

Predicting end-of-life and surrender decisions and grief following companion animal loss

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Animal companionship

- Brings many benefits to humans
- Improved mental and physical health (Allen et al., 2002; Krause-Parello & Gulick, 2013; Mueller et al., 2021; Ratschen et al., 2020; Vesnaver & Keller, 2011)
- Greater family (Koyasu et al., 2023) and community engagement (Charmaraman et al., 2022)
- Attachment with animals may provide an alternative source of comfort for those with insecure attachments with other humans

Animal companionship

- Overly strong attachments to companion animals can be associated with poor mental health (McDonald et al., 2021)
- However, greater attachment predicts greater grief when companion animals pass (e.g., Brown et al., 1996; Field et al., 2009; Gosse & Barnes, 1994; O'Connor et al., 2022; Park & Jeong, 2022; Schmidt et al., 2018)
- And greater guilt following euthanasia or surrender decisions (Davis et al., 2003; Hewson, 2014; Wong et al., 2017)

Research Goals

- There is much research on the psychological outcomes of companion animal bereavement and surrender, such as grief and guilt
- There is much research focusing on contextual factors predicting reasons for surrender and euthanasia but little focused on psychological predictors other than attachment
 - Attachment style is not considered as often as attachment strength
- There is no research predicting **when** individuals with varying traits make end of life decisions

Outline

- Study One
 - To better understand why companion animal caregivers in the U.S., Hong Kong and Pakistan surrender animal companions
 - Two studies to explore potential cultural differences in surrender
- Study Two
 - To understand **when** companion animal caregivers make end-of-life decisions, and if this is predicted by empathy, attachment, and emotion regulation
 - To explore cultural differences in attitudes toward companion animal euthanasia; U.S. versus Europe (Netherlands, Belgium)
- Study Three
 - How does early adversity predict later attitudes toward animals, and euthanasia?

Study One Aims

- Jennifer Vonk, Aliya Khalid, Amy Johnson, Patricia Cameron and Kar Tat Eddie Lee (2023, Anthrozoos)
- What contextual and **psychological** factors might make companion animal caregivers **more likely to** surrender animal “family members?”
 - Focused on role of attachment strength and type (avoidant, anxious), attitudes toward animals, beliefs in animal minds, problem behaviors and concerns
- Are there cultural differences between Western and Eastern cultures?
- Most studies include only those that *have* surrendered a companion animal, which does not allow for comparisons between those that have and have not

Study One Hypotheses

- Higher attachment strength, more positive attitudes, and greater beliefs in animal minds would predict less likelihood to surrender
- Avoidant and anxious attachment styles would predict greater likelihood to surrender
- A greater number of problem behaviors and concerns would predict greater likelihood to surrender
- Cultural differences were exploratory

Study One Predictors

- Samples (Eastern, Western)
- Pet Type (Study 1b only, cat or dog)
- Attachment to Pet
 - Censhare (Holcomb et al., 1985)
 - 27 items
 - 4-point Likert from almost never (0) to almost always (4)
- Pet Attachment Questionnaire (Zilcha-Mano et al., 2011)
 - 26 items
 - Avoidant and Anxious subscales
 - 7-point Likert from strongly disagree (1) to strongly agree (7)
- Pet Attitude Scale (Templer et al., 1981)
 - 18 items
 - 7-point Likert from strongly disagree (1) to strongly agree (7)

Study One Predictors cont.

- Belief in Animal Mind (Knight et al., 2004)
 - 4 items
 - 7-point Likert from strongly disagree (1) to strongly agree (7)
- Problem Behaviors
 - How often experienced from never (1) to frequently (5)
 - chewing, digging, scratching object, unwanted vocalizing, hyperactivity, escape/running away, inappropriate elimination, aggression toward other pets, aggression toward people, health issues requiring and not requiring medication, excessive demand for attention, excessive shedding, difficulty being controlled, killing livestock or wild animals
- Concerns
 - How concerned from “not at all” (1) to “extremely” (5) about: cost, time commitment, restrictions, behavioral issues, health issues

