates.

Principal conclusions and implications for the field: These results are consistent with previous studies, which emphasized that understanding human beings would be more difficult for people with ASD than decoding other animals. And conversely, people with ASD better understand animals such as mammals (e.g. dog, cat) and birds than human beings. Moreover, decoding emotion impairment would not represent a global deficit in people with ASD but may relate to the mindreading of specifically human agents, a hypothesis that may drastically change our point of view about their communicative and empathic skills.

This research was published: MIRALLES A, GRANDGEORGE M, RAYMOND M. (2022) Self-perceived empathic abilities of people with autism towards living beings mostly differs for humans. *Scientific Reports*, 12:6300, 1–9

Session A - ID #: 5 **“We Need More Dogs!”: The Outcomes and Experiences of the Canine-Ambassador Program in Elementary and Secondary Schools in Ontario, Canada**

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This study, funded by the National Science and Engineering Research Council of Canada, examined the implementation of a ‘Canine Ambassador Program’ (CAP) in elementary and secondary schools in Ontario, Canada. The CAP trains teams of school board staff and their pet dogs to provide a therapeutic milieu in the school setting. The overall objective of the CAP is to nurture student success by fostering mental health and well-being in the school environment. Over 60 schools now have CAP teams on site. Based on a qualitative pilot study and literature review, researchers broadly hypothesized that the presence of therapeutic canines in

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schools would 1) increase student empathy towards dogs, other students, and school staff, 2) increase positive emotions and decrease negative emotions in students, 3) increase student desire to attend and be engaged in schools, and 4) foster a positive school environment for students and staff, overall. The overarching methodological framework for this study was collaborative inquiry, developed for use in schools to give educators a role in the research process, with outcomes informing their teaching practices. A mixed-methods approach was utilized, with both qualitative (focus groups and interviews with students, staff, and community members) and quantitative (pre and post-surveys with students) data collection. Analysis shows that all hypotheses were supported, and that overall, the CAP has been resoundingly successful in meeting its goals. More specific connections between the presence of therapeutic canines and improved mood, mental health, and school milieu will be discussed, and the presentation will conclude with recommendations for future implementation and refinement of the CAP and similar programs.

Session A - ID #: 6 **Pet attachment and owner personality**

Deborah L. Wells, Jordan Collins, Saoirse O'Donnell, Lingyi Su, Siqi Shangguan
Queen's University Belfast, Belfast, United Kingdom

Introduction: Research points to an important relationship between quality of the pet-owner bond and mental health. Contrary to what one might expect, studies conducted during COVID-19 lockdowns, point to higher bonds of attachment being associated with poorer mental well-being (Wells et al. 2022). One explanation for this may lie with owner personality, although the link between these variables has been largely overlooked. This study therefore aimed to explore whether there is any association between strength of the pet-owner relationship and human personality.

Methods: 214 dog and/or cat owners completed an online survey designed to collect information on the pet-owner bond and owner personality. Participants completed the Lexington Attachment to Pets Scale (LAPS), a measure of pet-owner attachment, and the 15-item Big Five Inventory (BFI-S), a psychometric measure of 5 personality traits (neuroticism, agreeableness, conscientiousness, openness, extraversion).

Results: Pearson's moment correlations revealed a significant positive correlation between LAPS scores and traits of 'neuroticism' ($r=0.17$, $p=0.03$) and 'openness' ($r=0.19$, $p=0.01$). Higher levels of attachment were associated with higher scores for these personality traits. 'Conscientiousness' ($r=-0.01$, $p=0.87$), 'agreeableness' ($r=0.11$, $p=0.17$) and 'extraversion' ($r=-0.02$, $p=0.84$) were not significantly correlated with participants' LAPS scores.

Conclusions: Findings point to a relationship between strength of attachment to one's pet and owner personality. Stronger bonds of attachment were associated with higher levels of 'neuroticism', a robust predictor of several mental health disorders, and 'openness', a trait that can lead one to experience both more positive and negative emotional states. Further work is needed using a larger population to explore the relationship between pet-owner attachment and personality further, as findings may have important implications for human health and wellbeing.

Reference: Wells, D.L., Clements, M.A., Elliott, L.J., Meehan, E.S., Montgomery, C.J. & Williams, G.A. (2022). Quality of the human-animal bond and mental wellbeing during a COVID-19 lockdown. *Anthrozoos* 35, 847-866.

Session A – ID #: 7 **Supporting wildlife workers: working in isolation and the impact to mental health**

Frances E. Carleton

WildTalking Ltd, Canberra, Australia

Aim: To highlight the need for support for mental health of wildlife workers, volunteers and researchers at all times and how this might be achieved.

In a daily basis we hear from wildlife workers in a number of fields (veterinary, research, rescue, and rehabilitation) that when working with wildlife it is often in isolation from peers, supervisors, and family/friends. This isolation may be due to staffing shortages, budget restraints, or working hours (night shift). Also at play, may be social exclusion[i]. This is most often seen in academic and volunteer organisations due to interpersonal differences and disputes. It's also reported that often those closest to them do not have a level of understanding or interest about the type of work or difficulty they are engaged with to adequately debrief or receive ongoing support.

At WildTalk we polled to discover the numbers of folks working in isolation within the wildlife sector and what they do to support their own mental health, or not. In addition we offered suggestions of proven solutions they may engage with to see what the uptake may be. We also looked what they may experience in the day and compare those findings with organisations with similar outcomes (emergency services) who work in pairs or teams[ii].

In 2018 it was presented[iii] that wildlife workers are often unwilling to engage with self-nurturing and self-care activities due to stigma, fear of retribution, and further isolation. This research looks at the change of attitude and impacts of help seeking behaviours.

For the purposes of this research, 'work' refers to volunteer and paid employment in equal terms.

[i] Accessed 16/1/2023 41 Causes, Effects & Solutions For Social Isolation – E&C (environmental-conscience.com)

[ii] Accessed 16/1/2023 Employment, social inclusion and mental health – PubMed (nih.gov)

[iii] Accessed 16/1/2023 2018 Australian Wildlife Rehabilitation Conference Paper – Frances Carleton.pdf

Session A – ID #: 8 **Horses as Part of the Health and Wellbeing Sector – Practitioner Perspectives**

Rita Seery, Deborah L Wells

Animal Behaviour Centre, School of Psychology, Queens University Belfast, Belfast, United Kingdom

Introduction

Horses are being increasingly incorporated into health and wellbeing treatments and interventions. These Equine Assisted Services (EAS) vary widely in both theoretical and practical application. Until now, practitioners' perspectives in relation to these services and the horse's role have received little attention. This project therefore aims to get a better understanding of these areas through practitioner perspectives.

Methodology

A purpose-designed questionnaire was distributed via Qualtrics to EAS practitioners. The survey explored issues relating to the nature of the service provided, the horses' contribution, challenges faced and the possible ways that these interactions could be enhanced for horse and human.

Results

406 practitioners responded to the survey, with 40.6% coming from a 'therapy' background., e.g., mental, or physical health profession; most respondents (59.4%) came from a non-therapy background, e.g., horse riding,

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coaching. Both types of service were more likely to be directed at children than adults. Analysis revealed a significant association between practitioners' background and nature of the service offered ($\chi^2=26.96$, $df=4$, $P<0.001$), with individuals from non-therapy backgrounds offering more of a blended approach (riding, mounted and ground-based work) to EAS than those from therapy backgrounds. The median amount of EAS training received to first practice was 20 days of block release, however nearly half of the sample (42.3%) had less than 20 days of training in total. Most respondents (81.7%) considered the quality of the horse – client relationship to be 'extremely' or 'very' important. Commonly perceived challenges to EAS provision included lack of public awareness, robust research, and financial viability.

Principal Conclusion

Findings highlight the diverse nature of EAS in terms of practitioner perspectives. Practitioners regard EAS as beneficial and worthwhile. However, more progress is needed to professionalise and legitimise the area in order to support and help practitioners provide the best service for all concerned.

Session A – ID #: 9 **The Trouble with a Cuddle: Reported experiences from care givers of interactions between middle childhood aged children and their family dog**

Anna Baatz

University of Salford, Salford, United Kingdom

The benefits of child-dog interactions (CDI) are generating increasing scientific interest (Hall et al 2019b). Moreover the benefits for children of living with dogs have been linked to multiple child development constructs (Christian et al 2022; Chase et al 2022; O'Haire 2013). However, dog bite hospital admissions rose by 17% between 2014 and 2018 in the UK with children under 9 disproportionately affected (Jakeman et al., 2020). And evidence of the beneficial or non-beneficial effects of CDI on the dog remains less explored (Hall et al 2019a; Hall et al 2019b). This presentation, forming the pilot study of a wider PhD project investigating CDI, presents the findings of a thematic analysis of ten semi-structured interviews conducted with dog owning families that included least one child aged 7-11. A predominant theme constructed from the data was the enjoyment children experienced of close physical contact and cuddling interactions with their family dog. A behaviour that was frequently welcomed by parents as indicative of compassion and love. However parents and care givers also frequently described dog behavioural signals of avoidance, displacement and aggression were likely to occur because of or during such interactions. And differing reported prompts for parental intervention were observed. Additionally, the likelihood of any aggressive response from dog to child was most frequently reported as a result of impaired physical freedom of choice for the dog.

This short presentation will present and discuss the experiences of families sampled around cuddling interactions between children aged 7-11 and their family dog, and potential dog welfare and dog bite mitigation considerations resulting from these insights.

Session A – ID #: 10 **Longitudinal patterns of pet ownership in families with children during the COVID-19 pandemic**

Megan K Mueller, Seana Dowling-Guyer, Emily McCobb

Tufts University, Cummings School of Veterinary Medicine, North Grafton, MA, USA

Introduction: Pet ownership purportedly increased during the COVID-19 pandemic with individuals acquiring pets during periods of social isolation, which raised concerns about animal relinquishment when people began to return to work. Families with children experienced unique challenges during the pandemic, balancing childcare, remote schooling, and other needs and therefore patterns of pet acquisition and loss may differ from the broader population. Adding a pet to a family with children may have positive effects such as reduced social isolation but also adds to caregiving responsibilities; relinquishing a pet may reduce that burden but may create disruption and emotional distress. Understanding patterns of pet ownership within families with children during the pandemic will help identify areas for improved support and programmatic recommendations.

Methodology: We analyzed longitudinal data from a nationally-representative sample of 9,048 American adolescents from the Adolescent Brain Cognitive Development (ABCD) Study COVID Survey. Data were collected across six time points from May 2020 to June 2021. Pet ownership status (including species) was collected at all time points.

Results: Results indicated stability in pet ownership in families with adolescent-aged children, with overall pet ownership ranging from 72.9% to 75.7%. Pet acquisition rates at any given time point ranged from 1.9% to 2.7%, with the highest rate between August and October 2020. Pet loss (through relinquishment, death, or other reasons) ranged from 1.4% to 2.2%, with the highest rate of loss between December 2020 and March 2021.

Visualizations of longitudinal patterns of pet ownership by species will be presented.

Conclusions/Implications: The results suggest relative stability in pet ownership in families with children, perhaps in part due to the differing needs and constraints for these families. Future research should explore reasons that families with children acquire and lose pets to better understand barriers to pet ownership and implications of acquisition and relinquishment.

Session A - ID #: 11 **Attachment to Pet Dogs and Children's Psychological Wellbeing and Happiness**

Roxanne D Hawkins, [Charlotte J Robinson](#), Zara P Brodie

University of Edinburgh, Edinburgh, United Kingdom

Pet dogs are often central within children's families and social systems. Children are emotionally bonded to their dogs and turn to them for support and comfort, particularly in times of distress and when facing adversity, which can increase resilience and protect against psychopathology. Emerging evidence suggests that pet dogs can offer features of a secure attachment relationship which has been associated with healthy psychological development across the lifespan. Little research has considered potential underlying mechanisms that could be facilitating such effects, and we still do not fully understand the impact of pet dogs on children's mental health. The aim of this study was to examine whether positive child-dog behaviour and negative child-dog behaviour (intentional and unintentional cruelty) mediate the relationship between child-dog attachment and children's psychological health. This study found that the strength of child-dog emotional attachment influenced the types of child-dog behaviours observed, with higher attachment scores correlating with a higher frequency of positive child-dog behaviours, while lower attachment scores were associated with more 'at risk' negative interactions. Positive child-dog interactions significantly mediated the relationship between high attachment scores and better child outcomes (higher scores for wellbeing, positive outlook, happiness, quality of life, higher social satisfaction, and lower loneliness), whereas the reverse was found for negative child-dog interactions, being associated with lower attachment scores and worse child outcomes (negative outlook, loneliness and social

dissatisfaction, lower quality of life). These findings advance our understanding of the complex relationships children have with their pet dogs and the impact these child-dog bonds and interactions may have on children's emotional health. Positive and safe child-dog interactions can be facilitated through intervention which has implications for promoting mental health.

