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Capturing the Relational Factors Within Human-Companion Animal Relationships That Predict Human Psychological Well-Being and Caring for Companion Animals

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Supplementary Materials: Code, Data, Materials [see Index of Supplementary Materials]

Abstract

The current study investigated the nature of the psychological connection that exists within the human-companion animal relationship and tested which specific relational factors predict both the guardians' psychological well-being as well as their tendency to care and feel affection for their companion animal. The following relational factors were investigated: Positive contact with one's companion animal, quality of the human-companion animal relation, human-companion animal compatibility, attachment to the companion animal, and unconditional acceptance of one's companion animal. Data from a diverse sample of American pet owners (N = 535) were analyzed. Quality of the human-companion animal relation, unconditional acceptance of one's companion animal, and positive contact with one's animal predicted a greater tendency to care and feel affection for the animal. While quality of the human-companion animal relation also predicted higher well-being among guardians, human-companion animal compatibility was a particularly clear predictor of human well-being. In contrast, anxious attachment to one's companion animal predicted lower human well-being. These associations were observed over and above the role played by sociodemographic and social resources variables. Finally, when levels of human-companion animal compatibility were high, guardians' caring behaviors for their companion animal were associated positively with their own well-being, suggesting that caring for one's animal can have positive implications for the guardians' well-being if they perceive that the

personality of their companion animal is highly compatible with their own. These findings confirm the importance of investigating the nature of the human-companion animal relationship, and contribute to identifying factors that can strengthen the benefits that both humans and animals experience within this relationship. By capturing which relational factors predict beneficial outcomes for humans and their companion animals, the current research identifies routes through which we can promote more mutuality within human-companion animal relations

Keywords

attachment, caring for pets, owner-pet compatibility, pet ownership, psychological well-being, quality of the human-companion animal relation

Non-Technical Summary

Background

Living with companion animals is a common experience in different occidental countries. Many guardians also perceive that their companion animal contributes positively to their well-being. Yet, being a guardian has not been systematically associated with higher human health and well-being. This suggests a need to dig deeper into the very nature of this ubiquitous relationship and how it is experienced subjectively by guardians to better understand its implications, both for human well-being and animal welfare.

Why was this study done?

This study was conducted to identify which relational factors experienced within human-companion animal relations contribute to higher well-being among guardians, and predict the guardians' tendency to care for their animals and feel affection toward them. The following relational factors were investigated: Positive contact with one's animal, quality of the human-companion animal relation, human-companion animal compatibility, attachment to one's animal, and unconditional acceptance of one's animal. The study also tested the interplay between the guardians' well-being and their tendency to care for their companion animals, and explored which relational factor could yield mutual benefits for both humans and their animals. Specifically, this study aimed to capture which relational factor could accentuate the well-being benefits that are derived from caring for one's companion animal.

What did the researchers do and find?

The findings of a diverse sample of American pet owners (N = 535) show that the more guardians report a high quality of relationship with their companion animal, more positive contacts with their animal, and higher unconditional acceptance of their animal, the higher their tendency to care and feel affection for their animal. In terms of the guardians' well-being, results reveal a positive role for the quality of the relationship with one's animal as well as perceived compatibility between the guardian's and their animal's personality in predicting well-being. In contrast, being anxiously attached to one's animal predicts lower well-being among guardians. As per the interplay between guardians' well-being and their

tendency to care for their animals, we found that the guardians' caring behaviors were associated positively with their own well-being, but that this was the case specifically among guardians who perceive that the personality of their animal is highly compatible with their own.

What do these findings mean?
The findings suggest that guardians who perceive that they have a positive relationship with their companion animal, more positive contacts with their animal, and who accept their animal unconditionally, will also tend to care and feel affection for their animal to a higher degree. The findings also show that the more guardians perceive that they have a positive relationship with their animal and perceive that their animal's personality is compatible with their own personality, the higher their well-being will tend to be. Finally, guardians who perceive that their animal's personality is highly compatible with their own personality tend to derive more well-being benefits from caring for their animal. Overall, these results identified which specific psychological factors operating within human-companion animal relationships can have positive implications for both human guardians and their animals. The findings also bring novel and useful information for developing mutually beneficial human-companion animal relationships.

