# An Evaluation of Pet Owners' Attachment Style and the Human-Animal Bond

by Dr Elena Pezzini

# Thank you

I hope this topic interests you

# Agenda

- Motivation
- Problem and Purpose
- Theoretical Framework
- Definitions
- Research Questions & Hypotheses
- Nature & Significance
- Literature
- Methodology
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- Conclusions
- Practical Implications & Limitations
- Future Recommendations

# Motivation

- HAB is mutually beneficial (American Veterinary Medical Association, 2014)
- Today's prevalence of companion animals
- *Attachment* theory extended to companion animals in wellbeing (Kurdek, 2008; 2009a; 2009b; McConnell et al., 2011)

Thank you Dr. Lavac, Dr. Schulke & Staff

Sammy and Angel

# Problem

How *style* moderates the relation between strength of HAB & pet owner perceived stress


You've given your pets their own personal website
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# Purpose

Test quantitatively if attachment style, as *avoidance & anxiety*, moderated the relation between strength of HAB & perceived stress


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# Theory

- Bowlby (1958; 1973; 1982) & Ainsworth (1991) develop attachment framework
- 4 attachment styles: secure, anxious-insecure, avoidant-insecure & anxious-avoidant
- Attachment relation types: parent-child, romantic, workplace
- Researchers extend attachment theory to HAB (Kurdek, 2008, 2009a, 2009b; Zilcha-Mano et al., 2011a)
- Animal therapy reduce stress

# Definitions

**Attachment Element** In a bond, proximity maintenance & separation distress need nearness and do stress with figure's absence. Safe haven & secure base focus on distress alleviation & security to the figure (Ainsworth et al., 1978). Safe haven & secure base establish a relation (Bell & Howard, 2000; Kurdek, 2008)

**Attachment Style** Ways bonds occur. Secure, insecure by either anxious & avoidant, and 1 with both, anxious & avoidant (Bartholomew & Horowitz, 1991; Fraley & Shaver, 2000, 2010)

**HAB** A beneficial & interactive relation (Gillum & Obisesan, 2010; Walsh, 2009a, 2009b)

**Proximity maintenance** Longing to be with a figure (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2012)

**Safe haven** In fear, returning to the figure for safety (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2012)

**Secure base** The figure provides exploration outside the relation & comfort to alleviate stress (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991)

**Separation distress** When a figure disappears. Ends in anxiety (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991)

**Stress** Responses to stimuli that disrupt balance (Cohen & Janicki-Deverts, 2012). Here, perceived (Cohen et al., 1983)

# Qs & Hypotheses

**Q1. Is pet owners' perceived stress associated with the strength of HAB?**

**Q2. Is pet owners' perceived stress associated with attachment anxiety?**

**Q3. Is pet owners' perceived stress associated with attachment avoidance?**

**Q4. Does attachment style moderate the relationship between HAB & stress reduction?**

**$H1_0$.** There is no effect of the strength of HAB on perceived stress when controlling for anxiety & avoidance

**H1**. There is an effect of strength of HAB on perceived stress when controlling for anxiety & avoidance

**$H2_0$.** There is no effect of anxiety on perceived stress when controlling for strength of HAB & avoidance

**H2**. There is an effect of anxiety on perceived stress when controlling for strength of HAB & avoidance

**$H3_0$.** There is no effect of avoidance on perceived stress when controlling for strength of HAB & anxiety

**H3.** There is an effect of avoidance on perceived stress when controlling for strength of HAB & anxiety

**$H4_0$.** There is not a moderating effect of anxiety & avoidance on the relationship between strength of HAB & pet owner stress

**H4.** There is a moderating effect of anxiety & avoidance on the relationship between strength of HAB & pet owner stress

# Nature & Significance

- Confirm questions + provide future effects of human & pet attachment
- Importance of how pets may provide secure attachment & relieve stress
- How individual high anxiety/high avoidance, or low, can limit effectiveness of the pet-owner relation, for owner's stress reduction

# Literature: Attachment Theory

- Bowlby (1958; 1969; 1973) and Ainsworth originate it
- Goal-directed behavior leads a person towards proximity & security with figure
- Features: secure base, safe haven, proximity maintenance, separation distress
- Adult attachment, on dimensional;

  anxiety & avoidance, on a 2 dimensional continuum
- *Avoidance*: distrust of partner's intentions
- *Anxiety*: hyper vigilant behaviors, to secure attachment