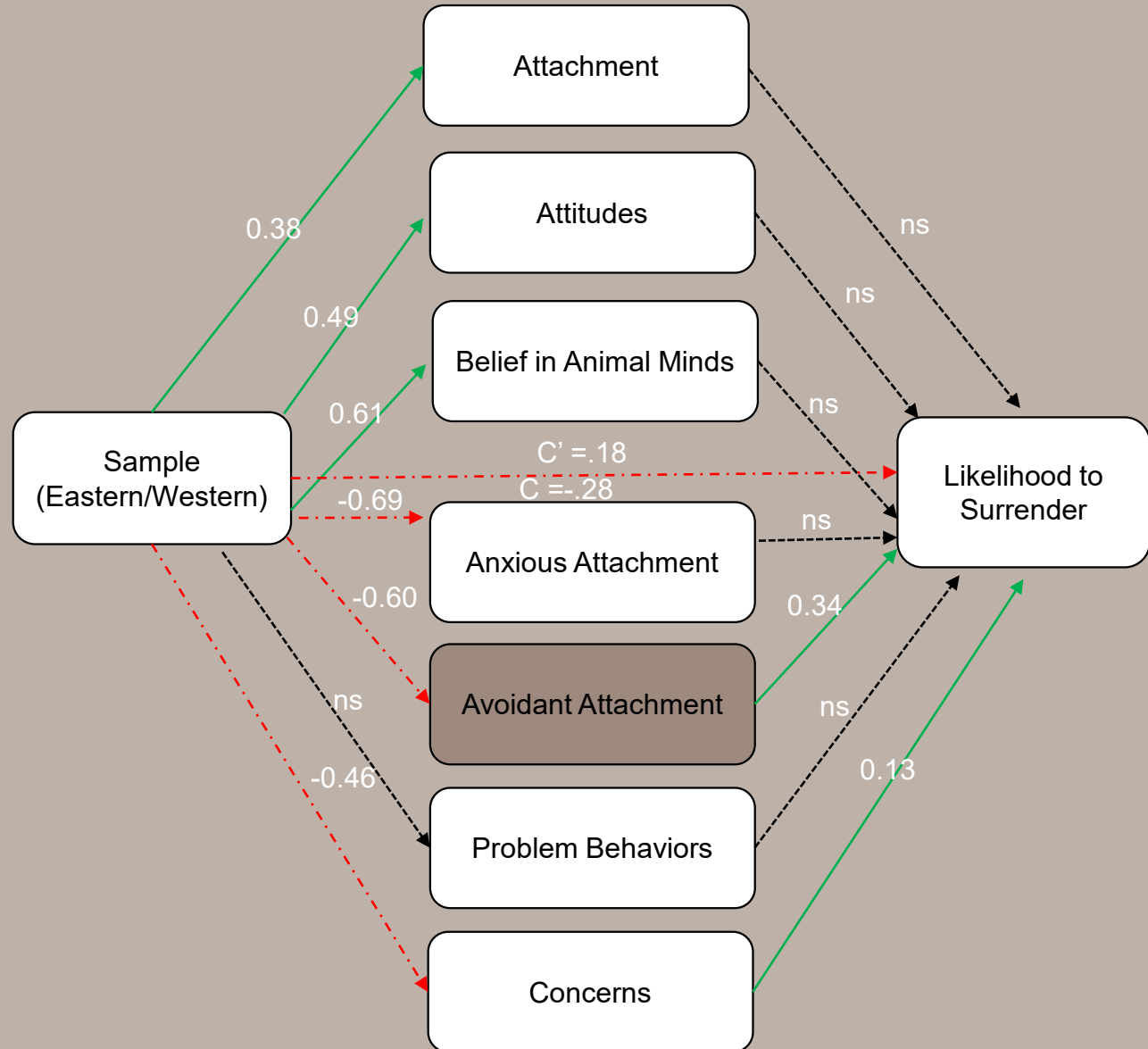
Study One Outcome

- Likelihood of Pet Surrender
 - From extremely unlikely (1) to extremely likely (5) for the following reasons:
 - Behavioral problems, health-related concerns of pet, age of pet, lack of bond with pet, high cost of pet care, health-related concerns of owner, inability to spend time with the pet, moving or living arrangements, dissolution of relationship with co-pet owner, and other