Session A - ID #: 12 Capturing Saliva Samples from Children with ADHD during Animal Assisted Intervention: Feasibility, Acceptability and Preliminary Findings

Lydia A. Steinhoff¹, Peyton R. Groves², Douglas A. Granger³, Annamarie Stehli¹, Rachel Y. Stokes¹, Cassie Zeiler¹, Elissa Monteiro⁴, [Sabrina E.B. Schuck](#)¹

¹University of California, Irvine, School of Medicine, Irvine, CA, USA. ²University of Pittsburgh, School of Medicine, Pittsburgh, PA, USA. ³University of California, Psychological Sciences, Irvine, CA, USA. ⁴University of California, Riverside, School of Education, Riverside, CA, USA

Introduction: Evidence suggests individuals with Attention Deficit Hyperactivity Disorder (ADHD) experience dysregulated stress responses in Hypothalamic Pituitary-adrenal axis (HPA) activity and the autonomic nervous system (ANS)¹. Candidate salivary analytes (cortisol and salivary alpha-amylase; α Amylase) may differ in this group compared to typically developing peers. Animal-assisted interventions (AAI) may help regulate stress responses, for these children. To examine these hypotheses, saliva was collected from children with ADHD. We examine the acceptability, feasibility, and describe preliminary findings.

Methodology: Twenty-seven (27) of 28 participants with ADHD, aged 7-9 years (23 males, 5 females), provided samples via an oral swab in two settings (home and intervention), across two conditions (with and without dogs). For home collection, parents were trained to collect samples at six times across two days prior to, immediately following and eight weeks later (18 total samples). During sessions, saliva was collected at three time points: arrival, 20 minutes later, then 15 minutes prior to departure (nine samples per participant). Samples were frozen and later transported to Salimetrics, thawed, vortexed, centrifuged, and analyzed using the Salimetrics α -Amylase and Cortisol Assay Kits

Findings: Twenty-seven (of 28) participants from both conditions (with or without dogs) provided samples across settings (at-home & in-session). Of 504 home collection opportunities, 391 samples were successfully collected (76%). Of 264 in-session opportunities, 253 were collected (96%). All samples yielded adequate volume for analysis. Preliminary analyses indicate no condition group differences in baseline levels of cortisol (mean diff=.0519, p=.2646) or α -Amylase (mean diff 13.15, p=.2631)

Conclusions: Capturing saliva at-home presents more challenges than in-session collection. Still, results indicate the procedure was generally acceptable, feasible and yielded ample saliva for analysis of candidate bio-markers. Ensuring a highly structured parent training and reminders for at-home collection is key. Future studies should consider deployment challenges when calculating sample size for power.

Session A - ID #: 13 How the handler's familiarity and the living environment affect the human-horse interactions in a working context?

[Océane Liehrmann](#)¹, Léa Lansade², [Virpi Lummaa](#)³

¹University of Turku, Turku, Finland. ²INRAE Centre Val de Loire PRC, Nouzilly, France. ³University of Turku, Turku, Finland

In a working context, the ability of animals and humans to communicate their intentions is one crucial part of their relationship to guarantee the handler's and animal's safety. Although, the factors driving differences in cooperation between humans and animals in a working context are still unclear. Here, we experimentally explored key factors involved in the human-horse relationships: the handler familiarity, the relationship length with the familiar handler and the horses social and physical environment. 76 horses participated in two novel object tasks to determine whether horses react differently to novel situations depending on whether they are handled by a familiar or an unfamiliar person. We also assessed the performance of horses at a two-way choice task testing their ability to follow human-given cues of either a familiar or an unfamiliar informant. The longer the relationship between the horse and the familiar handler the less reluctant were the horses toward the novel objects (estimate \pm SE=-0.15 \pm 0.07, $p=0.033$). Older horses (>18 yo) agreed more to walk on a novel surface when led by someone familiar compared to be led by someone unfamiliar (estimate \pm SE=2.55 \pm 1.05, $p=0.016$). The horse success rate at the two-way choice task was not affected by the familiarity of the informant or their relationship length with the familiar informant. Horses living in groups and in pasture were better at following the human-given cues than the ones kept in individual paddocks (odds-ratios \pm SE=0.38 \pm 0.12, $p=0.008$). The familiarity of the handler appears to play a different role according to the situation. In a more stressful environment animals may rely more on a familiar human than on a stranger. Providing an appropriate living environment could promote the development of socio-cognitive skills toward humans. Therefore, such aspects should be considered in studies evaluating human-animal relationships.

Session A - ID #: 14 **Relationships and Resilience at the Zoo**

Shantelle Tjaden, Leslie Stewart, Steven Moody, Conner Vrba
Idaho State University, Pocatello, Idaho, USA

Introduction: The OneWelfare Model is a holistic, empirically supported approach which aims to improve human wellbeing by addressing the interdependent links between human, animal, and environmental welfare. Current OneWelfare literature supports the use of this framework in promoting healthy relationships and motivating healthy behaviors, as well as to prevent and reduce domestic violence and violent crime at the individual and community level. Together with Zoo Idaho, we designed an elective course through a OneWelfare framework that promotes healthy relationships, healthy stress management, emotion regulation, and meaningful connection to the natural world. Participants engage in an 8-week curriculum teaching humane animal training and holistic husbandry with select animal partners as the facilitators help draw connections between participant human-animal interactions and relevant personal and professional skill development that may be generalized outside of the course. This study investigated the experiences of masters and doctoral counseling students participating in the course.

Methodology: Eight students who participated in the Relationships and Resilience at the Zoo course across 3 different semesters participated in 2 rounds of semi-structured interviews. Interviews were transcribed and themes were found using Interpretative Phenomenological Analysis.

Main Results: Six superordinate themes emerged from the analysis: challenging control and perfectionism, sense of mastery, accurate empathy, personal insight into self, universality of learning process, and making sense of counseling constructs.

Principal Conclusions and Implications for Field: Very little research has been conducted on Animal-Assisted Education and the OneWelfare model. The current study begins to address the gap in the literature by examining the experiences of students in a graduate level program with a course based in the OneWelfare model. Future research should focus on measuring the constructs using qualitative means to assess the efficacy of the intervention.

Session A – ID #: 16 It's like looking after someone else's kids: a qualitative study of dog fostering experiences

Katrina E Holland, Robert MChristley, Melissa MUpjohn, Rachel A Casey

Dogs Trust, London, United Kingdom

Introduction

Volunteer foster carers play a vital role in helping animal welfare organisations care for a greater number of animals. To improve fostering programmes and increase recruitment there is a need for understanding of how people experience foster caring.

Methodology

Experiences of fostering dogs were explored through 18 semi-structured interviews. Participants were 10 foster carers registered with Dogs Trust, the UK's largest dog welfare charity, and 8 fostering coordinators. Interviews transcripts were imported into NVivo 12 Pro to help manage the analysis. The data were analysed using reflexive thematic analysis.

Findings

This presentation focuses on one of the themes constructed during analysis: "It's like looking after someone else's kids". This theme captures how the entanglement of other actors and spaces beyond the foster carer and their home shaped their experience of caring for a foster dog. Mindful of an individual dog's past and their imagined future, foster carers strived to provide dogs with consistency of care. Additionally, while often considering individual dogs as part of their family during their stay, developing personal knowledge and opinions about what was best for them, foster carers' treatment of the dogs was influenced by a simultaneous understanding of them as belonging to someone else (e.g. the animal welfare organisation). For instance, one foster carer described taking more caution on walks than they would with their "own" dogs and others adjusted their behaviour or performed additional tasks to adhere to Dogs Trust's policies. Consequently, foster carers' authority was fundamentally limited by the organisation who made key decisions about a dog's care and future. Within this context, foster carers and coordinators navigated sometimes conflicting perspectives.

Implications

These findings have the potential to: inform policy and practice, including the design and delivery of support offered to foster carers; shape recruitment materials; and strengthen relations between foster carers and animal welfare organisations.

Session A – ID #: 17 **Man and Horse, "when communication with words fails"**

Richard E Griffioen, S. Haven-Prost, Hannah Verkuil

AERES university of Applied Sciences, Dronten, Netherlands

Introduction: Equine Assisted Interventions show promising outcomes for vulnerable populations. Former inmates and drug addicts are known for a high rate of recidivism and problem behaviour. The aim of this pilot study is to explore if Equine Assisted Coaching (EAC) could be an effective therapy form for this group to improve awareness of behaviour, emotion regulation and accountability.

Methodology: eight participants worked with purebred, non-domesticated Konik horses. They had to fill in the ABSQ and the PROMIS-29 questionnaires at start and end-of-program to gain insight in their aggression regulation, and quality of life. Four participants completed the questionnaires and in the final week reflected on their experiences in a semi-structured interview. Furthermore, the participants' sessions were filmed to assess movement synchronisation and both men and horses wore heart rate devices to detect physiological attunement. In addition, the behaviour of the horses was observed to evaluate their welfare.

Results: no significant difference was found pre-post testing (ABSQ: $p=0.625$, PROMIS-29: Physical Function: $p=0.371$, Anxiety: $p=0.197$, Fatigue: $p=0.854$, Sleep disturbances: $p=0.854$, Depression: $p=0.371$, Ability to participate in social roles and activities: $p=0.174$). However, when the results are viewed individually, there seems to be an overall improvement in quality of life, but a (slightly) deterioration in aggression regulation (probably due to more awareness of behaviour). Furthermore, in the interviews, the participants explained they perceived a noticeable improvement in their communication, emotion regulation, self-awareness, and calmness, and all agree EAC could be used as a form of therapy.

Conclusions: although there is no significant overall improvement, there is individual progress. This study can serve as an example for a new study with larger numbers at multiple locations to make the results more reliable and offer a better insight into the effects of EAC with former inmates and drug addicts.

Poster Session B

09:00 – 10:30 Friday, 16th June, 2023

Location Concourse

Session B – ID #: 1 **A national animal welfare crisis. The Scottish SPCA's Pet Aid Service aims to tackle the issues that breaks that human animal bond and ultimately keep people and pets together.**

Gilly AR Mendes Ferreira¹, Kirsteen Campbell²

¹Scottish SPCA, Dunfermline, Scotland, United Kingdom. ²Scottish SPCA, Dunfermline, Scotland, United Kingdom

Introduction

In 2022, calls to the Scottish SPCA's helpline from those struggling with the cost of caring for an animal trebled. Animal welfare organisations need to tackle the root cause when it comes to barriers to pet ownership and keep people and pets together.

Methodology

The Scottish SPCA analysed the calls it had received in 2021/2022. In addition, data from two surveys, one that looked at attitudes and awareness among the British public towards animal welfare and another that looked at

barriers to pet ownership specifically relating to housing, provided the vital insight required to create a community service called Pet Aid.

Main results/findings

72% of UK pet owners stated they think the cost of living will impact their animals, and 37% of tenants have had to choose between a pet and a roof over their head. The Scottish SPCA has seen an 18% increase in people citing financial issues, such as paying for food, insurance or vet bills affecting how they can care for their pet. On top of this they have seen a 77% increase in people calling to rehome an animal, an 84% increase in the number of people looking for advice and a 24% increase in people who have required physical support from the Society.

Principal Conclusions and Implications for Field

The Scottish SPCA's Pet Aid service supports the challenges that pet owners currently face, tackling unintentional neglect at an early stage, enabling people and animals to be kept together where possible. Pet Aid provides animal welfare support on doorsteps, in the heart of communities instead of organisations picking up the pieces when things have gone wrong and an animal and person has suffered. Join us to discover more about Pet Aid, the data behind the service and the impact it is having on both people and animals lives.

Session B – ID #: 2 **On birds and people: animal urbanum**

Suzana Marjanić

Institute of Ethnology and Folklore Research, Zagreb, Croatia

The presentation focuses on two examples of animal urbanum in Croatia. The first example refers to the documentary film *Imported Crows* (*Uvozne vrane*, 2004) by Goran Dević, which problematizes the violent killing of crows, where climbers and alpinists remove, destroy nests with the young from trees and kill them. The film is announced with a sentence in which the crows are treated as residents who come "across the river Sava", as temporary and unwanted guests from another country, as Others, where the director takes a critical aim at the nationalism that deepened after the Homeland War.

Another example refers to the Split architecture and Dinko Kovačić, who introduced the scale of birds and their nests into his key architectural buildings (e.g., Split III, Faculty of Economics, Secondary School Centre in Split) or as he calls them – architectural creatures of a swallow's nest because a swallow builds only as much as it needs, unlike people who, as the architect Kovačić states, are vain), or according to the local Split saying: "If the house does not have a hole for the sparrow, it is not good."

Session B – ID #: 3 Causes of Deaths of Law Enforcement K-9s in 2016–2019 during Service and after Retirement

Lynette A Hart¹, Andrea Sierra¹, Neil H Willits²

¹University of California, Davis, School of Veterinary Medicine, Davis, CA, USA ²University of California, Davis, Dept of Statistics, Davis, CA, USA

Introduction

Police canines face high risks for their jobs, but their causes of mortality are unknown. We investigated the 2016–2019 causes of death of U.S. law enforcement police dogs from the website “Memorials to Fallen K-9s”.

Methodology

Data on 2016–2019 deaths of 1,354 dogs from U.S. police/sheriff’s departments was compiled from the website maintained by James A. Cortina (2023). Stepwise logistic regression analyses were completed by R (Hlavac, 2023).

