

# Pet attitudes predicting preferences for pets over people

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**Abstract:** The preference for animal companionship over human companionship may be predicted by attitudes about pet ownership. We hypothesized that pet attitudes could predict preferences for relationships with pets over humans. We sampled 182 people who named a person and a pet they love and care about. Participants rated their feelings of love, time spent, enjoyment, and equity in both their human and pet relationships. We also presented seven hypothetical negative event scenarios that involve both the pet and human and asked participants to predict their feelings and reactions based on these events. The Pet Attitudes Scale (Templer et al., 1981) was used to assess attitudes towards pets. People had similar positive feelings about their pet-human and human-human relationships. However, people were more likely to react negatively towards a human compared to a pet. Positive pet attitudes predicted more positive and less negative reactions to pets. Positive pet attitudes can predict preference for pet relationships over human relationships and may help researchers identify what relationships work best depending on a person's pet attitudes.

**Keywords:** animal-companionship; pet attitudes; relationships; pets

## HIGHLIGHTS

- As pet ownership increases and some report preferences of animal companionship over human companionship, it is important to identify key factors that are related to positive pet ownership.
- Attitudes towards pets and pet ownership was related to a preference of pets over human companionship, with more love and less negative responses aimed at pets versus people.
- Assessing attitudes towards pets and pet ownership may provide insight into animal vs. human companionship preferences and suitability for effectiveness of animal-assisted therapy and companionship.

## INTRODUCTION

Both humans and pets can provide people with love and support. Unlike non-domesticated animals, pets or animal companions have a special relationship with people that is a result of various historical and cultural norms (Herzog & Foster, 2010; Serpell & Paul, 2011). Pets have helped with hunting, husbandry, prevention of pests or vermin, providing personal guidance, and are recognized in their ability to help humans medically and emotionally (see Blouin, 2012 for a review). As discussed by Veevers (1985) pets can also have a variety of emotional and social functions in the human-pet relationship. For example, a pet may have a projective function, in which they help a human through their selection, breed, size, or other characteristics make a statement about the human and their social standing (Hirschman, 1994; Veevers, 1985). Pets can also help serve as a kind of social lubricant, helping people get to know each other or bond because of their pet relationships (Robins, Sanders, & Cahill 1991; Veevers, 1985). Pets can also serve as a surrogate, either supplementing or in some cases, providing an alternative to human-human relationships (Basten, 2009; Belk, 1996; Veevers, 1985; Walsh, 2009). Pets can serve many of these functions and more. Of course, like any relationship, the human-pet relationship does have costs: sharing of food (Vale & Vale, 2009), resources (Pew Research Center, 2006), shelter (APPMA, 2008), time (Voith, 2009), and sharing or spreading of disease (Center for Disease Control and Prevention, 2021). However, most of these costs do not seem to deter people from owning pets as over 57% of American families own at least one pet (Strochak, Goodman, & Zhu 2018). Some researchers have argued that pet or animal companion relationships share similar qualities as that between a parent and a child (Franklin 1999; Serpell 1996). Pets may help humans provide an outlet for that desire to give and receive attachment love, while avoiding the costs and social challenges of raising a child (Bhattarai, 2017). Some evidence suggests that people may find that growing their family with a pet may be more appealing than growing their family with a human child (Cohen, 2002). For example, recent trends in pet ownership have shown that households with at least one pet are increasing while households with at least one child are decreasing (Strochak, Goodman, & Zhu 2018). During the lockdown and stay-at-home orders of the COVID-19 pandemic, many individuals sought dogs and cats to add to their families (Hedgpeth, 2021). However, adoption and fostering of children during the pandemic decreased (White & Blackburn, 2020). Some evidence has suggested that people actually prefer pet-human relationships over human-human relationships. For example, results of a survey by OnePoll in 2019 suggested that not only do many see pets as people, but a majority of parents preferred their pets over their children (Haaland, 2019). However, we have yet to find any scholarly research to support a preference for pets over human relationships.