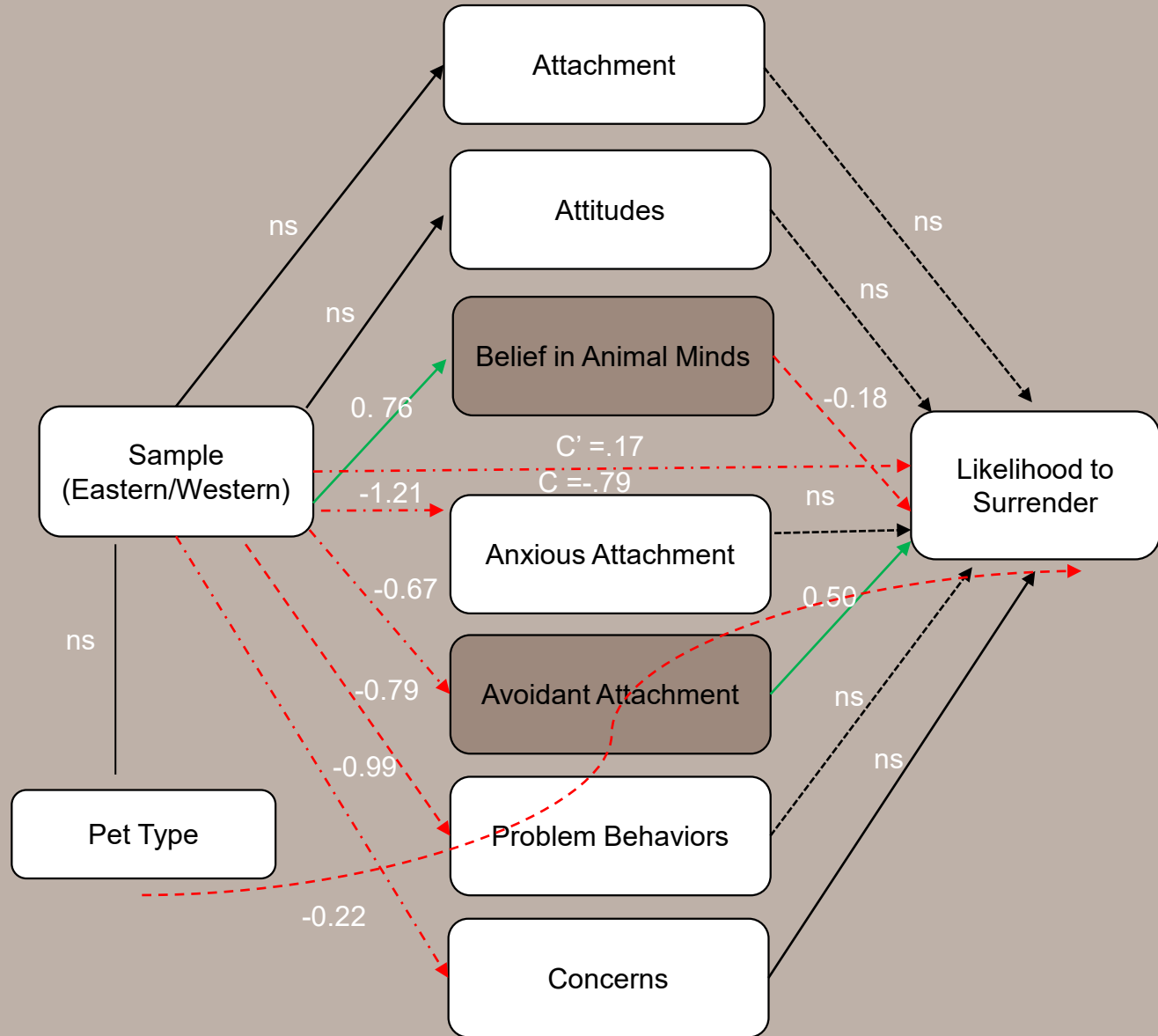
Study One Participants

- Community Sample – recruited through snowball sampling from social media
- Study 1a
 - 198 dog caregivers (n = 149 Western, n = 117 Eastern)
- Study 1b
 - 236 (n = 144 cat, n = 92 dog), (n = 103 Western, n = 133 Eastern)

Study 1a Results



Study 1b Results



Study One Discussion

- Eastern participants were more likely to have surrendered a companion animal in the past and to indicate being likely to do so in the future
- Eastern participants indicated a higher number of concerns and problem behaviors
 - This finding might suggest that less support for companion animal caregivers leads to greater surrenders
- In Study 1a only, Eastern participants indicated lower levels of attachment and more negative attitudes toward animals; in 1b lower beliefs in animal minds mediated greater likelihood to surrender
 - Education about animal minds may mitigate high surrender rates
- In both studies, Eastern participants indicated higher levels of avoidant and anxious attachment styles supporting previous studies showing cultural differences in human attachment
 - Greater likelihood to surrender was mediated by avoidant attachment in both samples

Study Two Aims

- Vonk, Bouma & Dijkstra (2022)
- Caregivers express conflict between considerations of companion animal health and suffering against burdens on the caregiver when making end of life decisions (Littlewood et al., 2021; Moore, 2011; Niessen et al. 2017; Sanders, 1995; Schuurman, 2017; Spitznagel et al., 2017)
- What **psychological** traits of companion animal caregivers predict **when** they make end-of-life decisions for cats and dogs?
 - How does the timing of these decisions impact guilt?
- Better understanding the characteristics and factors that influence companion animal caregivers' decisions about when to euthanize companion animals may help facilitate effective communication between veterinary professionals and caregivers facing such decisions.