Results

Most K-9s dying in service (n = 633) were male (77.41%). Top jobs included narcotics (41.71%), tracking/searches (31.75%), and apprehension (28.91%). German Shepherds (16.43%) and Belgian Malinois (14.85%) were most common breeds. Most reported deaths (n = 522) were nontraumatic: illness/medical/health problems (33.72%), and cancer (29.89%). Patrol dogs (p < .01) and search and rescue dogs (p < .05) more often died from cancer: perhaps breed-related. Traumatic deaths included vehicular accidents (9%), gunfire (6.9%), heat related causes (5.94%). Major 81 work-related deaths were gunfire (38.27%), vehicular accidents (13.58%), heat related causes (11.11%). Violent deaths were greater in tracking/searching (p < .01) and bomb or narcotics work (p < .01). After retirement (n = 721), most deaths were males (80.72%). Top jobs before retirement had been narcotics (52.43%), tracking/searches (36.48%), apprehension (36.48%). German Shepherds (16.09%) and Belgian Malinois (8.6%) were most numerous. Most reported deaths (n = 319) were nontraumatic: illness/medical/health problems (42.63%), cancer (30.72%), degenerative conditions (13.48%). Traumatic deaths included asphyxiation/breathing/throat problems (1.25%), vehicular accidents (0.63%).

Conclusions

K-9s provide essential assistance in law enforcement, but further protection could be offered them, e.g., from heat stress. Official monitoring of police canine deaths is needed to advance their health.

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Session B – ID #: 4 **Assessing Untrained Helpful Behaviours of Service Dogs Who Assist People With Post-Traumatic Stress Disorder (PTSD)**

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Introduction: An intervention gaining in popularity to treat PTSD consists of training assistance dogs so they can accompany a person in their daily life and help them cope with the difficulties related to their PTSD. Considering that dogs have an excellent ability to adapt to their environment, the present study aims to observe helpful behaviours that an assistance dog might have developed spontaneously in adaptation to the needs and behaviours of the person it assists.

Method: An observation grid is designed based on past empirical studies. It is then reviewed by a committee of experts and integrated into the daily routine of a person living with PTSD who is accompanied by an assistance dog.

Results: The results allow for the observation of helpful spontaneous behaviours, the contexts in which they occur, as well as their frequency. The results highlight dogs' ability to develop helpful behaviours that better meet the specific needs of the person they assist. On one hand, some behaviours described in past empirical studies were not observed in the present study. On the other hand, some behaviours reported by the participant were not theoretically expected behaviours and could be the results of the dog's adaptation to its owner's specific needs.

Conclusion: The grid developed in the present study could be used to identify helpful behaviours that are not taught to assistance dogs and thereby help to standardize the trainings offered to them. The grid could also be used for the many other types of service dogs, such as guide dogs, emotional support dogs, readaptation dogs, etc.

Keywords: post-traumatic stress disorder, assistance dogs, helpful behaviours, canine behaviours, observation grid, direct observation

Session B – ID #: 5 **Children's bond with companion animals and associations with psychosocial health: a systematic review**

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Introduction: This scoping review aimed to gain insight into the current literature regarding the child-companion animal bond and psychosocial health. We focused on the correlations between the child-companion animal bond and children's psychosocial health; the characteristics of children and companion animals and the strength of their bond and parental attachment and the child-companion animal bond. We also aimed to provide an overview of the instruments used to measure the child-companion animal bond.

Methodology: We searched three major electronic databases for studies reporting quantitative and qualitative data on child-companion animal bond and children's psychosocial health. Articles were included by a predefined protocol.

Results: The search revealed 1025 unique records, of which 29 were included. Some positive associations were reported between the strength of the child–companion animal bond and children’s psychosocial health outcomes like empathy, social support, and quality of life, although some results were inconsistent. The child–companion animal bond was the strongest with dogs, followed by cats and other mammals. Overall, girls reported a stronger bond with companion animals than boys. A secure attachment style to parents seemed positively associated with a stronger child–companion animal bond. Most of the used instruments measure the strength of the bond. They do not measure attachment style but do assess attachment related features.

Discussion: This review suggests that the child–companion animal bond is beneficial for children’s psychosocial health. However, not every bond develops into an attachment. Since a strong bond with animals might not be the same as a secure attachment, it remains uncertain if attachment styles between humans and companion animals are related. For future research, it is advised to use instruments capable of measuring attachment styles to companion animals. Our next project will research children’s attachment styles to companion animals and correlations between attachment to humans and children’s socio-emotional well-being.

Session B - ID #: 6 Paradigm Shift from Early Neutering of Dogs to Caregiver’s Personalized Choice for Each Dog’s Age of Spay/Neuter

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Until recently, U.S. responsible pet ownership specified dogs being adopted be spayed or neutered at least by 6 months, a paradigm to prevent unwanted puppies and avoid mammary cancer. Some studies had reported adverse effects regarding increased cancer risks with early spay/neuter; lacking information on breed, sex, age of spay/neuter prevented applying these findings.

We investigated for 12 years, on a breed-specific and sex-specific basis, joint disorders (hip or elbow dysplasia, cranial cruciate ligament tears or rupture) and cancers (lymphoma, hemangiosarcoma, mast cell tumor) related to caregivers’ decisions on spay/neuter ages. Initially studying the Golden Retriever, Labrador Retriever, and German Shepherd Dog, we covered 40 purebreds, ranging from small to very large breeds, and also mixed breed dogs.

For debilitating joint disorders, no small-dog breeds were vulnerable to early spay/neuter. Some breeds of larger size, including Goldens, Labs, and German Shepherds, have a 3-fold increase in at least one joint disorder occurrence with spay/neuter in the first year. Mixed breed dogs above 20kg have elevated risks of joint disorders with early neutering. Regarding one or more of the cancers followed, most small-dog breeds showed no vulnerability, but Boston Terrier and Shih Tzu females were an exception. Other cancer-vulnerable breeds were of several sizes.

As dogs gain the position of family members, our roles include making decisions such as age for spay/neuter to decrease odds for a life-long painful joint disorder or a life-threatening cancer. This requires considering the breed, sex, lifestyle, and vulnerabilities. This major paradigm shift from the previous single rule is of keen interest to the public.

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Session B – ID #: 7 **Both ends of the leash: Animals in Australian Residential Aged Care Facilities, views of aged care workers who are experienced animal trainers/handlers**

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Introduction. The provision of animal interactions in Australian residential aged care facilities (RACF) is not uncommon. Most visits are unregulated, including family pets and petting zoos. We asked experienced dog trainers with RACF work experience how RACF incorporated animals to understand their real-world experiences of including animals in RACF and the perceived benefits and risks.

Methods. Using snowball sampling, we recruited experienced dog people who worked (or had previously worked) in aged care to participate in a 30–60 minute semi-structured interview to discuss their thoughts about and experiences of animals in RACF.

The interviews were recorded using ZOOM and transcribed by Otter ai. After checking transcripts, two authors independently coded the data before cross-checking the codes and discussing any discrepancies.

Main results. Participants supported animals in RACF, describing the joy the interactions brought to even the most shut-down dementia patients. However, they also told us some of the difficulties and risks to residents, including trips, falls, scratches, pests and reliance on the willingness of management to allow such access. There were also risks to animals, including poisoning (from medication), overfeeding, poor husbandry, frightening experiences and escape from the building (automatic doors). Organisational challenges included who was responsible for a resident animal, especially out of hours, respecting those who do not want interaction with animals and who would assess the suitability of visiting animals.

Principal conclusion. While there are potential difficulties with giving residents of RACF access to animal interactions. Staff with animal knowledge can see the benefit to residents and animals if the providers employ careful and respectful management of these interactions. Developing guidelines and specific policies for including animals in RACF would help protect the residents, the animals and the organisation.

Session B – ID #: 8 **The Mediatory Role of Religious Practices in the Relationships between Authority and Violence Against Animals**

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Introduction. The source of violence against animals is our domination over them and our power to make decisions about their lives, reproduction, and instrumental use. The current study investigated whether attendance at religious practices plays a mediatory role by shaping the relationships between the moral

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foundation of authority, as defined in the Moral Foundations Theory, and acceptance of instrumental violence against animals.

Methodology. A total of 334 participants (74.3% were women and 67.7% were Catholic) from Poland completed paper-based questionnaires that measured their acceptance of instrumental violence against animals, binding moral foundations (authority, loyalty, purity), religious faith, and frequency of attendance at religious practices. Correlation analysis and multiple regression analysis were conducted to verify the relationship between all binding foundations, religious faith and acceptance of violence against animals. To verify the mediatory role of religiosity, the mediation models were estimated using the PROCESS macro for SPSS (Model 4.)

Main Results. The results identified that all binding foundations are positively related to acceptance of instrumental violence against animals. Moreover, in a multivariate model, authority was the only predictor ($B = 0.27, p < 0.001$) of this acceptance. As expected, religious practices played a mediatory role in the association between authority and acceptance of instrumental violence against animals (total effect: $B = 0.22, [0.130; 0.314]$; indirect effect: $B = 0.05, [0.019; 0.089]$), with religious faith, gender and work related to animals controlled for. This confirmed that tradition, duty, obedience, and respect for the institutions of power as components of authority that facilitate group-binding and social cohesion are linked to religious practices. Moreover, this suggests that more frequent attendance at religious practices, inevitably associated with more frequent contact with religious content, i.e. ideas and practices that promote an instrumental view of animals, facilitates acceptance of instrumental violence against animals.

Session B – ID #: 9 Equine-assisted social education in Finland: The effects of the intervention on participants' well-being as described by the instructors

Maija Lipponen^{1,2}, Elina Vehmasto³

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Introduction. Equine-assisted social education is a work orientation based on social pedagogy as well as equine-assisted rehabilitation. It is used by professionals on education, social or health sector in Finland but there is lack of research about the outcomes of the intervention.

Methodology. We wanted to find out how Finnish equine-assisted social education affect the well-being of the participants. The research data was collected 2020 by a qualitative survey to the equine-assisted social educators (n=53). We analyzed the data using theory-driven content analysis method.

Main results. We identified effects on physical, mental and social well-being on three different levels: individual, community and society level. According to our results, physical effects were seen in increased activity and physical condition, motor skills and coordination. Acting with horses facilitated the regulation of the state of vigor and helped participants to relax. The concentration and the cognitive control were improved and the structuring of thoughts became easier. Activities with horses produced joy, increased positive emotions and reduced anxiety. The self-esteem and social skills were improved. Transitions of new skills, behaviors or resources into everyday life were also described by instructors. Future studies will need to consider measuring these effects on the participants.

Principal conclusions and implications for the field. As described by the instructors, the intervention had effects on physical, mental and social well-being. This study provides perspective for the future research and awareness of animal-assisted services in Finland.

Session B - ID #: 10 General and Specific Attitude toward Animals: A Predictive Model Differentiating on Diet

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People consider animals differently depending on the role society gives them (e.g., companionship, food). Currently, most studies developed in the human-animal interaction field focus on the attitudes toward animals in general, disregarding attitudes toward specific animal categories. The studies that make this distinction emphasize the relationship with pets, neglecting other animal categories. With this approach, there is the possibility that people manifesting a favorable general attitude toward animals do not necessarily have a favorable attitude toward a specific animal category. Hence, the general attitude toward animals could not be generalized to specific categories. This work addresses whether attitudes toward specific animal categories (pet, pest, profit) can predict general attitudes toward animals. An online questionnaire was administered to 470 participants aged 18 to 68 years (70.1% female; 47.2% vegetarians/vegans; Mage=35, SDage=13.4). A linear regression analysis was conducted for omnivores and another for vegetarians/vegans. The results show a R² value of .75 and .24 for omnivores and vegetarians/vegans, respectively. For omnivores, the standardized coefficients according to each animal category were Pet ($\beta=.06$; $p>.05$), Pest ($\beta=.24$; $p<.001$), and Profit ($\beta=.67$; $p<.001$). For vegetarians/vegans were as follow: Pet ($\beta=.17$; $p<.05$), Pest ($\beta=.16$; $p<.05$), and Profit ($\beta=.31$; $p<.001$). The variable that explains more variance is the attitude toward Profit in both groups, especially for omnivores. Also, for this group, the attitude toward Pets was not significant in the predictive model. This may be due to this category being perceived as family members and not being compartmentalized merely as animals. Furthermore, for vegetarians/vegans, the specific attitude predicts to a lesser extent the general attitude, and the prediction is more evenly distributed among the animal categories.

Session B - ID #: 11 Protocol for the process-evaluation of the development of the innovative PET@home Toolkit using the comprehensive EBCD+ method for frail client pet guardians

Peter W.A. Reniers¹, Ruslan Leontjevas^{1,2}, Ine J.N. Declercq^{1,2}, Marie-Jose Enders-Slegers¹, Debby L. Gerritsen², Karin Hediger^{1,3}

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Introduction: Long term care organisations (LTC) in the Netherlands provide care to clients with pets who remain at home. We are developing the PET@home Toolkit which intends to: (1) foster understanding about the roles that pets play in the lives of LTC-clients, (2) create awareness in professional caregivers, LTC-clients, and their family about potential problems related to pets and their influence on caregiving relationships, and (3) support conversations about pets, how to improve LTC-clients' quality of life and to prevent potential pet-related problems.

Methods: In the first study-phase, the comprehensive Experience-Based Co-Design+ (EBCD+) method was used. This method includes a literature review, the Consensual Qualitative Research method, and plural discussion

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sessions of preliminary material in focus groups and individual interviews. In the second study-phase, we are assessing the relevance, feasibility of, and satisfaction with the created Toolkit materials in stakeholders. Professional caregivers will use the Toolkit in 10 to 15 LTC-clients with pets. Subsequently, semi-structured interviews will be conducted with LTC-clients, family and professional caregivers. Information on clarity and (dis-)advantages of the Toolkit materials will be collected.