Many studies, using interviews and qualitative analyses, were able to establish the strong bond between people and their pets (e.g., Basten, 2009; Laurent-Simpson, 2017). Additionally, observational studies as done by Robins and colleagues (1991) and Sanders (1990) have solidified the important role pets can play in people's social lives with other humans. However, few studies have attempted to quantify these relational impacts. For example, Dotson and Hyatt (2008) surveyed over 700 dog owners about the underlying dimensions of dog



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ownership and their measures established relationships between a person's demographic characteristics and their likelihood to belong to certain dimensions related to the construct of dog-ownership. However, Dotson and Hyatt's (2008) study does not help explain a possible preference for pets over people. Several scales regarding pet commitment have been developed, including: the Lexington Attachment to Pets Scale (LAPS: Johnson, Garrity, & Stallones, 1992) and the Miller-Rada Commitment to Pets Scale (CPS: Staats et al., 1996). These studies and scales provide evidence of the importance of pet-ownership and animal companionship. The LAPS (Johnson, Garrity, & Stallones 1992) is especially useful when measuring feelings, attachment, and anthropomorphism of pets. The CPS (Staats et al., 1996) has been used to measure commitment and care towards pets and predict behaviors in regards to treatment of pets (Brackenridge et al., 2012). Both of these scales provide quantitative measurements regarding the quality of pet relationships, however to better understand the factors that contribute to preferences for pets over people we turn to attitudes.

#### *Attitudes*

Attitudes are global evaluations toward an object or issue (Eagly & Chaiken, 1998). Whether one likes or dislikes pets is an attitude about pets. For the purposes of this study, if one has a positive attitude about pets then one generally likes pets, the relationship one has (had or could have) with pets, and taking care of pets. A negative attitude about pets would denote disliking pets, the relationship one has (had or could have) with pets, and taking care of pets. Of course, one may have dual attitudes (both positive and negative) about pets and given our definition, pet attitudes could be measured as a distribution. Attitudes are separate from attachment as one could theoretically have a strong attachment to an animal companion, but have a negative attitude about pets. Cute pets and ones that express child-like or human-like responses or behaviors may be especially likely to evoke positive human reactions and positive attitudes (Sherman & Haidt, 2011). Beyond cuteness, animals who have certain anthropomorphic traits may also be more likely to attract the attention and care of people in need of non-human companionship and support (Serpell, 2003). One may also argue that if a pet has a shared history with a person, then one could develop a more positive attitude about animal companionship and pets (Sable, 1995). Beyond positive feelings, there are practical and several adaptive benefits from animal companionship that may influence pet attitudes. Animal companionship can increase feelings of social support which can impact the likelihood to survive and the fitness of the human owner (Eriksen, 1994; Serpell, 1991; Serpell, 2003; Serpell & Paul, 2011). However, from an evolutionary psychology perspective, any preference for pet-human relationships over human-human relationships is a bit puzzling, especially if one considers the preference of a pet over a human that one is related to genetically (Archer, 1997). Given the theory of kin selection (Smith, 1964), one would suppose that people are much more willing to engage with and help others that one is related to or share genes with than those one does not (e.g., help feed and change the diapers of one's own child or parent, but not necessarily the children or parents of others). However, pets or animal companions share considerably less genetic material with their owners than a child, parent, or significant other. So why might people prefer pets



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over humans? Attitudes may help explain this possible preference. Predicting behavior from attitudes has been a long topic of debate in social psychology (for review see Ajzen et al., 2018 and Glasman & Albarracín, 2006). However, there is some evidence that interest in or involvement with an attitude object, can be powerful in predicting behaviors (e.g., Fazio & Zanna, 1981). Attitudes towards pets and pet ownership may provide some insight into whether one will rate their relationship with a pet as better than that with a human. Pet attitudes have been found to be related to a variety of relational outcomes. For example, Planchon, Templer, Stokes, and Keller (2002) found that those whose pet died were more likely to grieve if they had higher pet attitudes as measured with the PAS, Pet Attitude Scale (Templer et al., 1981). Additionally, those with more positive pet attitudes seem to receive even more benefit from medical assistance from animals, as those with more positive pet attitudes had lower blood pressure after petting dogs (Jenkins, 1986) and lower arterial pressure and systolic pressure after petting horses (Hama, Yogo, & Matsuyama, 1996). Practical benefits and relational bonds aside, attitudes about pets in general may provide some indication for a preference for pets over human relationships.