Living with a companion animal is a common experience in many occidental countries, with a majority of Americans, Canadians, and Australians sharing their homes with at least one companion animal (Animal Medicines Australia, 2022; AVMA, 2024; Canadian Animal Health Institute, 2022). While companion animals are perceived by many of their humans as contributing positively to their well-being (e.g., HABRI, 2021), being a pet owner or guardian has not been systematically associated with higher human health and well-being (e.g., Herzog, 2011). This suggests a role played by subjective processes operating within human-companion animal relations, as well as a need to dig deeper into the very nature of this ubiquitous relationship and how it is experienced by the guardians. Furthermore, the interplay between human health and well-being and the health and welfare of one's companion animal remains under-investigated (e.g., Koskela et al., 2024). This gap persists despite the growing recognition of the interconnections that exist between human and animal health—i.e., the One Health Approach (Mackenzie & Jeggo, 2019)—and the need to capture the mutualistic forces that operate in human-companion animal relations (Amiot & Santerre-Bélec, 2022).

To this aim, the current research investigated which relational factors experienced within human-companion animal relations contribute to higher well-being among guardians and predict their tendency to care for their companion animals and feel affection toward them. We also tested the interplay between the guardians' well-being and their tendency to care for their companion animals and explored which relational factor could yield mutual benefits for both humans and their animals. Specifically, this study aimed

to capture which relational factor could accentuate the well-being benefits derived from caring for one's companion animal. Accounting for both human well-being and animal wellness is crucial to fully understand humans' role in promoting their companion animals' welfare (Mellor et al., 2020).

Relational Factors Operating in Human-Companion Animal Relations

The mere presence of a companion animal (e.g., being a pet owner or not) has shown mixed associations with human health and well-being across studies—i.e., with some studies showing a positive association between pet ownership and well-being, other studies reporting a negative association, and others a non-significant association (Herzog, 2011; Rodriguez et al., 2021). Moving beyond a strict comparison of pet and non-pet owners, a fertile direction for research is to focus on the nature of the connection that operates within the human-companion animal relationship, and to identify the psychological factors, present within this relationship, that promote human well-being (e.g., Amiot & Bastian, 2023). In other words, which psychological factors, existing within the human-companion animal relationship, may contribute positively to the well-being of their human guardians. The current study integrates and tests the role of five specific relational factors in predicting both guardians' well-being as well as their tendency to care and feel affection for their animal, namely: positive contact with one's companion animal, human-companion animal compatibility, quality of the human-companion animal relation, attachment to one's companion animal, and unconditional acceptance of one's animal. Figure 1 summarizes the definitions for each factor and provides concrete examples.

Figure 1

Definitions for Each Relational Factor Along With Concrete Examples

Concept	Definition	Example
1. Positive Contact with One's Companion Animal	Refers to the frequency at which a guardian has frequent contacts with their animal, along with the reciprocity of these contacts and their positive valence.	A dog guardian regularly cuddles, plays fetch, and engages in affectionate physical contact with their dog, and the dog responds positively by seeking proximity and showing excitement.
2. Human-Companion Animal Compatibility	The perceived similarity between a guardian and their animal in terms of specific characteristics (e.g., personality, values). Such compatibility can facilitate shared activities and mutual understanding.	A calm, introverted guardian has a relaxed cat who prefers quiet environments and enjoys spending time sitting nearby rather than engaging in social, high-energy activities.
3. Relationship Quality	The degree to which guardians feel satisfied with, and experience positive emotions (e.g., joy, interest, gratitude) within, their relationship with their animal.	A guardian reports that having their dog brings feelings of comfort, joy, and happiness. The guardian feels satisfied about their relation with their dog.
4. Attachment Type	Based on human attachment types, an **anxious attachment style** toward one's companion animal involves being worried or anxious about the animal's love, loyalty, and availability in times of need. In contrast, an **avoidant attachment style** toward one's companion animal involves using maintaining a distance with one's animal, denying attachment needs, and over-reliance on oneself as the only reliable source of protection.	A person with an anxious attachment to their companion animal feels overly distressed when separated from their animal and relies heavily on the animal for emotional reassurance, worrying about losing them. A person with an avoidant attachment type to their companion animal feels reluctant to depend on their animal for the satisfaction of their own needs.
5. Unconditional Acceptance	The degree to which the guardian accepts and supports their animal unconditionally and non-judgmentally, and provides them with unconditional positive regard.	A guardian continues to care for and show affection toward their dog even when the dog acts in mischievous ways, or ages and becomes less active; the guardian values their dog regardless of these specific behaviors or developmental changes.