Results: Examples of the created Toolkit materials are: an information brochure, an agreement checklist, an infographic, and an e-learning module. We are collecting process data that are needed to understand the validity (internal and external, i.e. generalisability) and the implementability of the innovative PET@home toolkit. We will present the Toolkit material and preliminary results of the process evaluation.

Discussion: Our results can be used to further improve the Toolkit and its implementation in LTC at home.

Outcomes will help to understand whether the PET@home Toolkit has reached the aims regarding awareness and the improvement of LTC when clients have pets. Methodologically, the study promotes understanding whether the EBCD+ method is feasible for future anthrozoology research in LTC-clients.

Session B - ID #: 12 **Pawsitive Training: An Investigation of Animal-Assisted Counseling Competencies in a University-Based Training Program**

Jordan Jalen Evans¹, [Elizabeth Kjellstrand Hartwig](#)²

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Introduction. With the proliferation of animal-assisted training programs for mental health practitioners, the need for quality training that addresses AAC competencies is essential. This paper describes a study that investigated the influence of a university-based AAC training program on AAC knowledge, skills, and attitudes. **Methodology.** A sample of 15 mental health practitioners who completed a professional university-based AAC training program in the Southwestern United States chose to participate in this study. The AAC training program is comprised of 120 hours of training that targets AAC competencies, with 48 hours of in-person skills training with their animal partner and a supervised practicum with clients. For the study, we used a researcher-developed survey adapted from the AAC competencies (Stewart et al., 2016). This survey was comprised of three subscales: AAC Knowledge, AAC Skills, and AAC Attitudes, with items self-rated by participants from 1 (no level of competence) to 5 (high level of competence), and a total competency score. The researchers used a paired samples t-test analysis for the subscales and total scores to investigate the research questions.

Main Results. Results indicated that there was a significant positive difference between pretest and posttest mean scores in all three subscales and total scores. These outcomes suggest that the AAC training program had a significant influence on increasing AAC competencies for participants.

Principal Conclusions and Implications for Field. These findings suggest that mental health practitioners can increase AAC competencies by participating in training programs that target AAC competency development. Future research should explore aspects of AAC training programs that have the greatest influence on increasing AAC knowledge, skills, and attitudes.

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Session B – ID #: 13 Is it effective, ethical and easy to apply? A preliminary analysis of factors influencing horse owners' choice of training approach

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¹Animal Welfare and Behaviour Group, Bristol Vet School, University of Bristol, Bristol, United Kingdom. ²Hartpury University, Gloucester, United Kingdom

Introduction

Horse-owners are typically the primary decision-makers when selecting equine training approaches (TA). An improved understanding of how these individuals perceive different TA, and how this relates to their own TA selection, would be beneficial in the promotion of more ethical equestrian training.

Methodology

An internet survey investigated horse-owner (n=1,593) perceptions of 5 TA: negative-reinforcement (NR); positive-punishment (PP); positive-reinforcement (tactile reinforcer) (PRT); positive-reinforcement (food reinforcer) (PRF) and combined-reinforcement (CR). Statements describing, but not naming, each approach were provided. Participants scored how likely they were to use each on a 5-point scale (1='very unlikely'; 5='very likely') and rated how 'effective', 'ethical' and 'easy-to-apply' they considered each to be. Friedman's ANOVA and linear regression analyses were used to investigate the relationship between owner views and likelihood of TA use.

Results

Significant differences ($F=2296.39$, $P<0.001$) in the 'likely-to-use' score were seen between all TA, other than PRF and CR. The approach with the highest mean 'likely-to-use' score was PRT (mean=4.59), followed by PRF (mean=4.08), CR (mean=3.99), NR (mean=3.78) and PP (mean=2.41). The extent to which they were considered 'ethical' was the best predictor of 'likely-to-use' scores for NR ($\beta=0.670$, $P<0.001$), PP ($\beta=0.619$, $P<0.001$) and CR ($\beta=0.471$, $P<0.001$), whilst perceived 'efficacy' was most influential for both PRT ($\beta=0.046$, $P=0.003$) and PRF ($\beta=0.159$, $P<0.001$). Tactile reinforcement was considered to be more ethical than food reinforcers.

Conclusion

These findings suggest that horse-owners are considering the 'ethics' of the TA they utilise, particularly when this involves applying or removing an aversive stimuli. Likelihood of using TA involving the addition of reinforcement were most influenced by perceptions of efficacy. Further work is required to establish the nature of this relationship whilst also considering the effect of horse-owner experience and knowledge on TA perception. This would serve to better inform future educational initiatives that promote more ethical horse training.

Session B - ID #: 14 Age and experience affect the interpretation of dog facial emotional expressions by humans

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Introduction. Interpreting emotions from facial expressions is an important part of social communication, yet the effects of age and experience on cross-species emotion recognition have received limited attention. Here, we investigated the recognition and evaluation of dog and human emotional facial expressions by 4- and 6-year-old children and adults, and the effect of everyday experience with dogs.

Methodology. Twenty-eight 4-year-olds, 31 6-year-olds and 34 adults participated in the study. They were divided into two groups based on whether they had a dog in the family. Participants were shown happy, aggressive, and neutral images of dogs and humans from a computer screen. They were asked to rate the faces' valence, arousal and to assign a discrete emotion to the faces. The emotion, valence and arousal ratings of children and adults were compared with repeated measures ANOVAs and clarified with t-tests using SPSS statistics software.

Main Results. Aggressive dogs were rated more often correctly by adults than 4-year-olds regardless of dog experience (without experience: $t=2.5$, $p<0.05$; with experience: $t=3.9$, $p<0.01$), whereas 6-year-olds' and adults' performances did not differ. Happy human and dog expressions were recognized equally by all groups. Children rated aggressive dogs as more positive than adults (4-year-olds vs adults: $t=8.1$, $p<0.001$; 6-year-olds vs adults: $t=4.8$, $p<0.001$) and lower in arousal than adults (4-year-olds vs adults: $t=4.5$, $p<0.001$; 6-year-olds vs adults: $t=2.3$, $p<0.05$). Overall, participants without dog experience rated aggressive dogs as more positive than those with dog experience ($t=3.9$, $p<0.001$).

Principal Conclusions and Implications for Field. The results suggest that the ability to read dog emotional expressions, especially aggression, increases with age. This can be related to brain structure maturation involved in facial emotion recognition and general dog experience, and their role in interpreting dog emotions needs further investigation.

Session B - ID #: 15 Factors influencing the acceptance of pets at evacuation shelters in three Japanese cities during natural disasters

Mitsue Motomura¹, Hajime Tanida²

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Introduction. Most Japanese pet owners want to evacuate with their pets to evacuation shelters in the event of a natural disaster, but it is unclear whether all shelters will accept pets. We compared the pet acceptance rates of shelters in three big cities and examined the factors that influence shelters' decisions regarding whether to accept pets.

Methodology. Shelter managers in Osaka, Kyoto, and Kobe cities were asked to complete online questionnaires to determine their acceptance of pets. Kobe suffered many casualties during the 1995 earthquake. Multiple logistic regression analysis was used to identify the factors that influence shelters' decisions. The factors

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considered were municipalities, shelter type (schools, community halls, etc.), experience as a shelter, experience with evacuation drills, number of staff, shelter capacity, and concerns when accepting pets. Main Results. Of the 205 respondents, 74 answered “accept,” and 25 answered “not accept.” Others were undecided. There was no significant difference in the pet acceptance rates of shelters across the three cities. The logistic regression model indicated that the shelters that answered “accept” tended to be schools (OR: 8.26, 95%CI:1.99–41.49), probably because there is enough space to accommodate the evacuees and their pets. However, pet-friendly shelters were concerned about complaints and trouble caused by pets (OR: 8.86, 95%CI: 2.79–31.33). The shelters with fewer than 20 staff members were more likely to accept pets than those with 20 or more staff members (OR: 4.75, 95%CI: 1.38–20.52). A possible explanation is that small groups may be more flexible in managing shelters and responding agilely to any situation. Principal Conclusions and Implications for the Field. Acceptance of pets at shelters in big cities seems to be influenced by facility type and number of staff rather than disaster experience.

Session B – ID #: 16 “It didn’t change my life; it saved my life”: An evaluative study of a social pedagogical programme: Changing Lives through Horses (CLtH).

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Introduction: The UK faces a high prevalence of school exclusion rates and children and adolescents with special educational needs (SENs) are overly represented. Despite the high rates of expulsion among those with SENs, it is not common practice to provide students an alternative education programme with a focus on emotional and social growth. This paper evaluates a social pedagogical programme; Changing Lives through Horses (CLtH), aimed to provide students who are excluded, or at risk for exclusion, with the transferable skills to return to education or employment, through integrating students into the stable environment, and eventually the community.

Methodology: A service evaluation was conducted to examine the effectiveness of the CLtH programme on addressing the six key skills (Communication; Confidence; Teamwork; Responsibility; Relationship building; Perseverance). Data was extracted from the charity’s data base of 295 CLtH members pre- and post-intervention. Data was analysed through a series of Paired Sample t-tests.

Main results: Results demonstrated a significant improvement in Communication ($t(293)=21.44, p<.0005$); Confidence ($t(293)=21.39, p<.0005$); Teamwork ($t(294)=18.91, p<.0005$); Responsibility ($t(293)=21.724, p<.0005$); Perseverance ($t(289)=18.92, p<.0005$) and Relationship building ($t(294)=20.392, p<.0005$), post intervention.

Principal Conclusions and Implications for the field: The current study documents how Human– Equine Interaction (HEI) partnered with the stable environment and a social pedagogical structure, is effective in strengthening interpersonal, and transferable skills among children and adolescents who are excluded, or at risk of exclusion. This research contributes to a growing body of research suggesting that HEI can enhance social and emotional development among at risk youths.

Poster Session C

16:30 – 18:00 Friday, 16th June, 2023

Location Concourse

Session C – ID #: 1 Intersubjectivity in human-horse relationships associates with compassion and lived practices

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Introduction. Intersubjectivity in human-animal relationships is a relatively scarcely studied topic that has relevance for animal welfare and for advancing our understanding of human-animal relationships. In this mixed-method study, we assessed intersubjectivity in human-horse relationships, focusing particularly on the agency assigned to the horse companion and to notions of affective, cognitive, and embodied intersubjectivity in horse interactions. Furthermore, we asked whether different experiences of intersubjectivity are related to the lived-in practices with the horse, and if so, whether they are related to compassion tendency as a personal characteristic. We hypothesized that as compassion is built upon empathy, which is an elementary component of intersubjectivity, compassion may be related to different facets of intersubjectivity, to the agency people assign to horses, as well as to the acted practices with them.

Methodology. We conducted semi-structured interviews of 25 horse owners and applied the Compassion for others scale (CS)-questionnaire to 31 horse owners at five Finnish stables; all participants who filled the questionnaire were also interviewed. We also determined the stable type in which the respondents kept their horse(s). We analyzed the interview material with theory guided qualitative content analysis for appearances of notions of agency and intersubjectivity in the horse-human relationship.

Results. All three facets of intersubjectivity differed between participants keeping their horse in a box- and an open-shed stable. Further, we found that the respondents at the open-shed stables had statistically higher compassion scores than those at the box-stables (mean (SD): CSopen= 4.23 (0.41), CSbox= 3.78 (0.46); MWU= 65.5, p=0.015). Thus, respondents who had higher scores of compassion more often kept their horses in conditions that give the horses more agency in their daily lives.

Conclusions. Compassion for others appears as one of the mechanisms mediating the connection of intersubjectivity and the practices with the horse.

Session C – ID #: 2 The difference between two brachycephalic and one mesocephalic dog breeds' problem-solving performance suggests evidence for pedomorphism in behaviour

[Dorottya J Ujfalussy](#)^{1,2,3}, [Zsófia Bognár](#)^{1,2}, [Marianna Molnár](#)⁴, [Ádám Miklósi](#)¹, [József Topál](#)³, [Enikő Kubinyi](#)^{1,2,5}

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Introduction: Despite the serious issues concerning their general health and longevity, small brachycephalic breeds, especially the French bulldog, are becoming increasingly popular among pet owners. Motivations underlying choosing a short-nosed breed are extensively investigated in recent years; however, this issue has been addressed mainly by relying on owner reports, resulting in somewhat vague explanations of "cute looks", referring to the child-schema phenomenon and "behaviour well suited for companionship".

Methodology: In this study, we set out to compare the behaviour between two brachycephalic (English and French bulldogs) and a mesocephalic (Hungarian mudi) breed in a problem-solving context. Dogs were given the task of opening boxes containing food reward in the company of their owners and an unfamiliar experimenter. Over success and latency (indicators of motivation and ability), we investigated human-directed behaviour elements.

Main results: We have found that both English and French bulldogs were significantly less successful in solving the problem than mudis. Opening latencies of both brachycephalic breeds were longer than latencies in the mesocephalic group. We also found that short-headed subjects used their paw less than mesocephalic dogs, probably resulting from anatomical issues. Interestingly, no difference was found in nose use. Brachycephalic breeds have oriented much less at the problem box but much more at humans present. No difference has been found between English and French bulldogs in any behaviours. In summary, short-headed breeds were less successful but oriented at humans much more than mesocephalic controls.