### *Hypotheses*

This study measures the quality of relationships one has with both a loved and cared for pet and human and is intended to discover if pet attitudes are related to relationships with pets. We hypothesize that pet attitudes will be related to differences in pet-human and human-human relationships. Specifically, people with higher (more positive) pet attitudes will be more likely to report more positive feelings (e.g., love, time spent, and enjoyment) with pets than with humans. Similarly, people with strong pet attitudes will be more likely to report less negative reactions and feelings (e.g., hate, need to attack, upsetness, and anger) towards pets than humans.

We also explore differences in human and pet relationships, specifically: love, hate, time, and enjoyment.



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H1: People will report more equity with human relationships than pet relationships, because pets tend to take more time and resources than human relationships as previous literature has found.

H2: Higher scores on the pet attitudes scale will be positively correlated to higher reports of love for pets vs. human companions.

H3: Higher scores on the pet attitudes scale will relate to lower reports of hate for pets vs. human companions.

H4: Higher scores on the pet attitudes scale will relate to lower reports of upsetness, anger, and hate for negative scenarios for pets vs. human companions.

## METHOD

### *Participants*

Participants were recruited through social media and through the Hawai'i Pacific University Subject Pool. All methods have been reviewed and approved by Hawai'i Pacific University's Institutional Review Board (IRB) Protocol #560420042. Participants were provided a consent form and if they consented to continue with the study were asked a series of demographic questions including age, race, gender, and location. We surveyed 182 people of which 103 (86 Female & 17 Male) were born and currently reside in the U.S.

### *Measures*

After the consent form and demographics, participants identified both a human and a pet they currently love and care about (We allowed for relationships between humans or pets that have ended as it was assumed that people may still have feelings about this person or pet. The important part was identifying instantly, a person or pet that the participant loves and cares about.). The order of identification (human or pet) was randomized and balanced along with the following measures: Relationship measures, Negative Event Scenarios, and PAS. Participants identified the relationship with the human (e.g., parent, sibling, significant other, or friend) and the species of pet (e.g., dog or cat). For repeated measures ANOVA analyses, sphericity assumptions were met. When normality was not met for One-way ANOVA, the Welch's statistic is reported.

### *Relationship measures*

Participants answered the same four relationship questions about their human and pet relationships including:

- (1) How much do you love (pet name or human name)?
- (2) How much do you hate (pet name or human name)?
- (3) How much time do you spend with (pet name or human name)?
- (4) How much do you enjoy spending time with (pet name or human name)?

All of these questions were answered on a 1-5 Likert scale with 1 being "not at all/none at all" to 5 being "completely/a lot". Participants also rated the equity in their relationship using The Global Measure of Equity scale (Traupmann, Peterson, Utne, & Hatfield, 1981; Young & Hatfield, 2009) which asked one question: "Consider what you put into your relationship, compared to what you get out of it, how does your relationship with pet/person stack up?" was answered on a +3 to -3 scale. Positive values indicated getting a "better deal" or being over-benefited, a rating of 0 indicated "both getting the same deal" or equitable, and negative values indicated the "pet/person getting a better deal" or under-benefited in the relationship.

To examine if pet attitudes were related to preferences for pet relationships, we used residual change scores for relationship and negative scenarios with human



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ratings as the predictor and pet ratings as the dependent variable (Jennings & Cribbie, 2016). A negative standardized residual change score would mean that the rating was higher for the human and a positive standardized residual change score would mean that the rating was higher for the pet. We then regressed residual change scores across the relationship and negative scenario questions onto pet attitudes to see if pet attitudes could predict differences in relationship quality between human-pet and human-human relationships.