Positive Contact With One's Companion Animal

Positive contact with one's companion animal refers to the positive interactions that pet owners experience with their companion animal, as interspecific relations that involve members of distinct species. This relational factor captures both the frequency as well as the reciprocity and affective valence of these contacts (Davies et al., 2011), in line with the intergroup contact literature. Given that the positive contacts that take place between the members of different social groups predict an increased tendency to help the members of another group (Johnston & Glasford, 2018), herein we test if such contacts also predict more affection and caring behaviors toward one's own companion animal specifically, as a particularly proximal type of interspecific relationship.

Human-Companion Animal Compatibility

The relational factor pertaining to human-companion animal compatibility refers to the similarities that are shared by a guardian and their companion animal (El-Alayli et al., 2006). Based on similarity attraction principles in social psychology, according to which perceived or actual similarity facilitates the emergence and maintenance of interpersonal relationships (Byrne, 1971), sharing similarities with one's companion animal could have positive implications, particularly for the guardians' psychological well-being. Prior research has indeed found that the more pet owners perceive that their

self-characteristics are similar to their companion animal's, the higher their well-being (e.g., lower negative affect; higher life satisfaction; El-Alayli et al., 2006). Similarly, the more dog owners perceive that their personal values (i.e., in terms of hedonism and achievement) are similar to their dog's, the higher their life satisfaction (Sneddon et al., 2022). Furthermore, perceiving higher behavioral compatibility between one's own personality and the personality of one's companion animal has been associated with higher well-being among pet owners (George et al., 1998). Yet, and because similarity is a consistent predictor of relationship satisfaction and quality in human-human interpersonal relationships (Wilson & Cousins, 2003), human-companion animal compatibility could also predict more affection and caring for one's companion animal.

Relationship Quality

Relatedly, the quality of the human-companion animal relationship captures how satisfied guardians feel about their relation with their companion animal and experience positive emotions in the context of this relationship (Cassels et al., 2017). Based on the human-human interpersonal relations literature, this relational factor could also potentially have beneficial implications for the guardians' well-being, as well as fuel more affection and caring for their companion animal, given that experiencing positive emotions and satisfaction within the human-companion animal relation should facilitate commitment and care.

Attachment Types

The type of attachment to one's companion animal has also been found to play a role in predicting guardians' psychological well-being. Studies that have applied psychological attachment theory (Bowlby, 1969) to the realm of human-companion animal relations have uncovered negative associations between an anxious attachment to one's companion animal and guardians' well-being (e.g., higher psychological distress and anxiety: Zilcha-Mano et al., 2011; lower happiness but higher depression and loneliness: Ellis et al., 2024). While such associations between an anxious attachment to one's companion animal and the well-being outcomes are expected to replicate herein, we will also explore if having an anxious or an avoidant attachment type has implications for guardians' tendencies to feel affection and care for their companion animal. Although these types of attachment to one's companion animal were assessed given their theoretical anchor in the human attachment literature, it is worth acknowledging that there exists a diversity of different taxonomies and ways of measuring the human-companion animal attachment construct (e.g., Lexington Attachment to Pets Scale, Pet Attachment Questionnaire, CENSHARE Pet Attachment Survey).

Unconditional Acceptance

Based on the concept of unconditional positive regard, which involves feeling valued, respected, and accepted unconditionally and non-judgmentally (Rogers, 1959), unconditionally accepting one's companion animal implies accepting and supporting one's animal unconditionally and non-judgmentally. Companion animals are often perceived as providing unconditional support and affection to their humans (e.g., Wiens et al., 2024), a message also conveyed in the media (e.g., Lamic, 2022). Some research has confirmed that feeling unconditionally supported and accepted by one's companion animal has beneficial implications for guardians' well-being (e.g., Amiot & Bastian, 2023; Teo & Thomas, 2019). Yet, and to our knowledge, no research has focused on the other direction of this unconditional support and acceptance, namely on guardians' unconditional acceptance of their companion animal. This relational factor should not only have positive implications for feeling affection and caring for one's companion animal, but it could also predict higher psychological well-being, given that supporting one's companion animal's needs—which implies a prosocial inclination toward one's animal—has been found to have well-being benefits for pet owners per se (Kanat-Maymon et al., 2021) .