Conclusions/Implications: Owners might interpret these behaviours as "helplessness" and dependence. The results support the hypothesis that infant-like traits could be present in brachycephalic breeds not only in their appearance but also in behaviour, triggering a nurturing behaviour in owners.

Session C – ID #: 3 Are attachment, animal species, and animal contact duration associated with the health of pet owners and people having regular contact with animals?

[Rahel Marti](#)^{1,2}, [Karin Hediger](#)^{1,2,3,4}

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Background: In Switzerland, 43% of households have a pet, which means that for a majority of the Swiss population, pets are part of their social network and everyday life. Besides the provision of social support, pet ownership seems to be related to several health outcomes. However, the evidence is still inconclusive if there is

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a direct link between pet ownership and human physical and mental health. In our study, we want to get a better understanding of the relationship between pet ownership and health and which factors influence this relationship.

Method: We added 11 questions focusing on pet ownership, human-animal contact, and human-animal attachment to a cross-sectional survey that focuses on the Swiss population's values and attitudes towards a wide range of social issues. The survey consisted of two parts with an interview and a questionnaire. The sample was a representative random sample, drawn on national level by the Swiss Federal Statistical Office. In the first part, 3349 valid interviews were collected. In the second part, 2328 persons responded to the questions. We will conduct regression analyses using the glmnet package in R. We aim to look at the relationship between pet ownership and animal contact, and mental and physical health, social support, life satisfaction, and loneliness. Further, we will investigate how attachment, animal species, and animal contact duration influence the health of pet owners and people having regular contact with animals.

Results: Analysis is still ongoing. Results and discussion will be presented at the conference.

Session C - ID #: 4 **Animal Welfare Education in UK Primary School Settings: A Collaborative Approach**

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¹PDSA, Telford, United Kingdom. ²Blue Cross, Oxford, United Kingdom. ³Cats Protection, Chelwood Gate, United Kingdom. ⁴Dogs Trust, London, United Kingdom. ⁵RSPCA, Horsham, United Kingdom. ⁶Woodgreen, Cambridge, United Kingdom

Qualified educators from six of the UK's leading animal welfare charities: PDSA, RSPCA, Blue Cross, Dogs Trust, Cats Protection and Woodgreen have taken a unique approach and are working together to reach their common goals.

In increasing efficiency and preventing duplication by pooling relevant resources, we will create a high quality, high impact, user-friendly offering for those seeking our educational resources. Our effective delivery will enable us to reach a greater number of children across the UK, showcasing the impact of our work in a measured, consistent way. Using our engaging educational tools to influence a change in human behaviour, our united voice should influence Government decisions around animal welfare on the relevant educational curricula.

This ground-breaking, evidence-led programme and unified approach from trusted educators in the sector will cover animal welfare topics, including but not exclusive to:

Understanding and application of the 5 Welfare Needs

Children viewing all animals with empathy and compassion

Understanding of dog, cat and rabbit behaviour; dog bite prevention; and specific resource needs for all pets

Promoting careers in the animal welfare sector

Promoting responsible acquisition and relinquishment of pets

Increasing awareness of the cost of pet ownership

Key stakeholders, Defra and UKPF, support this programme and the collaboration has already created shared, standardised terminology for educating children about animal's needs, using a combination of the Five Welfare Needs and the Five Domains.

As part of working closer together on education outreach, the partnership will undertake research with primary school-aged children. Our research initiative will follow the format of the widely recognised PDSA PAW Report to understand our audience. We will ask a range of questions to provide us with meaningful data about children's knowledge, attitudes, empathy and confidence around animals, as well as pet ownership data for this age bracket.

Session C – ID #: 5 “I am getting confused Mum”: Anthropomorphism, agency, and ‘animal talk’ in training between disabled humans and their assistance dogs

Jamie Arathoon

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Introduction. Questions of anthropomorphism and agency are issues that have haunted animal studies. Anthropomorphism is everywhere. In the TV we watch, in the books we read, the art we observe, and the languages we speak. It has become a universal way to make sense of our lived experiences with animals. Yet, it is challenged in various academic circles as ‘unscientific’, a language adoption led by subjectivity, rather than objectivity: “dogs can’t talk!”.

In this paper I examine instances of ‘animal talk’ within training interactions between disabled humans and their assistance dogs. The research asks: How does anthropomorphism occur during interaction between humans and their assistance dogs? How is animal agency expressed through talk and interaction? What does this anthropomorphism do?

Methodology. This research draws on an ethnomethodological approach that utilises video recordings of assistance dog training between assistance dog handlers and their assistance dogs. Using an ethnomethodological approach I examine the action sequences and conversations around task completion and training.

Findings. What I come upon, through multiple forms of conversation and a series of embodied actions – gestures, verbalisations, and touches – are the ways in which humans and animals communicate to one another and make meaning through these communications. I go beyond the ideas of ‘animal talk’ as ventriloquism or infantilisation (animals as childlike) to discuss how these interactions and conversations are themselves facilitated by the assistance dogs. In doing so, I situate animal agency greater within training practices.

Conclusion. The findings show the importance of anthropomorphism in attributing agency to assistance dogs and presenting the meaningful impact assistance dogs have in everyday interactions and training situations. Animal talk is not just an anthropomorphic attribution of sentience and agency but deeply felt and experienced, a form of meaning making between human and animal.

Session C – ID #: 6 Evaluating the impact of a cartoon on the perception of wasps (*Vespula vulgaris*).

Lesley Elizabeth Elizabeth Craig

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Introduction: Conservation efforts are often biased towards species the public find most appealing e.g. mammals, and previous research suggests that anthropomorphising animals by using illustrative caricatures to depict them enhances positive perception to that species (Newberry et al, 2017). There is a paucity of research that has investigated whether using illustrative caricatures to portray wasps can enhance perception of them and their ecological importance. The present study sought to evaluate the impact of a cartoon which aimed to enhance knowledge about the ecological importance of wasps and increase positive perception of them.

Methodology: 417 anonymous Facebook comments were thematically analysed.

Results: Thematic analysis identified four themes: Human–Wildlife Conflict, (which included negative interactions caused by wasps entering people’s homes, nesting in houses and gardens. Wasps Decimate Species (associated with the upset caused by knowing wasps are predators and kill species bees), Biophobia (represents a fear of nature), and Biophilia (represents affection for nature). The most prevalent theme was Human–Wildlife Conflict, which was not surprising given that previous research suggested negative perception towards wasps was culturally ingrained (Sumner, 2018). The results suggest that interventions to reduce human–wasp conflict by promoting sustainable wasp deterrents are needed, as well as enhancing knowledge of the ecological importance of them as predators.

Implications: This research has the potential to inform improvements in conservation communication and facilitate positive societal change that benefits important pollinators and their habitats.

References.

Newberry, M.G., Fuhrman, N.E., and Morgan, A.C. (2017). Naming “animal ambassadors” in an educational presentation: Effects on learner knowledge retention. *Applied Environmental Education and Communication*, 389, 1–11.

Sumner, S., Law, G., and Cini, A. (2018). Why we love bees and hate wasps. *Ecological Entomology*, 6, 836–845.

Session C – ID #: 7 Family Animal Veterinarians’ Perception of Their Euthanasia Related Roles and Challenges: An Interview Study

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Introduction. For companion animal veterinarians, euthanasia can be a complex situation with many concurrent needs to handle, including interactions with a grieving family. Nevertheless, and despite a specialization option as family animal veterinarian, the Danish vet study curriculum covers euthanasia sparsely, and mainly its technical aspects. Thus, other professional aspects of euthanasia in family animal practice may need more attention. As a contribution to this, we explored vets’ perceptions of their roles and challenges related to euthanasia of family animals.

Methodology. In-depth semi-structured interviews with four Danish vets were conducted by author NV. Analyses followed Braun & Clarke’s (2006) six steps of thematic analysis and took a hermeneutical–phenomenological approach to interpretation.

Main Findings. Four major themes were identified; (1) performing euthanasia well (comprised of planning the event and supporting the animal's family), (2) emotional displays (comprised of perceived needs and emotions of present family members, and emotions evoked in the veterinarian themselves), (3) conflicting roles (comprised of running a business versus being the animal's advocate), and (4) working with people as well as pets (including challenges with breaking bad news to the animal's family). From the themes, three perceived roles could be identified, of which two might sometimes be in conflict.

Principal Conclusions and Implications for the Field. Euthanasia of family animals often requires more from the veterinarians than their medical expertise. The veterinarians were found to balance three roles: being an advocate for the animal, providing support for the animal's family, and running a business. We suggest curriculum development to address all three roles and their interactions. Relevant next steps are to explore family needs related to euthanasia, and to use findings for developing training programs that combine veterinary and psychological knowledge.

Key Words: companion animals; euthanasia; veterinary medicine; psychology

Session C - ID #: 8 Doctoral Dissertations in Human-Animal Interaction: Update on Gerbasi et al. (2002)

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Introduction:

Research shows that the number of dissertations in the Human Animal Interaction (HAI) field increased from 1980-1999, but an evaluation of dissertation characteristics in the context of academic diffusion and status led Gerbasi et al. (2002) to conclude that because HAI studies have been scattered across a disjointed collection of academic fields, it has not fully developed. This study provides updated evaluation of HAI dissertation trends in growth rate and subject distribution, with wider implications for the advancement of the HAI field.

Methodology:

A search was executed in ProQuest Dissertations and Theses Global, using terms related to human-animal interactions (HAI). We examined dissertations published between 2000-2019 for key data categories, including year, country, academic discipline, and others.

Main Results:

1090 dissertations across 14 countries met this study's inclusion criteria. To best compare results to those of Gerbasi et al (2002) we examined only those completed in the USA (762) across the previously-examined 10 discipline categories. The number of dissertations more than doubled between the 2000-2009 and 2010-2019 decades, and when compared to the total number of dissertations increased at a much higher rate ($\chi^2 = 78.78$, $df = 1$, $p < .00001$). An examination of dissertations by academic discipline between the 2000s and 2010s suggests significant variability across disciplines from one decade to the next ($\chi^2 = 190.95$, $df = 9$, $p < .00001$), but patterns of change vary by discipline.

Principal conclusions:

It is reasonable that changes in the pattern of HAI dissertations reflect similar changes in the field. The results of this study largely mirror those of Gerbasi, et al. (2002) indicating that the HAI field continues to grow at a considerable rate and that HAI research continues to be conducted across myriad disciplines.

Gerbasi, K., Anderson, D., Coultis, D., & Gerbasi, A. (2002). Doctoral dissertations in human-animal studies. *Society & Animals*, 10(4), 339–346.

Session C – ID #: 9 Public consent to the legal ban on dog meat production, sale, and purchase in South Korea
Myung-Sun Chun, Seola Joo

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Introduction: Controversy over eating dog meat has recently taken a new stage in South Korea after a social consultative body was formed to ban the production, sale, and purchase of dog meat under the president's direction in 2021. The media reported the claims of extreme opponents but had limited insight into the context of the issue. Therefore, this survey investigated the factors affecting the public perception of the dog meat problem and consent to ban the production of dog meat.

Methodology: An online panel survey (N=1,000) using the allocation extraction method according to gender, age, and region, was conducted to investigate demographic characteristics, pro-animal attitude, experience in dog meat consumption, intention to eat dog meat, and consent to ban dog meat production, sale, and purchase. The differences in dog meat perception between demographic groups and the regression model of the consent to dog meat ban were statistically analyzed using SPSS 26.0.

Main results: Most participants (93.4%) recognized that the public negatively perceived dog meat, and 87.1 percent answered they would not eat it. However, 35.9 percent disagreed with the legal ban on dog meat because people have the right to choose what they favor and pursue their interests. 64.1 percent of participants agreed to ban dog meat because it reflects the humanity of our society. Multiple linear regression analysis suggested that age ($\beta=0.122$, $p<0.001$), college education ($\beta=0.068$, $p=0.015$), pet ownership ($\beta=0.126$, $p<0.001$), and pro-animal attitude (0.525 , $p<0.001$) significantly predicted consent to ban on dog meat production, sale, and purchase ($R^2=0.342$, $F=46.597$, $p<0.001$).

Principal conclusions and implications for the field: Public consent to the ban on dog meat would come from personal experience and values for animals. However, barriers to the legal intervention banning dog meat in Korea are based on doubts about limiting individual freedom, not cultural relativism.

Session C – ID #: 10 Pet ownership and Chinese adolescents' and emerging adults' mental wellbeing: The mediating role of pet attachment

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Introduction: Studies of human-animal interaction in China have focused on the negative effects of pets on human physical health. This study is the first to examine the impact of pet ownership on Chinese adolescents' and emerging adults' wellbeing. It specifically aimed to test the potential mediating role of pet attachment (general attachment, person substitution and animal rights) in the relationship between pet ownership and wellbeing.

Methodology: Data from 987 respondents ($M = 23.19$ years, $SD = 3.08$) aged 16 to 29 from 33 cities across China were collected through JISC Online Surveys during the Covid-19 pandemic. Participants' pet ownership, pet attachment, mental health including wellbeing, depression, anxiety and stress were assessed in study.