#### *Negative Event Scenarios*

Participants were presented with seven negative events scenarios and were asked to rate the degree of (1) upsetness, (2) anger, and (3) hate they would feel towards the human or pet if that scenario occurred. Scenarios included:

- (1) If your (human/pet) attacked you, how likely would you attack back?
- (2) If your (human/pet) destroyed something you loved, how much would you feel (upset/angry/hate)?
- (3) If your (human/pet) ignored you, how much would you feel (upset/angry/hate)?
- (4) If your (human/pet) betrayed you, how much would you feel (upset/angry/hate)?
- (5) If your (human/pet) treated someone else better than you, how much would you feel (upset/angry/hate)?
- (6) If your (human/pet) ignored a gift you gave them, how much would you feel (upset/angry/hate)?
- (7) If your (human/pet) threatened you, how much would you feel (upset/angry/hate)?

All scenarios were developed based on previous data from research regarding hate in human relationships (Aumer et al., 2015; Aumer et al., 2016). All scenarios were first piloted with seven research lab members who were unfamiliar with the study. These seven scenarios were finalized after 100% agreement. Scenarios were answered using a 5 point Likert scale with 1 “not at all” to 5 being “extremely”. The scenario regarding attack was answered on a 1 to 5 scale with 1 being “very unlikely” and 5 being “Very likely”.



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#### *Pet Attitudes*

Participants rated their attitudes towards pets using Templer and colleagues (1981) Pet Attitudes Scale (PAS) Modified. The modified version allows for those who have not owned a pet, but have in the past or would like to in the future, take the scale (Templer et al., 2004). Additionally, the PAS measures attitudes as opposed to attachment or commitment to the pet. This 18 item measure has questions like: “I like house pets” and “I hate animals (reverse scored)” and uses a rating scale from 1 to 7 with 1 being “strongly disagree” and 7 being “strongly agree”. Given that the PAS can be used as a general scale (Templer et al., 2004) we did not examine the factors of the PAS separately in relation to our hypotheses.

## RESULTS

### *Descriptives for Relationship with Human*

All participants named someone they loved and cared about, 47% named a parent, 30% named a significant other, 8% named a friend, 7.5% named a sibling, 7% named a family member other than a parent or sibling (e.g., grandparent, uncle, aunt, etc), and 1% named other, specifically “myself”. For the purposes of our study, we excluded the answers from the person who marked “myself” as the person they loved and cared about. We did find significant relationships between age and equity in human relationships; older individuals reported being more underbenefitted ( $r(125) = -0.193, p = 0.031$ ), age and enjoyment with pets; older people reported less joy being with their pet ( $r(124) = -0.182, p = 0.043$ ), and older individuals were less likely to report hating pets ( $r(122) = -0.179, p = 0.048$ ) or hating humans ( $r(122) = -0.196, p = 0.030$ ) when in a negative situation. We controlled for age when analyzing the variables of equity, enjoyment, and hate.

### *Descriptives for Relationship with Pet*

Most participants reported a dog or cat as a pet they currently (72 dog, 21 cat) or previously owned (27 dog, 9 cat). Eleven participants reported a different animal they either currently, wanted, or previously owned (3 rabbit, 3 fish, 1 bird, 1 guinea pig, 1 goat, 1 monkey, 1 gecko). However for the purposes of this paper, we report only the results from those who reported a dog or cat as a current or previously owned pet ( $n = 138$ ). Additionally, 58 participants (42%) had missing answers either in a measure or as part of the demographics. We include their answers and report the results with the degrees of freedom reflecting the sample that was used in the analysis.

### *Comparison of Human and Pet Relationships*

#### *Love and Hate*

Due to technical issues with the survey, only 53 people answered the love and hate questions. All other questions were not impacted. We compared the love in both human and pet relationships using repeated measures ANOVA. Preliminary one-way ANOVA with post-hoc analyses using Bonferroni correction revealed no differences in love towards dogs or cats, however we did find differences in love depending on the type of human relationship with friends ( $M = 4.43, SD = 0.535$ ) being loved less compared to parents ( $M = 4.90, SD = 0.309$ ), siblings ( $M = 4.60, SD = 0.548$ ), other family members ( $M = 5.00, SD = 0.000$ ), and significant others ( $M = 4.89, SD = 0.323$ ),  $F_{(4, 48)} = 2.997, p = 0.028$ . In the repeated measures ANOVA we used relationship type as a between subjects variable to account for these differences. We found no differences of love between human ( $M = 4.81, SD = 0.395$ ) and pet ( $M = 4.70, SD = 0.607$ ) relationships. We also found no differences in hate between dog or cat owners or human relationship types. The repeated measures ANOVA did not reveal any significant differences in hate between human ( $M = 1.11, SD = 0.393$ ) and pet ( $M = 1.08, SD = 0.277$ ) relationships. See Table 1 for summary.