# Attachment & Pets

- Levinson speculate that proximity to an animal allowed youth therapy patients to trust
- Scales for human attachment applied to HAB
- Adapted measures for HAB: ECR (Brennan & Fraley, 1998), ECR-R (Fraley, Waller and Brennan 2000), RQ (Bartholomew & Horowitz, 1991)
- Researchers examine pets as figures (Kurdek, 2008, 2009; Zilcha-Mano, Mikulincer, & Shaver)
- Kurdek found proximity maintenance as important, although owners also turned to pets, over other figures, during stress: significance of secure base in HAB
- Zilcha-Mano develops measure of human-pet attachment style, measuring anxiety & avoidance, in owner stress

# Stress Reduction & HAB

- Benefits of pet companion: cardiovascular health (Friedmann, Katcher, Lynch & Thomas, 1980)
- Positive effects on subjects after stressful task (McConnell et al., 2011)
- German national surveys show positive correlation between pet ownership & health
- China provides data of pet ownership, legal in 1992. Since, surveys demonstrate benefits of pet to owner
- HAB drawbacks: less social support correlated to highly-attached pet owners + more depression to greater time with pets

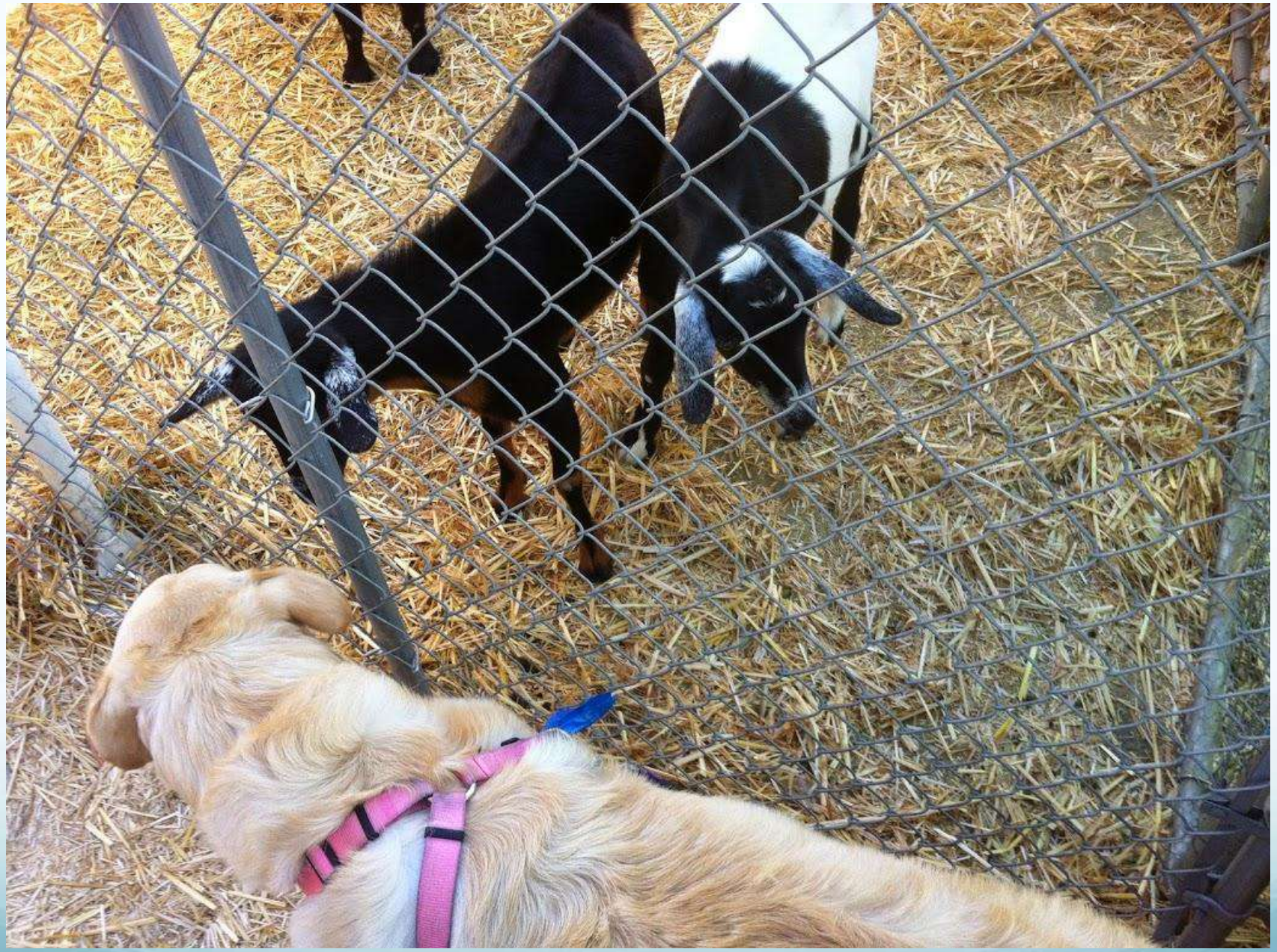
# Methodology

**Design** Quantitative correlative

**Procedure** Of 328 SurveyMonkey respondents, *N*=304 subjects completed, aged between 18 and 80 pet owners and balanced by age, gender & location