Interplay Between Human Well-Being and Prosocial Inclinations Toward Companion Animals

While research investigating human-companion animal relations has focused predominantly on the well-being and health experienced by humans within this relationship (e.g., Amiot & Bastian, 2015; Herzog, 2011), a greater emphasis on the wellness of companion animals, and on humans' contribution to this wellness, is highly warranted. Doing so has the potential to redress power imbalances existing in human-companion animal relations, and contribute to increased mutuality within these relationships (Amiot & Santerre-Bélec, 2022). To this aim, the current study assesses two prosocial inclinations toward one's companion animal, which may have positive benefits for the well-being of companion animals, namely: the guardians' affection for their companion animal and the caring behaviors they manifest toward their animal.

Relatedly, the interplay between the guardians' well-being and their prosocial inclinations toward their companion animals needs to be captured directly. While caring for one's companion animal can be demanding and requires resources (American Veterinary Medical Association, n.d.), such care may also have beneficial implications for the well-being of at least some guardians. Accounting for these interactions between human well-being and animal care and wellness also aligns with the One Health Approach (Leconstant & Spitz, 2022; Mackenzie & Jeggo, 2019), a perspective which recognizes the interconnections that exist between human and animal health, and how promoting the health of animals may benefit the health of humans (and vice versa). In the realm of human-human relation, engaging in prosocial behaviors has been found to predict increases in happiness and positive emotions (e.g., Aknin et al., 2013), as indicators of well-being;

this positive association between caring for one's companion animal and experiencing higher well-being may also operate in human-companion animal relationships per se, among some guardians.

To this aim, the current study will explore if the relational factors investigated herein could facilitate this positive interplay between guardians' well-being and their tendency to care for their companion animal and identify which of these factors allow guardians to derive higher well-being benefits from caring for their animal. Specifically, this study will test which of the relational factors assessed herein could accentuate the positive association between guardians' tendency to care for their companion animals and their own psychological well-being. Given that these relational factors capture the nature of the guardians' psychological bond with their companion animal, it is possible that at least some of these factors will also yield increased well-being benefits from caring for one's animal.

The Present Research

The current study investigated five relevant relational factors that capture the nature of the guardians' relationships with their companion animals and explored which of these factors predict guardians' psychological well-being as well as their affection and care for their companion animal (i.e., as prosocial inclinations toward their animal). These two sets of outcomes were covered in the current study to account for both the well-being of human guardians and the wellness of their companion animals and hence bring more mutuality to the investigation of human-companion animal relationships. Furthermore, the study tested the possible interplay between the guardians' well-being and their tendency to care for their companion animals and explored which relational factor could promote both outcomes simultaneously. Doing so will allow to identify which relational factors may accentuate the positive association between caring for one's animal and experiencing higher psychological well-being.

Finally, and given that the guardians' sociodemographic background and the general resources available (e.g., social, monetary, time) to care for their companion animals play a role in the experience of pet ownership (Amiot et al., 2022; Mueller et al., 2024), diverse sociodemographic factors as well as variables capturing the resources available to care for one's companion animal were also accounted for in the current study. Issues surrounding access to veterinary care are receiving research and public attention (Arluke & Rowan, 2020; Harding, 2018), and are particularly timely to take into account in the context of economic inflation and growing social inequalities. The inclusion of these variables into the current study will provide insights into their role in predicting guardians' tendency to feel affection and care for their companion animal, as well as their own well-being.