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	Human (M)	Human (SD)	Pet (M)	Pet (SD)
Love	4.81	0.395	4.7	0.607
Hate	1.11	0.393	1.08	0.277
Time Spent	3.5	0.986	3.56	1.04
Enjoyment	4.59	0.645	4.33	0.912
Equity	0.61*	1.62	-0.5238*	1.72

**Table 1.** Average (M) ratings of love, hate, time spent, and enjoyment for humans vs. pets. There were no significant differences between human and pet relationships for love, hate, time spent, and enjoyment. There was a significant difference for equity, with people reporting being more overbenefitted in their human relationships and underbenefitted in their pet relationships (\* $p < 0.001$ ).

#### *Time Spent*

A preliminary one-way ANOVA with post-hoc analyses using Bonferroni correction revealed that participants reported spending most of their time with their significant others ( $M = 4.13$ ,  $SD = 0.686$ ) compared to parents ( $M = 3.27$ ,  $SD = 0.936$ ), siblings ( $M = 3.40$ ,  $SD = 1.265$ ), other family members ( $M = 3.33$ ,  $SD = 1.00$ ), and friends ( $M = 3.18$ ,  $SD = 1.25$ ),  $F(4, 125) = 5.826$ ,  $p < 0.001$ . Repeated measures ANOVA with human relationship type as a between subjects variable, compared time spent between human ( $M = 3.50$ ,  $SD = 0.986$ ) and pet ( $M = 3.56$ ,  $SD = 1.040$ ) relationships and was not significant. See Table 1 for summary.

#### *Enjoyment*

A preliminary one-way ANOVA with post-hoc analyses using Bonferroni correction revealed that participants reported most enjoyment from their relationships with significant others ( $M = 4.63$ ,  $SD = 0.540$ ) and other family members ( $M = 4.67$ ,  $SD = .500$ ) and the least amount of enjoyment from their relationship with their parents ( $M = 4.18$ ,  $SD = 0.725$ ),  $F(4, 125) = 3.548$ ,  $p = 0.009$ . Repeated measures ANOVA with human relationship type as a between subjects variable, compared enjoyment between human ( $M = 4.39$ ,  $SD = 0.645$ ) and pet ( $M = 4.33$ ,  $SD = 0.912$ ) relationships and was not significant. See Table 1 for summary.

#### *Emotions during Negative Event Scenarios*

We asked participants to rate their upsetness, anger, and hate towards a human or pet across different negative event scenarios. We also asked participants to rate the likelihood of attacking a human or pet if that human or pet attacked them. Four paired samples t-tests using Bonferroni correction to control for Type 1 error revealed that all differences concerning reactions to negative events were significant between humans and pets. We averaged ratings of upsetness, anger, and hate for pets and humans across all the negative event scenarios and conducted three paired samples-tests. We found that people reacted with less upsetness,  $t(125) = -15.209$ ,  $p < .001$ , Cohen's  $d = -1.355$ , 95% CI difference [-1.36, -1.05], anger,  $t(124) = -14.979$ ,  $p < .001$ , Cohen's  $d = -1.34$ , 95% CI difference [-1.32, -1.01], and hate,  $t(125) = -6.924$ ,  $p < .001$ , Cohen's  $d = -0.62$ , 95% CI difference