**Sample** A priori power analysis for multiple linear regression with 3 predictors, sample size of 76 found using effect size of .15 and an alpha (α) of .05

Ethics followed as recommended by the Belmont Report & required by IRB



# Data Analysis: statistical tests

--Hierarchical multiple regressions test null hypotheses

--Statistical assumptions met: linear relationships, normal distribution, homoscedasticity and independence of residuals, low multicollinearity

--Cronbach's alpha used with scales; above .70, acceptable internal consistency reliability


SWAT

# Findings

--RQ1: Null hypothesis rejected

--RQ2: Null hypothesis not rejected

--RQ3: Null hypothesis rejected

--RQ4: Null Hypothesis rejected

- Significant effects for strength of HAB on stress
- Anxiety was not significant on stress
- Avoidance was significant on stress
- Significant moderation of anxiety & avoidance on the relationship between strength of HAB & stress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# Discussion

Q1: Both models found significance of "strength" of HAB on perceived "stress"

Q2: ***No*** significance of "anxiety" on stress

Q3: Significance of "avoidance" in both models

Q4: Significant moderation of anxiety & avoidance on the relationship between strength of HAB & stress

| | Strength of the HAB: OPRQ | Anxiety & Avoidance: PAQ | Owner Stress: PSS |
|---|---|---|---|
| **Items** | 15<br>Scaled 1-5 | 26<br>Scaled 1-5 | 14<br>Scaled 1-5 |
| **V & R** | Factor analysis<br>Internal consistency with Cronbach's alpha of .92 | Anxiety test-retest coefficient = .75<br>and avoidance = .80 | Internal consistency with Cronbach's alpha of .91 |

# Instrumentation

**Moderating Variables**

**Strength of HAB**: OPRQ (Winefield, Black & Chur-Hansen, 2008)

Items: 15, desire to maintain proximity to the animal + HAB as mutual: emotional support & proximity seeking

Scaled 1–5 towards greater attachment

Validity & Reliability: measured pet attachment through factor analysis. In previous study, internal consistency with Cronbach alpha of .92

**Attachment anxiety & avoidance**: PAQ (Zilcha-Mano et al., 2011a)

Items: 26, from validated measures of attachment: ECR-R (Fraley, Waller & Brennan, 2000), AAS (Collins & Read, 1990), which measure HAB

Scaled 1-5 towards greater anxiety or avoidance

Validity & Reliability: Zilcha-Mano et al 2011 had anxiety test–retest reliability of .75; avoidance .80. Both had passable internal consistency


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# Instrumentation

**Dependent Variable: Owner Stress**. PSS (Cohen et al., 1983)

Items: 14

Scaled 1-5 towards greater degree of stress

Validity & Reliability: PSS in large-scale studies

US Surveys found .91 internal reliability in samples from 2006 and 2009 (Cohen & Janicki-Deverts, 2012)

| Scale | Cronbach |
|---|---|
| OPRQ | .776 |
| PAQ | .953 |
| PSS | .796 |

# Conclusions

- Significant for strength of HAB & association with stress. ***Not*** conclusive
- Significance ***not*** found for anxiety on pet owner's stress
  Significance for effect of avoidance
- Support findings of Zilcha-Mano et al. (2011, 2012) that avoidance affects pet owner stress reduction. Anxiety does ***not***. Zilcha-Mano et al (2011) establish orthogonal variables with anxiety & avoidance
- Support use of pet as safe haven, which is most connected to alleviation of owner's stress

# Implications & Limitations

--Outcome *applicable* to complex HAB and how it relates to wellbeing for pet owners

--Knowledge of attachment style in HAB useful for pet therapy. How style & pets affect owners' stress, *applicable* in work with vulnerable populations

--Knowledge of HAB may *assist* workers with pet owners in therapy (Jasperson, 2010; Plass, 2008)

**Limitations**

- Convenience sample, so generalizability & external validity limited
- Cross-sectional methodology, so causality not determined


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# Recommendations

- Results may be applied to studies which examine relation of anxiety & avoidance in attachment
- A future study could use a random sample, to represent larger population
- The use of panel data would allow the determination of causality between measures


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# Thank You