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Findings: Participants who currently own pets presented better wellbeing ($t = -2.45$, $P = 0.015$) and lower anxiety ($t = 2.33$, $P = 0.020$) than non-pet owners, while no significant results were found on depression and stress between two groups. Parallel mediation analyses indicated that pet ownership had a significant indirect effect on anxiety ($abcs = -1.05$, large effect) and wellbeing ($abcs = 0.82$, large effect) through pet attachment. Furthermore, closer pet attachment between increased the impact of pet ownership on human wellbeing ($\beta = 0.18$, $SE = 0.05$, $CI's: 0.08, 0.29$). However, higher person substitution, was found to be linked with higher levels of depression, anxiety and stress in this study. This indicated that owning pet might impact one's wellbeing both positively and negatively.

Implications: As pet ownership in China is increasing, this research forms the start of an evidence for understanding pet attachment, and further research is required on Chinese pet ownership to unpack the impacts of pet attachment.

Session C – ID #: 11 **Are you Thinking what I'm Thinking? How do Zoo Visitors' Anthropomorphic Conception of Nonhuman Great Apes Influence Conservation Intent and Beliefs about the Lives of Great Apes?**

Cassandra E. M. Lyon

Arizona State University, Tempe, AZ, USA

Introduction:

This exploratory study focuses on anthropomorphic thinking of zoo visitors (ascribing human-like emotions, intentions, or thoughts to exhibited animals) and how this thinking may relate to aspects of the visitors environmental identity. In-person surveys were conducted to evaluate how anthropomorphic beliefs relate to conservation intent and feelings of relatedness to nature. This study considers anthropomorphic thinking to be similar to a 'trait' meaning that this cognitive lens likely changes over a long time scale, with its expression shaped by a variety of factors.

Methodology:

Adult zoo visitors at three facilities, the Bronx Zoo, Smithsonian's National Zoo, and the Maryland Zoo, were asked to fill out a survey either before or after visiting a great ape exhibit. The survey explored visitors' anthropomorphic beliefs about the cognitive and emotional experience of great apes exhibited in the zoos, intent to take conservation-related action, and had questions about nature-relatedness. Anthropomorphism is common in the human-animal interaction space, therefore this survey aimed to find out more about how this may intersect with conservation action/environmental mindedness. 388 complete responses were analyzed using linear regression and stepwise processes.

Results:

Analysis indicates a positive relationship between a higher conservation action score and higher anthropomorphic thinking score ($\beta=0.115$, $p=0.092$). Within the model, there is a strong relationship between the belief that gorillas or chimpanzees in the wild generally have a good life and anthropomorphic thinking ($\beta=0.16$, $p < 2e-16$). Additionally, there is a strong relationship between believing that these species have a good life in a zoo and anthropomorphic thinking ($\beta=0.114$, $p=0.008$).

Conclusions:

Accredited zoos aim to educate and positively influence conservation outcomes for the species they house. Anthropomorphic language is often used to connect visitors to the animals. We need to know more about how this way of interpreting zoo animals may intersect with our willingness to take action to conserve the species.

Session C – ID #: 12 Best practices for measuring physiological responses in youth with autism spectrum and co-occurring mental health diagnoses within an equine-assisted activities environment

Hannah Christensen^{1,2}, Cory Smith³, Veronica Henderson-Davis^{1,2}, Matthew Siegel^{4,5}, Robin L Gabriels^{1,2}

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Introduction:

Therapeutic horseback riding (THR) has shown efficacy in youth with autism spectrum disorder (ASD) (Gabriels et. al, 2015). A necessary next research step is to refine understanding of the potential causal relationships (e.g., physiological response patterns) underlying these effects. However, population and environmental challenges must be addressed to successfully employ physiological devices. As part of a five-year ongoing NIH/NICHHD funded study, our current research team is collecting physiological response data including Electrocardiogram (ECG) and Galvanized Skin Response (GSR) with youth ages 6–16 diagnosed with ASD and co-occurring mental health diagnoses. This poster proposes to present optimal methodologies to employ these devices and obtain viable physiological response data.

Methodology:

This study uses small, non-invasive, portable Shimmer3 devices for monitoring ECG and tonic GSR responses. Population and device challenges were addressed including securing sensors, limiting movement artifact, and maintaining compliance. We also developed data monitoring, participant education and desensitization protocols, and identified novel equipment securing methodology.

Preliminary Findings:

Our data monitoring plan focused on ensuring that data was accurate and mitigated participant-related unique data quality issues prior to next scheduled collection visits. Participant education and desensitization protocols resulted in a high (98.8%) compliance across participants' acceptance of devices throughout the duration of the 10-week intervention. These protocols also resulted in capturing time points required for the mediation analyses (baseline, mid-point, and endpoint of the 10-week intervention) for participants entered in the study (n = 83) to date. We will provide examples of minimally compressive materials used to secure and cover devices.

Principle Conclusions and Implications for the field:

The combination of approaches utilized in this study can be applied for future studies aiming to improve the quantification of physiological responses in environments where populations and movement increase complexity.

Session C – ID #: 13 Promoting solutionary education through service-learning

Michelle M Proctor

Madonna University, Livonia, MI, USA

Introduction: Partnering humane education and sociology, the course “Do Animals Matter” teaches students to become solutionaries – one recognizing inhumane, unsustainable, and unjust systems and works to transform them to restorative, healthy, and equitable ones for people, animals, and the environment.

Methodology: To bring wildlife “into the classroom,” students engage in service-learning (SL) through a collaboration with the Detroit Zoo’s Humane Education Center (the only zoo in the US with a Humane Education Center), providing a working opportunity with the Center developing animal enrichment activities as a vehicle to expose human/non-human animal relations.

Content analysis was conducted with a sample of 12 (of 50 enrolled) student enrichment experience papers exploring the impact that SL had on their views of human/non-human animal interaction in the context of humane social responsibility.

Findings: Manifest outcomes reflected a renewed sense of value of SL and in working together in as a group. Latent outcomes reflected valuing enrichment/welfare environments for animals in captivity. After completing the project and witnessing the animals interacting with their objects, students expressed an increased value for animals in captivity and a greater understanding of, and appreciation for “the other.”

Conclusion: Service-learning opportunities promote and implement opportunities for students to become aware of power inequalities that exist within society generally, and more specifically how they can develop and promote a sense of social justice for non-human animals. Combining empirically based information within the classroom along with SL provides students greater exposure to ideas that they may never have been exposed to otherwise. These understandings promote the development of compassionate, dedicated solutionaries, able to identify unjust, inhumane, and unsustainable systems and create solutions that enable people, animals, and nature to thrive.

Session C – ID #: 14 **Caregiver Burden of Dogs and Cats Owners in South Korea**

Seola Joo, Myung-Sun Chun

Center for Animal Welfare Research, Research Institute for Veterinary Science, College of Veterinary Medicine, Seoul National University, Seoul, Korea, Republic of

Introduction: Pet owners experience “caregiver burden (Zarit, 1980),” a response to difficulties from caregiving. This burden, having a significant impact on the quality of life, occurs not only in caring for human family members but also for pets receiving dedicated care until death. This study investigated the Korean pet owners’ caregiver burden in the context of rapidly changing human-animal relationships over the past 20 years.

Methodology: An online-panel survey (1,000 dog and cat owners) was conducted to investigate caregiver burden, measured by the Zarit Burden Interview score for pet owners (Spitznagel, 2019), and the influencing factors, such as owner factors (gender, age, income, main-caregiver, and attachment), animal factors (species, age, and health status), and support factors (economic, practical, emotional support, and veterinary counseling). A multiple linear regression model for the caregiver burden was tested using SPSS 26.

Main results: In the regression model ($R^2=0.24$, $F=22.064$, $p<0.001$), participants’ younger age ($\beta=-0.108$, $p<0.001$), a role as a primary caregiver ($\beta=0.059$, $p<0.05$), and lower attachment to pets ($\beta=-0.134$, $p<0.001$) could explain more substantial caregiver burden. Dogs ($\beta=0.069$, $p<0.05$), younger animals ($\beta=-0.112$, $p<0.001$), and treatable diseases of pets ($\beta=0.109$, $p<0.001$) could be predictors to load more burden. In addition, less emotional support from others ($\beta=-0.145$, $p<0.00$), more economic support from other family members ($\beta=0.318$, $p<0.001$), and more

frequent veterinary counseling about life-cycle care ($\beta=0.200$, $p<0.001$) significantly predicted higher caregiver burden.

Principal conclusions and implications for the field: Due to animals' behavioral changes and health status in their life course, pet owners' changing roles in care increase the caregiver burden. Therefore, understanding the contextuality and reciprocity of care is needed to support pet owners in caring for animals with lower burdens.

Session C - ID #: 15 **The IN-HABIT project: co-designing a hum-animal city**

Carmen Borrelli¹, Giulia Granai², Massimo Rovai¹, Angelo Gazzano¹, Roberta Moruzzo¹, Francesco Riccioli¹, Francesco Paolo Di Iacovo¹, Chiara Mariti¹

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The beneficial effect of human-animal interactions on physical and psychological health as well as its effect on improving socialization with other individuals has been documented by several papers. However, there hasn't been much research done to evaluate the advantages of human-animal interaction as a novel resource to improve people's health and wellbeing in urban environments. In this regard, the In-Habit (Inclusive Health and Wellbeing in Small and Medium-Sized Communities) project, funded by the European Commission (GA 869227), serves as a good example of a framework that suggests an original approach on the subject of interactions between people and animals in urban settings.

Following a participatory approach, the IN-HABIT project has already designed and is currently implementing infrastructures to enhance interactions between people and animals. The so-called "Animal Lines" are a 15-kilometer-long path that links the suburban areas of Lucca to its historic center and that will be provided with specific relational areas.

The process has also identified innovative services to improve tourism, animal-assisted interventions, activities in schools, and other services with the aim to improve people's health and wellbeing as well as the human-animal relationship. A group of stakeholders, known as the "IN-HUB," will work on mapping pet-friendly services and public spaces, as well as co-designing specific services aimed at pet owners, while professionals from various sectors will design animal assisted interventions for less empowered people and educational activities in schools.

All the solutions cited above will be codified into experimental activities, evaluated (via surveys, focus groups, physiological measures, etc.) to determine their efficacy, and then repeated in other cities.

Innovative projects like IN-HABIT should be taken into consideration by policymakers to prioritize preserving the benefits of the human-animal relationship and fostering the integration of pets into society by implementing appropriate pet regulations.

Session C - ID #: 16 **Dog-owner interaction modulates the heart rate variability in humans according to the type of interaction**

Aija Koskela^{1,2}, Heini Törnqvist², Sanni Somppi^{2,3}, Virpi-Liisa Kykyri², Laura Hänninen³, Jan Kujala², Miia Maaria Kujala^{2,3}

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Introduction. Despite our long-shared history with dogs, we have much to learn about the physiological mechanisms that regulate the dog-owner interaction. Reflecting autonomic nervous system responses, changes in heart rate variability (HRV) are promising indicators of emotional arousal within interaction. Here, we examined the HRV changes in dog owners during dog-owner interaction.

Methodology. 30 dog-owner dyads participated in a semi-controlled natural interaction study comprising positive interaction tasks (Playing with the dog, Training the dog with positive operant conditioning, Stroking, a Nose work task and passive resting (Baseline)) while their behavior was videotaped. Electrocardiogram (ECG) and 3D-acceleration data were recorded simultaneously from the owners with Bittium FarosTM180 devices (Bittium Corp.). Kubios software (Kubios Oy) was used to analyze the ECG data. HRV values as root mean square of successive differences between normal heartbeats (RMSSD) were compared between different tasks and analyzed statistically using SPSS software.

Main Results. Averaged (2 min) HRV/RMSSD values differed statistically between the tasks (Friedman Anova $Z = 9.87$, $p = 0.007$). Owners had significantly higher RMSSD values during Nose work (MeanRank = 2.47) compared to Stroking (MeanRank = 1.73, $p = 0.014$) and Baseline (MeanRank = 1.80, $p = 0.029$). RMSSD values during Stroking and Baseline did not differ statistically. Training and Playing will be analyzed separately with acceleration data as a covariate.

Principal Conclusions and Implications for Field. Our findings suggest that as the HRV for stroking and resting did not differ, they were equally relaxing for the owners. Notably, observing the dog conduct the Nose work task increased the owner HRV, thus lowering the owner arousal, even further than stroking or rest. Thus, different type of dog-owner interaction is differently related to the autonomic nervous system changes in humans. The factors affecting the dog-owner interaction should be clarified in further studies.

Poster Session D

08:15 - 09:45 Saturday, 17th June, 2023

Location Concourse

Session D - ID #: 1 **The Donkey Who Wanted to Be Free. Negotiating Multispecies Livelihoods and Extinction in Rural Sardinia.**

Alessandro Guglielmo

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Introduction: The Sardinian donkey is an endangered breed native to the Italian island of Sardinia, where a conservation program grants monetary aid to anyone willing to care for these creatures. Unemployment is the main reason for their threatened extinction: once pivotal workers in the multispecies assemblage of pastoralism, when engines and concrete roads reached rural Sardinia they lost their job, and with it any reason to live alongside humans. Today, Sardinian donkeys are kept in private, enclosed areas, sometimes providing meat, milk, or entertainment for tourists.

Methodology: I met one of such donkeys, named Bertu, during the first months of my ethnographic fieldwork, as I conducted participant observation in the sheepfold and pastures where he lives with Matteo, a shepherd in his

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sixties. I used field notes and photography to record multispecies interactions, such as Bertu's will to surpass any enclosure in the pastures where he lives, and Matteo's continuous attempts to lure him back to avoid finding himself indebted to neighbours. During my participant observation, I had the occasion to see Bertu's escapes twice; the growing anger in Matteo led to Bertu's confinement and violent bondage. On the last occasion, Bertu risked death by choking caused by Matteo's mistake in tightening the rope.