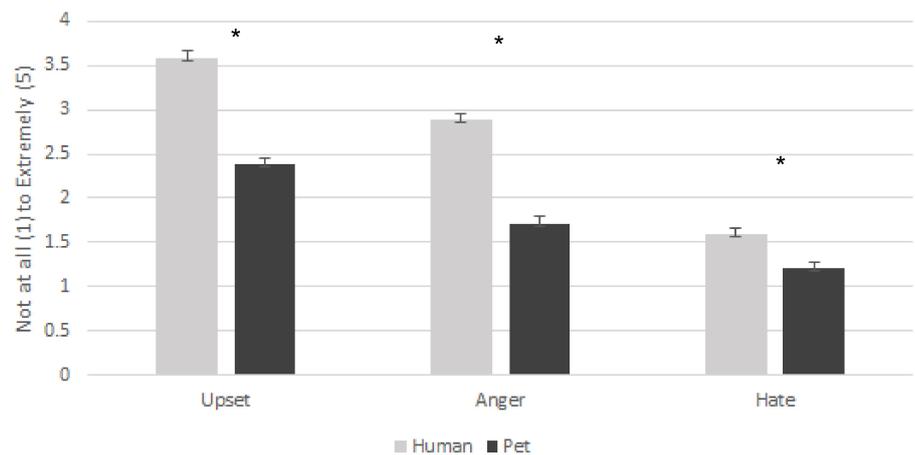


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[-0.498, -0.28], towards a pet than they would towards a human in similar hypothetical negative events. See Figure 1 for details. Additionally, participants were more likely to report attacking back, at a human than a pet,  $t_{(124)} = 4.321$ ,  $p < 0.001$ , Cohen's  $d = 0.387$ , 95% CI difference [0.299, 0.805].



**Figure 1. Differences in emotions between Human and Pet relationships. Given negative scenarios in a relationship, people report a higher average of being upset, angry at, and hate towards humans in these negative scenarios than towards their pets. All differences between human pets were statistically significant (\* $p < .001$ ).**

### Testing Hypotheses

#### Equity

To test our first hypothesis that people will report more equity with human relationships than pet relationships, participants answered The Global Measure of Equity Scale (Traupmann, Peterson, Utne, & Hatfield, 1981; Young & Hatfield, 2009) from a -3 (greatly underbenefitted) to +3 (greatly over-benefitted) scale, with scores around 0 being most equitable. A one-way ANOVA with post-hoc analyses using Bonferroni correction revealed that participants reported being overbenefitted in their relationships with their parents compared to all other human relationships ( $M = +1.43$ ,  $SD = 1.731$ ),  $F_{(4, 125)} = 9.522$ ,  $p < 0.0001$ , partial  $\eta^2 = 0.234$ . Data were normally distributed, but violated the assumption of homogeneity of variance (Levene statistic $_{(4, 125)} = 5.275$ ,  $p < 0.001$ ). The Welch statistic demonstrates that the main effect is still significant (Welch (4, 26.362) = 9.403,  $p < 0.001$ ). To directly test the differences between human and pet relationships in terms of equity (H1) we conducted a repeated measures ANOVA comparing equity between human and pet relationships with human relationship type as a between subjects variable, revealed that people report being more over-benefitted in their human relationships ( $M = +0.611$ ,  $SD = 1.62$ , 95% CI [0.233, 1.194]) and under-benefitted in their pet relationships ( $M = -0.5238$ ,  $SD = 1.72$ , 95% CI [-1.194, -0.233]),  $F_{(1,121)} = 8.634$ ,  $p = 0.004$ , partial  $\eta^2 = 0.067$ . The interaction between equity and the human relationship type was significant,  $F_{(4,121)} = 5.657$   $p < 0.001$ , partial  $\eta^2 = 0.158$ . Mauchly's Test of Sphericity was 1.00. Examining the



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simple effects analysis revealed that the difference in equity between human and pet relationships was only significant when people were comparing the equity in their parent relationship with their equity in their pet relationship (Mean Difference = 2.034, SE = 0.271,  $p < 0.001$ , 95% CI [1.498, 2.571]). H1 was partially supported. See Table 1 for summary.