Study Two Predictors

- Sample (Dutch, American)
 - 1542 companion animal caregivers who had euthanized
- Pet Type
 - Cat (n = 996), Dog (n = 546)
- Pet Attitude Scale (Templer et al., 1981)
 - 18 items rated from strongly disagree (1) to strongly agree (7)
- Empathy for Animals
 - Multi-Dimensional Emotional Empathy Scale (Alloway et al., 2016; Caruso & Mayer, 1998)
 - 17 statements from strongly disagree (1) to strongly agree (7)
- Emotion Regulation
 - **Difficulties** in Emotion Regulation Scale Short-form (Kaufman et al., 2016)
 - 18 items rated from “almost never” (1) to “almost always” (5)

Study Two Outcomes

- Timing (preference for too early or too late decisions)
- Stage (at what stage of illness would decision be made)
- ~~Weight (weighing own needs against those of the pet)~~
- Guilt
 - Too early
 - Too late
 - Not doing enough
 - Doing too many interventions

Study Two Hypotheses

- Empathy → earlier decisions , greater guilt for late decisions, esp. if low in emotion regulation
- Attachment/Attitudes toward pets → later decisions, greater guilt for early decisions

Study Two Results

Reasons for Euthanasia	Cat	Dog
Behavioral Problems	9	15
Health issues (pet)	948	520
Age (pet)	292	212
Health issues (human)	2	1
High costs of pet care	3	1
Busy work schedule	0	1
Living arrangements	0	0
Accident	10	3
Other	4	3

Study Two Results

- Little cultural differences
- Cat owners made decisions later than dog owners
- No significant effects on preferences for late or early decisions (timing)
- Higher empathy predicted making decisions at later stages and greater guilt at early and late decisions
- Emotion dysregulation predicted greater guilt for early and late decisions, but did not interact with empathy

Study Two Discussion

- None of our predictors significantly predicted timing
 - Perhaps because we selectively analyzed those who *had* euthanized a companion animal, there was less variability in preferences for earlier timing
- Contrary to our hypotheses, those with higher empathy for animals, made decisions at later stages
 - Empathy may relate to moral beliefs regarding sanctity of life rather than reduction of suffering
 - It could be that guilt over timing of decisions mitigated against those preferences for future decisions
- Consistent with hypotheses, empathy and emotion dysregulation predicted guilt but they did not interact

Study Two Additional Data

- **Community Sample**
- Those who had **not** euthanized a companion animal
- 264 participants
- Analyzed Empathy and Emotion Regulation and their interaction only
- Empathy predicts **guilt too early, guilt too late, guilt not enough and guilt too much**
- Emotion dysregulation predicts **guilt too early** and **guilt not enough, timing, and stage**

Study Two Additional Data

- Student Sample
- Some had euthanized a companion animal and some had not (*euthanized* as a factor)
- Some were pet owners and some were not (*owned* as a factor)
- Euthanized predicted **stage** and **timing**
- Empathy predicts **guilt too early**, **guilt too late**, **guilt not enough** and **guilt too much**
- Emotion dysregulation predicts **guilt too early** and **guilt not enough**

Study Two Limitations and Future Directions

- Biased sample, self-report, correlational data
- Limitations include specifically asking about illness compared to other reasons for euthanasia
- Need a better way to ask about how participants weigh different factors in making end of life decisions
- We found no effects of attitudes toward pets
 - Should ask about attachment strength and style with specific companion animal that was euthanized

Study Three Aims

- Early Adversity and Attitudes toward Animals
- Early adversity impacts later empathy (Fourie et al., 2019; Greenberg et al., 2018; Levy et al., 2019)
 - Most research doesn't distinguish between different aspects of adversity
 - Unpredictability associated with ideological attitudes like social dominance
 - Little research examining early adversity and attitudes toward animals, esp. in adults

Study Three Predictors

- 318 Community Participants from Connect
- Gender
- SES
- Race (Black, White)
- Childhood Ecology Scale (Maranges et al., 2022)
 - Early adversity; harshness and unpredictability subscales
 - 26 items rated from strongly disagree (1) to strongly agree (7)