Main Results: Bertu's story is one of animal resistance, but it is not linked to the usual frameworks of animal industry or circuses: on the opposite, his resistance speaks of unemployment, abandonment, and withering lifeways. I will thus analyze Bertu's violent reclusion from the perspective of human-animal welfare, discussing the sores produced on his body as multispecies products of subalternity.

Principal Conclusions and Implications for the field: My analysis will provide an ethnographic account of how multispecies assemblages embody sociopolitical trajectories, and how conservation programs are based on biological notions that obscure social and ecological ones.

Session D - ID #: 2 Building relationships between children, handlers and dogs in animal assisted educational contexts.

Helen Lewis, Janet Oostendorp-Godfrey, Marikris De-Leon
Swansea University, Swansea, United Kingdom

This paper explores interactions between children, dogs and handlers in educational contexts. Evidence suggests these can positively influence a person's biological, psychological, and social state (Gee et al, 2022). In such relationships, it is important to consider the impact of these interactions on the dog. Howie (2015) recommends that handlers understand, anticipate and deal with factors that are distracting or stressful for the dog. However, this may be challenging for the growing number of teachers who bring their own dogs into the classroom and thus by necessity divide their attention between dog and child (Lewis et al, 2022).

We examined the nature of interactions between two children, two dogs and two handlers over a 12-week period in two schools in the UK. This was part of a programme to support children's social skills. Interactions took place once a week for up to 30 minutes at a time. Sessions were conducted in quiet spaces within the school and were video recorded. Recordings were coded and analysed, examining the audio and visual modalities of communication, for example, through body language, and the child's verbal utterances with the dog and /or handler.

Analysis suggests that these relationships changed over the course of the study. Initial interactions were led by the handler, and there were differences in how handlers managed the sessions, and in how children and dogs responded. In both cases, over time, children and dogs gained more agency, and interactions became more playful in nature.

The findings lead us to ask questions about the challenges of establishing appropriate canine assisted educational activities. We consider the value of video as a tool to help teachers become more aware of the nature of such interactions, so that they can better prepare for the realities of a dog in the classroom.

Session D - ID #: 3 Matters of Context: Educating about human-animal interaction and developing critical thinkers

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Introduction: Hartpury retains a unique sector course titled BSc Human-Animal Interaction (HAI) distinct from the often human centric Anthrozoology, with a philosophical and anthropological core, and Animal Science with biology, animal behaviour, and/or ecology based. BSc HAI balances the positions, and industry concern, of hyper-animal or hyper-human focused courses by adopting a central tenant of psychological principles of human-behaviour change for the benefit of animals; this actively balances the wellbeing needs of animals and humans.

The programme develops students to work in traditional animal related fields and explicitly supports the growing industry of Animal Assisted Services (AAS)

Our aim is to present the innovative design of the programme and use the case study of the Animals in Society (AiS) module to demonstrate how students tackle the programme's interdisciplinary nature and develop academic skills through the concept of context.

Methodology: A case-study approach considers two iterations of AiS over two consecutive academic years with a similar teaching team and assessment strategy. The teaching strategy used principles from critical social research with an ethos of every voice matters and making the familiar strange. Guest lectures included colleagues with expertise in care farming, urban wildlife conflict, and human well-being.

Main Findings: Students demonstrated active integration of cultural, political, ethical and welfare issues related to HAI. They developed a maturity and balance when engaging in discussion. Students volunteered reflective and reflexive statements, not required by the brief, rivalling final year students on other animal related programmes. Grades were consistently high in both cohorts and reflected students' craving to express their perspectives and advocacy interests.

Principal Conclusions: Using the concept of context is a viable and accessible lens with which first year students can tackle an interdisciplinary view and explore aspects of their field which support, counter, and expand upon their current perspectives.

Session D - ID #: 4 **Designing an analytical framework for canine-assisted interventions in school contexts**

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Introduction. This project piloted a framework to evaluate interactions between children, handlers and dogs in schools. The use of canine-assisted interventions has been studied extensively in clinical contexts and these approaches have attracted growing attention in educational settings. Yet there remains a lack of robust evidence about why these approaches might work. Implementing effective interventions requires developing an analytical framework and assessment tools that educators can use to evaluate their practice. This study derives from previous research and addresses research gaps concerning discourse-pragmatics, speaker profiling and environmental assessment.

Methodology. Following a literature review, observations, and consultations with staff in two schools, a recording system was devised to enable the behavioural encoding of canine-assisted child and handler interactions. The framework consists of individual evaluations of the dog, child, and handler. There were separate assessments of auditory and visual data. Speech was analyzed through linguistic (e.g., semantic) and

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paralinguistic (e.g., prosodic) components, while canine sounds were coded and rated by canine trainers. Videos were coded for behaviour then rated using adaptations of the CARing Kids Ethogram (Lee et al., 2022).

Main findings. The framework characterised the nature of interactions between child, handler, and dog, and allowed the evaluation of such interactions. The poster illustrates how their relationships developed over time in terms of communication and emotional display.

Principal conclusions and implications. The framework allowed researchers to examine the detailed nature of child-dog-handler interactions in educational contexts. This approach may be of interest to educators in evaluating the impact of canine-assisted interventions on both human and dog wellbeing.

References: Lee, C. Y., Ngai, J. T. K., Chau, K. K. Y., Yu, R. W. M., & Wong, P. W. C. (2022). Development of a pilot human-canine ethogram for an animal-assisted education programme in primary schools – A case study. *Applied Animal Behaviour Science*, 255, 105725.

Session D – ID #: 5 Paws on Campus: A Psychoeducational Dog-Facilitated Programme Supporting Mental Wellbeing in University Students

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Introduction: Student mental wellbeing is a concern for universities, and canine-assisted activities are an increasingly popular way of providing support. This poster presents the results of a series of small iterative studies used to collaboratively design a canine-facilitated psycho-educational programme to support student mental health.

Methods: First, 204 university students completed an online survey exploring what they would most like to see in university animal-assisted interventions. Then, a pilot programme was designed based on these results and basic principles from cognitive behavioural therapy (CBT). A set of five sessions were completed with eight volunteer students and three therapy dogs to pilot themes and activities, and data was collected on whether they found each session useful and enjoyable. Finally, a further set of six university students were involved in a co-production process. During this process the final design and content of the sessions were comprehensively discussed and tested, with the help of 3 therapy dogs.

Results: The survey indicated that students would prefer to interact with dogs and have multiple weekly sessions in the afternoon. Pilot work with 8 students indicated that they felt they benefitted from structured sessions focusing on canine and human wellbeing, with some describing them as 'transformative'. Based on the collaborative work, the final Paws on Campus programme was designed to have six sessions: 1) recognising thoughts and feelings, 2) welfare needs, 3) learning and play, 4) body language and sensations, 5) compassion and social support, 6) problem solving and asking for help. Sessions are designed to last one hour, start with a grounding exercise, and with 2-3 students per dog.

Conclusions and Implications: These results show that students were engaged and motivated to help design a dog-assisted intervention, and the Paws on Campus programme is in the process of being fully evaluated.

Session D – ID #: 6 Can we recognize emotions of tigers, monkeys and goats?

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Introduction: Human ability to recognize animal emotions appears limited, but as research on emotion recognition is still scarce, the factors influencing it are poorly understood. Studies thus far have mainly tested recognition of domestic animals. We studied people's ability to recognize emotions of three zoo animal species (Barbary macaque, tiger and markhor). We assessed separately recognition of arousal and valence of the emotions to scrutinize emotion recognition in more detail. We hypothesized that recognition is influenced by the species' phylogenetic closeness to humans and that arousal is better recognized than valence.

Methodology: The material consisted of short clips of a tiger, a barbary macaque, and a markhor goat (5 of each, 15 in total) presenting emotions of high, medium and low arousal and of positive, neutral and negative valence. Of these we composed three video collections, each including five clips and each of the three species. The respondents evaluated the arousal and valence in the clips in 7-step Likert scales.

Results: We obtained answers from N=1127 respondents. We found that, as predicted, people recognized better the emotions of Barbary macaques compared to those of tigers and markhors ($F=148.9$ $df=2$, $p<0.001$). We also found that valence was overall less accurately recognized than arousal ($t=8.91$, $df=10941$, $p<0.0001$), while this also varied among the species. Species also differed in which emotions were better recognized than others.

Conclusions: Recognition of the three species' emotions was overall rather poor, but varied according to the species, valence and degree of arousal. Understanding the factors influencing animal emotion recognition needs more research, as improved recognition is highly relevant for animal welfare in a wide range of contexts, as well as in improving human-animal relationships.

Session D – ID #: 7 “When it comes to fireworks our tactics is try and cope rather than cure”: Qualitative Analysis of UK Dog Owners’ Decision-Making and Help-Seeking During Firework Events.

Sara Owczarczak-Garstecka, Hannah Dempsey, Tamsin Durston, Lauren Harris, Katrina Holland, Rachel Kinsman, Hoi-Lam Jim, Chloe Maher, Kate Main, Jane Murray, Jillian Rose, Malcolm Stagg, Rachel Casey
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Between 21–70% of dogs in Western countries are fearful of fireworks. However, it is unclear how owners make decisions regarding help-seeking and caring for dogs during firework events, which this study aims to explore. Eleven online focus-group discussions involving a total of 33 dog owners took place (March–May 2022).

Purposeful sampling was used to recruit participants with different experiences of seeking help and whose dogs showed varied response to fireworks. Transcribed data were analysed with reflexive–thematic analysis and five themes were constructed.

Decisions regarding caring/seeking help for a dog were framed by “understanding the dog’s point of view”. This understanding was developed with reference to dog’s senses, the owner–dog relationship, owners’ experiences of fireworks, and theories of dog behaviour. Multiple strategies for supporting dogs were discussed, but none were experienced as completely effective. Choice of a strategy was based on trust in the source of information, perceived efficacy of a strategy and “a trial-and-error approach”.

Owners emphasised the importance of “taking a dog-led approach” when implementing a strategy. Some approaches perceived as best for the dog (e.g. medication) contradicted owners’ ethics and were implemented reluctantly. Owners justified (not) escalating the strategy they use by “defining bad enough”. This often related to owners’ understanding of normal dog behaviour and perceived good dog ownership. “Bad enough” was

characterised by extreme fear-related behaviours and the dog's life/health being at risk. Changes in dog's care routine during fireworks events, seeing dogs in distress, and the futility of management strategies left owners feeling "powerless, distressed and exhausted". This led some owners to accept their dog's behaviour and focus on mitigating the impact of fireworks during/after the event.

This study highlights that owner awareness of credible sources of information regarding dog behaviour is limited. Further education into evidence-based approaches to managing/preventing sound-sensitivity is needed.

Session D - ID #: 8 **Not all who wander are lost: The influence of transience on the welfare of mules and their relationship with people**

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Equids experience transient lives where ownership may change multiple times. For working equids this can be extreme where ownership changes are numerous and abrupt, and situations encountered prove difficult, diverse and tough for equids to adapt.

We investigate the life cycle of pack mules in a remote mountain community in Gorkha region, Nepal, discovering the challenges they face during their lives through to end of life, developing a better understanding of their needs and their truth or 'telos'.

To gain insight into the lives of mules in this region, we conducted semi-structured interviews and livelihood surveys with 27 key informants, gathering in-depth perspectives of people working with mules. Welfare assessments of 166 mules were undertaken via the Equid Assessment Research and Scoping tool (EARS) using a trained assessor.

Mules had to adapt swiftly to changes in industry type, enduring long distance transportation in overloaded vehicles and across country borders with no checks for biosecurity or welfare. Mules had to show swift adaptation to their new environment, to respond to and learn new tasks via inhumanely administered training, using inappropriate techniques, delivered by owners lacking in understanding of mule behaviour and learning. Environmental conditions were often hard; the negotiation of difficult terrain and challenging weather conditions during monsoon and subsequent high-altitude working without acclimatisation often pushed mules beyond their biological limits.

The findings of this study indicate the challenges facing mules (and their humans) in the mountains of Nepal. Some of the findings, such as welfare issues and training need practical applications such as human behaviour change work within the field. Some issues, such as owners and mules forced to work at altitude, require better government recognition and support for rural communities to thrive and adapt to a changing climate. Others, such as illegal transportation, require legislative reform and implementation.

Session D - ID #: 9 **"This rabbit crisis needs to stop": Animal shelter and rabbit rescue perspectives on companion rabbits before and during the COVID-19 pandemic in Canada and the United States (2017-2022)**

Carol E Tinga, Lee Niel

Introduction: Limited research exists about domestic rabbits in the care of animal shelters and rabbit rescues in Canada and the USA. However, news stories from both countries during the COVID-19 pandemic have reported that these organizations have been dealing with an abundance of bunnies. Our objective was to explore trends in rabbit care and relinquishment for these organizations from 2017–2022.

Methodology: A Qualtrics survey was created to collect information from humane organizations with broad species and rabbit-focused mandates on the number of rabbits taken in, picked up as strays/abandoned, and surrendered by owners as well as comments about pandemic impacts, the rabbits, and organizational roles in rabbit care. Participants were recruited directly through email, website and Facebook messages, and by social media posts (Facebook, Twitter) requesting sharing. Quantitative results were computed using SAS with comments analyzed using NVivo.