#### *Pet Attitudes*

To test our second, third, and fourth hypotheses, we used average pet attitudes and emotions. Average attitudes about pets and pet ownership was positive ( $M = 5.88$ ,  $SD = 0.72$ ). Pet attitudes significantly predicted residual change scores for love, with higher pet attitudes related to more love directed towards pets than humans,  $\beta = 0.59$ ,  $t(47) = 5.049$ ,  $p < 0.001$ , and explained a significant proportion of variance in the difference in reported love,  $R^2 = 0.352$ ,  $F_{(1, 47)} = 25.497$ ,  $p < 0.001$ . Similar results were also found for time ( $\beta = 0.520$ ,  $t_{(117)} = 6.590$ ,  $p < 0.001$ ;  $R^2 = 0.27$ ,  $F_{(1, 117)} = 43.428$ ,  $p < 0.001$ ) and enjoyment ( $\beta = 0.635$ ,  $t_{(117)} = 8.902$ ,  $p < 0.001$ ;  $R^2 = 0.40$ ,  $F_{(1, 117)} = 79.239$ ,  $p < 0.001$ ). As people's pet attitudes increased, their love, enjoyment, and time spent with pets was greater than that for humans and therefore H2 was supported. When it came to hate, pet attitudes did not predict residual change scores in hate ( $p = 0.733$ ), therefore H3 was not supported.

In regards to people's responses to negative event scenarios, participants' pet attitudes were good predictors of their differences in anger and hate, with increases in pet attitudes predicting more anger ( $\beta = -0.270$ ,  $t_{(116)} = -3.018$ ,  $p = 0.003$ ;  $R^2 = 0.07$ ,  $F_{(1, 116)} = 9.108$ ,  $p = 0.003$ ) and hate ( $\beta = -0.287$ ,  $t_{(114)} = -3.20$ ,  $p = 0.002$ ;  $R^2 = 0.08$ ,  $F_{(1, 114)} = 10.24$ ,  $p = 0.002$ ) towards human companions in negative scenarios. Additionally, pet attitudes were good at predicting the likelihood of attacking back, with higher pet attitudes leading to a greater likelihood to attack back at a human, but not a pet if the human companion was threatened ( $\beta = -0.287$ ,  $t_{(116)} = -3.227$ ,  $p = 0.002$ ;  $R^2 = 0.08$ ,  $F_{(1, 116)} = 10.41$ ,  $p = 0.002$ ). However, pet attitudes were not good predictors of residual change scores for upsetness, therefore, H4 was only partially supported.

## DISCUSSION

The growing trends towards pet ownership may be impacted by several social and financial factors. Whether people prefer pets over human companionship can also be impacted by several personal and social factors. In our study, we found some insights into how human-pet and human-human relationships are different as well as found support for most of our hypotheses. Overall, people report having quality human and pet relationships, especially in regards to positive feelings like love, time spent, and enjoyment. However, more positive pet attitudes significantly predicted more positive feelings (i.e., love, time, and enjoyment) for pets than for humans. Not supporting our hypothesis, pet attitudes did not predict differences in overall negative emotions, specifically hate. When it came to hypothetical negative events, participants seemed much more likely to react with anger and hate towards a human being than a pet if they had positive pet attitudes. Again, this may be evidence that pets are often seen as almost "child-like" or dependent upon their human companions and such a negative emotional response may not be appropriate for some one or some



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animal in that role (Franklin 1999; Serpell 1996; Serpell, 2003). While people who serve as parents, significant others, other family members, or friends may be viewed as acceptable targets of anger and hate given their independence and maturity. This willingness to provide preferential treatment to pets is further supported by the report that most people would not attack their loved pet if the pet attacked them, but would be more likely to with a loved human who had attacked them. This study provides more supporting evidence to polls that find some preference for pet relationships compared to human relationships (Haaland, 2019) and scholarly work (e.g., Basten, 2009; Belk, 1996; Veevers, 1985; Walsh, 2009) that pet relationships can serve a variety of functions, especially that of a surrogate for attachment love. Additional evidence that pets are seen on a similar level with that of a child is the differences in equity scores. People reported being slightly more underbenefitted with their pets than in their human relationships and this difference in equity was largely carried by the comparison of parent-child relationships to human-pet relationships. People reported being significantly under-benefitted in their relationship with their pet, especially when compared to their relationship with a parent, bolstering evidence that pets do have sufficient costs along with benefits (Vale & Vale, 2009).