Study Three Outcomes

- Multi-dimensional Emotional Empathy Scale (Alloway et al., 2016)
 - For both humans and animals
 - 16 items for each subscale rated from strongly disagree (1) to strongly agree (7)
- Animal Attitude Scale (Herzog et al., 1991)
 - 20 items rated from strongly disagree (1) to strongly agree (5)
- Human-Animal Continuity Scale (Templer et al., 2006)
 - 12 items rated from strongly disagree (1) to strongly agree (7)
- Human Supremacy Scale (Dhont & Hodson, 2014)
 - 6 items rated from strongly disagree (1) to strongly agree (5)
- Comfort with Animals Scale (Herzog et al., 1991)
 - 15 animals rated from “very uncomfortable touching” (1) to “very comfortable touching” (5)
- Attitudes toward euthanasia of humans (child, elderly) and dogs (puppy, elderly)
 - Extent to support decision to euthanize 16 items from strongly oppose (1) to strongly support (5)

Study Three Hypotheses

- Unpredictable early experiences would be associated with lower levels of empathy and more negative attitudes toward both humans and nonhumans
- Harsh early experiences would be associated with higher levels of empathy toward both humans and animals but the association with empathy for animals may be moderated by gender
- Harsh and unpredictable early experiences would be associated with more liberal attitudes toward euthanasia for animals but may be associated with more conservative attitudes toward euthanasia for humans

Study Three Results

- Women reported more positive attitudes toward animals compared to men
- Harsh environments predicted **more** positive attitudes toward animals only for White individuals.
- Unpredictable environments predicted **less** positive attitudes toward animals only for White individuals.
- Harsh environments predicted **less** acceptance of euthanasia for humans
- Unpredictable environments predicted **more** acceptance of euthanasia for humans and animals but the latter effect was only significant for White females

Study Three Discussion

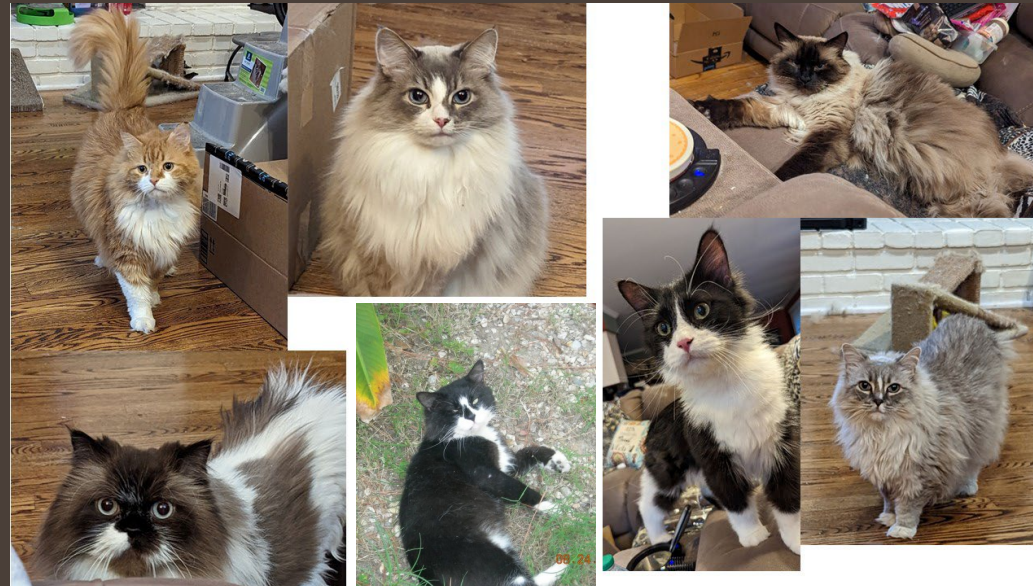
- Similar effects for empathy toward animals and humans
- Whereas experiencing a harsh environment predicted greater empathy, more positive attitudes toward animals, and less acceptance of euthanasia (for humans), unpredictable environments predicted less empathy, more negative attitudes and more support for euthanasia of animals
 - This is consistent with literature showing more deleterious effects of unpredictable compared to harsh environments.
- These effects also appear more pronounced for White, compared to Black, individuals – a finding that merits further exploration.

General Discussion

- It is important to understand how early life events shape attitudes toward animals
 - Early adversity predicts empathy and attitudes toward euthanasia involving animals and humans similarly with unpredictable environments predicting less empathy, more negative attitudes and more acceptance of euthanasia whereas harsh environments predicted more empathy, more positive attitudes towards animals, and less acceptance of euthanasia towards humans
 - These findings are consistent with others showing that unpredictability may contribute to competitive social worldviews, which may lead to ideological beliefs that denigrate outgroups
 - Early adversity is not a unidimensional construct
- Not surprisingly, empathy was an important predictor of decisions to euthanize companion animals
- Emotion dysregulation, along with empathy, predicted guilt following end of life decisions
- Avoidant attachment styles rather than attachment strength or attitudes were the best predictors of surrender decisions

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Thank you!