Main results: Participating organizations (n=87) commonly practiced resource-intensive management: coordinating foster care (n=82, 94%), maintaining waitlists (n=72, 83%), and transferring rabbits in (n=68, 78%) and out (n=66, 76%) to other organizations. The number of organizations declining surrender requests and having active waitlists was already high in 2017 and rose each year to 2022 (surrenders from 55 to 77, and waitlists from 46 to 58). The pandemic affected rabbit care at 57 (66%) organizations through human resource (e.g., staff/volunteer/foster) and other (e.g., appropriate housing, adoption events at pet stores) limitations. Rabbit Hemorrhagic Disease Virus 2 emerged in this region during the study period and affected intake at 52 (60%) organizations, making interpretation of COVID-related changes in rabbit count data challenging.

Principal conclusions and implications for the field: These findings suggest that humane organizations handling rabbits face complex challenges and many are stretched to their limits. Future studies that determine how to keep rabbits in homes and out of shelters and rescues are needed.

Session D – ID #: 11 **Where Narratives About Human-Animal Relations During the COVID-19 Pandemic Lead Us: Advancing Animal-Inclusive Housing to Promote Human and Animal Health**

Holly A McKenzie¹, Colleen A. Dell¹, Kayla Arisman¹, Alexandria Pavelich¹, Linzi Williamson¹, Elisabeth Snead¹, Maryellen Gibson¹, Ben Carey¹, Emma Raichuk¹, Catherine Beaupre¹, Aliya Khalid¹, Erynn Buhr¹, Jane Smith², Stephanie Peachey², Kaylyn Kubes¹

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Introduction: This presentation examines narratives circulated about a common social response during the early COVID-19 pandemic in North America: humans seeking social support from companion animals.

Methodology: Using a discourse analysis approach, we drew on interviews with individuals involved in a therapy dog organization (2021) and media coverage (2020 – 2022). Therapy dog handlers are ideally positioned to provide insight into how animals support people navigating isolating and stressful contexts due to their own experiences with COVID measures and therapy dog visiting experiences prior to the pandemic. We reviewed media coverage to contextualize these interviews in the broader Canadian context.

Findings: Therapy dog handlers discursively framed animals' support for humans within the narrative of ongoing reciprocal human-animal relationships. Media coverage throughout 2020 about people bringing animals into their homes circulated similar representations. There was also resonance between therapy dog handlers' reflections about their own relationships with animals during the pandemic and therapy dog interactions with program participants navigating ongoing isolating and stressful contexts. Media representations also often evoked the narrative of pets as a "long-term" or "lifetime" commitment in coverage anticipating, and then responding to, an increase in animal surrenders to rescues and shelters. The latter narrative implies that people predominantly surrender animals because they are irresponsible or because they consider animals disposable. This masks structural inequities (e.g. uneven access to animal-inclusive rental housing) that shape people's decisions to surrender animals as well as the grief and loss some experience when making such decisions.

Conclusion: This analysis highlights the need to support people and animals to live together while navigating isolating and stressful contexts, whether situational (e.g. COVID-19) or ongoing (e.g. structural violence).

Prompted by this analysis, we expanded our PAWS in Places initiative to address animal-inclusive rental housing and foster health and welfare for all members of our communities.

Session D – ID #: 12 **Analysis of companion animal abandonment during 2021 in the city of Barcelona (Spain)**

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Introduction: Barcelona city council wanted to study the causes and epidemiology of companion animal abandonment to implement efficient strategies to prevent it.

Methodology: We reviewed files of all dogs and cats that entered in 2021 the Barcelona official animal shelter, which receives approximately 90% of abandoned animals in the city of Barcelona.

We selected only those files of truly abandoned animals (nor lost and recovered neither confiscated).

All information of the abandoned animal files was categorized to extract relevant variables about possible causes and motivations of abandonment (age, size, color, breed, guardian explanations, behaviour problems, health issues, etc).

Main results/findings: 227 dog and 326 cat files of abandoned animals that entered Barcelona Animal Shelter in 2021 were analysed.

For abandoned cats: 95% were found in the street, 53% were kittens, 95% were European Breed, 59% were not neutered, 54% were male, 3% had identification and 38% arrived in really bad health conditions, and 86% were adopted, most of them after a short stay in the shelter (between 1 and 6 months).

For abandoned dogs: 90% were found in the street, 30% were puppies and 25% were teenagers, 63% were mixed breed, 29% were classified as “Potentially dangerous dog breed”, 48% were middle size and 38% were big size, 63% were male, 79% were not neutered, 31% arrived in bad health conditions, 20% entered with behaviour issues, only 29% had identification and 86% were adopted, most of them after a short stay in the shelter (between 1 and 6 months).

Principal conclusions and implications:

All these data show that most abandoned animals in 2021 were puppies or kittens or very young.

Since many animals entered without being sterilized, it seems that non controlled breeding should be the first issue to resolve with specific policies to prevent companion animal abandonment in Barcelona.

Session D – ID #: 13 **The Anthrozooethogram: Monitoring Equine Welfare Through Human-Animal Behavior Analysis**

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Introduction: Animal-assisted interventions are becoming more popular and accessible to the public, causing a need for researchers to look at welfare among the animals involved. Our research describes a method for monitoring equine welfare before, during, and after therapy sessions by creating a tool that lists behavioral interactions between humans and animals– an anthrozooethogram. This presentation will introduce the anthrozooethogram and demonstrate its utility by sharing findings from a field study on equine-assisted intervention.

Methodology: A field study was conducted, involving 7 equines and 33 children between third and sixth grade. The data were collected at a ten-acre horse pasture at a private practice. During equine-assisted learning sessions, researchers conducted scan and sequence sampling of horse and human behavior. Researchers observed horse maintenance behaviors and human-animal interactions.

Main Results: 1,600 observations were recorded. Results suggested that horse maintenance behaviors (e.g., alertness, ambulation) were slightly different during equine sessions, compared to before and after sessions. Most human-animal interactions consisted of humans approaching horses and horses ignoring or avoiding humans.

Principal Conclusions and Implications for Field: The anthrozooethogram is a useful tool for recording human-animal interaction and may help equine-assisted intervention practitioners monitor equine welfare. Findings will be discussed in terms of human-animal interaction measurement and equine welfare assessment.

Session D – ID #: 14 **Lead the Way: The Effects of Dog-Led Lead Walks on the Behaviour of Pet Dogs**

Beth L Ritchie, Vicky Melfi

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Introduction: To promote positive welfare, owners should provide their dogs with opportunities to engage in behaviours that they are motivated to perform, including sniffing. Walks can offer dogs opportunities to explore their environment through sniffing, however, evidence suggests that sniffing may be restricted when dogs are walked on a lead. It has been suggested that allowing dogs to set the direction and pace during lead walks may enhance their welfare, by giving them more control over their environment and allowing them to sniff as much as they want, but this has not been empirically tested.

Methodology: This study investigated the effects of dog-led lead walks on the behaviour of 17 pet dogs, including Border Collies, Labrador Retrievers, Cocker Spaniels, and Springer Spaniels. The dog-owner dyads completed two 15-minute lead walk conditions – an owner-led walk and a dog-led walk. In the owner-led walk owners led their dogs around a specific route and were instructed to handle them as they normally would. In the dog-led walk dogs chose the route and pace. The dogs' behaviour in each condition was recorded and compared. The number of times owners restricted sniffing in the owner-led walk was also recorded.

Main Findings: Dogs spent significantly more time sniffing in the dog-led walk (Wilcoxon $z = -3.148$, $p=0.002$). The number of times owners restricted the dogs sniffing in the owner-led walk was not associated with the increase

in sniffing between conditions. Significantly lower frequencies of panting (Wilcoxon $z = -3.290$, $p=0.001$) and lip-licking (Wilcoxon $z = -2.278$, $p=0.023$) behaviours were observed in the dog-led walk.

Implications: Dog-led lead walks may be beneficial for dog welfare, at least in the four breeds investigated, as they can increase opportunities for sniffing behaviour, and reduce panting and lip-licking which are indicators of stress.

Session D – ID #: 15 **Hierarchy of human-generated signals in free-ranging dogs' approach decision**

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Introduction: In this study, we aim to investigate, the hierarchy of human facial and auditory signals in interspecific individual recognition (IIR) in free-ranging dogs (FRD) through a choice test. FRDs have to navigate complex interactions with a multitude of humans on a daily basis. Thus, they need to quickly and accurately identify potential friends or foes quickly and respond accordingly.

Methodology: There were three phases to this experiment. Phase 1 tested the response of the dogs through approach to one of two familiar persons standing at a distance without any auditory cue. Phase 2 tested the choice of dogs between the same two humans (H1 & H2) providing one of the two cues. H1's face was visible but they provided no vocalization. H2's face was completely covered but they provided a positive vocalization, "aye, aye", a common way to call dogs in India. Phase 3 was positive control wherein the faces of both the humans were visible but only one of them called to the dog. The total sample size at the start of the experiment was 40 dogs. The experiment was carried out in the dogs' natural habitat. Chi-square tests were carried out in R to compare the choices of the dogs statistically.

Results: Dogs approached both familiar humans equally when there was only facial cue, but no auditory cue (p -value = 0.8271). Dogs chose the human providing vocalization significantly higher (Phase 3: p -value = 0.03767) even when their faces were covered (Phase 2: p -value = 0.04002).

Conclusion: Dogs are more likely to respond to auditory cues over facial cues because they can receive and respond to auditory signals from afar thus decreasing chances of potential harm. Furthermore, positive vocalizations are generally followed by positive gesture (petting or food) by friendly humans and may thus be more trusted.

Session D – ID #: 16 **Who traverses the Sundarban forest? The intricacy and meaning of merging boundaries**

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Sundarbans' identity is intrinsically bound up with the fluidity of its boundaries that pushes us to step beyond Cartesian binaries of land and water but also consider the human-nonhuman movement to make sense of the region's "fluid ecology" (Mukhopadhyay, 2022). Non-native scholars have imposed their erudite analysis of the Sundarbans rather than adopting the local perspective and understanding of the ecosystem to promote socioeconomic, ecological, and environmental resilience, especially through their customary rights and rituals associated with co-habiting animals.

The paper develops on the contention that the Sundarbans is a complex landscape through an observational and participatory methodological approach in two of the selected study sites- Samsernagar and Kumirmari, both of

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which fall in the same forest range. The paper argues that its demarcated boundaries are intertwined with socio-cultural, political, and ecological epiphanies of water, forests, wildlife, and even climate-related disasters, all impacting local communities (both human and non-human) in different ways.

Just like how a sundarban forest dependents can navigate its way through the creeks and ridges of the deltaic mesh, though with permission from the forest office, the paper elucidates incidents on how it is the same for all forms of nonhuman animals (vertebrates). The non-native versions believe that there is no check and balance to non-human animal mobility in Sundarbans; however, by studying the different fencing/boundary strategies that go beyond the protected area demarcation- the paper discusses how nonhuman animals like tigers, wild boars, deer and monkeys traverse in and out of their designated space by "negotiating" with humans further showing traces of "restricted coexistence" possibility between humans and nonhumans. It further contests this "restricted coexistence" through several negotiation actions between humans and non-human animals.

Session D - ID #: 17 **Associations between attitudes towards animal assisted therapy (AAT) and personality traits**

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Introduction: Despite the benefits and increasing popularity of animal assisted therapy (AAT), perceptions considerably differ regarding both sectoral and target group aspects. Research investigating attitudes towards AAT suggests that the possible reason for the diverse perceptions of AAT stems from the lack of clear methodology or principles, imprecise or incomplete knowledge on AAT, or aversion to possible barriers to methods. Our study aimed to assess attitudes towards the most commonly used form of AAT, namely canine assisted therapy (CAT), in the light of different personality traits.

Methodology: Questionnaires were applied to assess attitudes towards AAT (Attitude Towards AAT Test) attitudes on dogs (Coleman Dog Attitude Scale (C-DAS)) and knowledge on AAT (AAT Knowledge Test).

Personality traits were assessed by the Big Five Inventory-2 (BFI).

Main results: Associations were identified between different personality traits, knowledge on AAT and attitudes towards AAT and dogs. Higher knowledge on AAT and positive attitudes towards dogs correlated with positive attitudes towards AAT. Higher results on the Extroversion (E) and Agreeableness (A) trait dimensions of the Big Five scales correlated with positive attitudes towards dogs ($p = .195$, p (two-tailed) $< .01$) and AAT ($p = .252$, p (two-tailed) $< .01$), while Agreeableness (A) also correlated with positive attitudes towards dogs ($p = .194$, p (two-tailed) $< .01$) and AAT ($p = .186$, p (two-tailed) $< .01$). Positive attitudes towards AAT were associated with higher Conscientiousness (C) ($p = .184$, p (two-tailed) $< .01$) and Openness to experience (O) ($p = .152$, p (two-tailed) $< .05$). Meanwhile, higher Neuroticism (N) correlated with rather negative attitudes on AAT ($p = -.174$, p (two-tailed) $< .05$).

Principal conclusions and implications for the field: Findings identified associations between attitudes towards dogs and AAT, and different personality factors. Assessing individual perceptions of AAT in relation to personality traits might be considered crucial regarding the applicability of AAT.