Importantly, differences in relationship quality between pets and humans was predicted by the explicit reports of one's attitudes about pets in general. Attitudes are general evaluations of an object (Eagly & Chaiken, 1998) and in this study, positive attitudes about pets were positively related to preferential treatment of pets over humans. Those who reported more love, time, and enjoyment with their pets than their human relationship had more positive pet attitudes. Similarly, those who were more likely to respond with anger, hate, and attack back in negative situations towards their loved humans rather than their pets, also had more positive pet attitudes. Although people were likely to report being as upset about a negative event, whether it involved a human or a pet, people were more likely to react with anger and hate towards a person than they were a pet. The impact of one's attitudes about pets may not only impact the relationship they have with their pet, but with the humans in their lives. Preferences for certain types of people, or in this case species, may impact how we relate to other potential relationship partners. This study provides some evidence that pet attitudes may be a good predictor of differences in the quality of relationships one may have between pets/animal companions compared to their human companions.

For the ordinary pet owner, pets can provide companionship in ways a human companion may not be able to. Specifically, pet relationships may serve as a surrogate to help fulfill the need to belong and attachment love that are not readily accessible from human companionship. For those that, for a variety of reasons, are not able to access or maintain human relationships and have positive pet attitudes, a pet may provide not just an acceptable outlet, but a mental and physical health benefit. Finally, these results suggest that relationships, despite how costly or inequitable they may be, can provide significant positive relationship outcomes if the companion is viewed or framed not as a human, but as a companion requiring one's presence to survive.



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### Limitations

The negative event scenarios are only an estimation of behavior. Observation under a variety of situations may provide a better indication of actual behavior. Future research could use observation or informant reports to confirm or provide more insight into these results as well as the perspective of the pet. In addition to observation of behavior, future research may want to explore relationships with other pets besides dogs and cats. Although dogs and cats are the majority species for pet owners in the U.S. it would be important to see if these results carry over to relationships with other pet species (Strochak et al., 2018). We also did not measure attachment styles with pets. People's attachments may also moderate or mediate the relationship between pet attitudes and relationship differences observed between human-pet and human-human relationships (Kurdek, 2008; Zilcha-Mano, Mikulincer, & Shaver 2011). No measures regarding human attitudes or attitudes about human relationships were administered. Future research may want to consider creating and incorporating such measures. Additionally, we did not incorporate any measures that would help better understand the pet's perspective. Other researchers (Serpell, 2003) have noted this drawback in other research as well and although we agree this is an important element in the research of pet and human relations, we were specifically interested in the human perspective of preference of pets and therefore did not incorporate any pet-perspective measures.

Pet attitudes seem to be positively related to positive feelings and negatively related to negative responses towards pets. Although pet attitudes accounted for a significant portion of variance in these situations, there are likely many other factors that may go into the inequitable treatment of human and pet relations. In this study, we asked participants to name a human and a pet they love and care about. We did not ask them to name their favorite human or pet or most ideal human or pet. We assumed the human or pet named by participants was one who received a significant, although possibly not similar amount of love and care. Given that we wanted to compare differences in treatment towards humans and pets, we expected some variance. Future research may want to try to maintain a certain standard of comparison between the human and pet named by the participant. Finally, we did not measure the attitude towards human relationships. Measuring this may also serve as an important indicator of treatment of human companions and pets.

### CONCLUSION

Overall, people tend to target more negative emotions at other humans than animals in negative event scenarios. However, having positive pet attitudes can predict significant differences between pet and human treatment. A person's pet attitudes may reflect more than just how they feel about their pet, but also indicate the dynamics of their human-human relationships. As pet attitudes became more positive the report of loving a pet, spending more time with a pet, and enjoying their pet more than their loved one increased. Also, positive pet attitudes were indicative of more negative reactions, specifically anger and hate towards humans compared to pets in the same negative scenarios. Although we did not assess preference for human or pet relationships, pet attitudes may be a



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useful measurement to assess this preference. Given that pet ownership is increasing and the use of an animal companion is often recommended to help with physical and psychological health (Smith, 2012), assessing pet attitudes may be a good indicator to see if animal companionship would be beneficial.

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