Method

Participants

A power analysis conducted using G*Power prior to conducting the study revealed that a sample size of 471 participants was needed to capture small effect sizes (f^2 = .04) for multiple regressions with 14 independent variables, α = .05, 1-β = .80. We recruited 585 American pet owners via Prolific. Participants were compensated with 3 British pounds (approximately US$4) upon completion of the study. A total of 50 participants were excluded because: (1) the participants withdrew their participation (n = 23); or (2) failed to provide the right answers to the two attention check items (n = 2); or (3) did not reach the end of the questionnaire or were timed-out by Prolific (n = 9); or (4) did not consent to taking part in the study (n = 1). In addition, 14 participants were excluded because they were not current pet owners, and one participant was excluded given they were not residing in the U.S. The final sample included 535 participants. In terms of gender, 34.2% of participants were males, 62.1% were females, 3.2% were non-binary, 0.4% indicated 'other' for their gender, and 0.2% preferred not to answer. Approximately 21.7% of the sample were older than 50 years. More details on the sociodemographic characteristics of the sample are presented in Supplementary Table S1.

Procedures

The study was approved by the Ethics Committee involving Human Participants of the University of (anonymised) (certificate number 2023-4883). The study was conducted in accordance with the guidelines of the Canadian Tri-Council Policy for the Ethical Conduct of Research Involving Human Participants. The study was administered using the Qualtrics software. After reading the information and consent form detailing the objectives of the study, confidentiality, possible risks involved, and ethical clearance, participants provided sociodemographic information, including information about their companion animals. The questionnaire then included different companion animal-related measures; if participants had more than one companion animal, they were instructed to refer to their preferred companion animal when responding to this section of the questionnaire. As well, participants were asked to either indicate what is the species of their current companion animal, or, if they currently had more than one companion animal, what is the species of their preferred companion animal. Participants then completed the psychological well-being measures.

Measures

A detailed description of the measures and their reliabilities, along with the Qualtrics questionnaire used in the study, are provided in the supplementary materials document.

Sociodemographic Variables

The sociodemographic data analysed for this study included the following categories: age, country of residence, gender, marital status, number of children currently living at home, work arrangement, education level, gross annual household income, perceived social status, number of pets currently owned, and species of their pet(s), for up to five pets. The supplementary information document includes additional analyses exploring the differences between companion animal species on the companion animal-related measures (Table S2).

Companion Animal-Related Measures

The companion animal-related measures included: companion animal caretaker status, resources available to care for one's companion animal, positive contact with one's companion animal, perceived human-companion animal compatibility, quality of the human-companion animal relation, avoidant and anxious attachment to one's companion animal, unconditional acceptance of one's companion animal, affection for one's companion animal, and caring behaviors for the companion animal.

Psychological Well-Being Measures

A broad range of psychological well-being measures were included, in line with a holistic conception of human health and wellness. These measures were selected on the basis of their validity and established psychometric properties. The psychological well-being measures included: life satisfaction, perceived stress, presence of life meaning, search for meaning, positive relations with others and vitality. On the basis of a principal component analysis using a varimax rotation, these well-being measures were also combined into an overall well-being variable. For the sake of parsimony, only this overall well-being variable was used as the dependent variable in the moderated regression analyses presented below.

Results

Statistical analyses were performed using SPSS (IBM SPSS Statistics for Windows, Version 29.0. Armonk, NY: IBM Corp.).

Correlations

Zero-order correlations between the relational factors (i.e., contact with one's companion animal, human-companion animal compatibility, quality of the human-companion animal relation, avoidant and anxious attachment to one's companion animal, unconditional acceptance of one's animal), the prosocial inclinations toward one's companion animal variables (i.e., caring for one's companion animal and affection for one's animal), and

the well-being variables are reported in Table 1. As can be seen in this Table, many significant associations were uncovered between the relational factors and the prosocial inclinations toward one's companion animal variables. Specifically, contact with one's companion animal, human-companion animal compatibility, quality of the human-companion animal relation, as well as unconditional acceptance of one's companion animal, all correlated positively with caring for one's companion animal and with affection for the companion animal. Avoidant attachment to one's companion animal correlated negatively with these two prosocial inclination variables, while anxious attachment to one's companion animal showed positive associations.

As per the associations between the relational factors and the psychological well-being variables, human-companion animal compatibility correlated significantly with nearly all of the well-being variables, showing that the higher human-companion animal compatibility, the more positive the guardians' well-being (i.e., higher life satisfaction, life meaning, positive relations with others, vitality, and overall well-being, but lower stress). A similar pattern of correlations was uncovered for the quality of the human-companion animal relation and the well-being variables. An inverse pattern of correlations was found however for anxious attachment to one's companion animal, which correlated with lower well-being (i.e., lower life satisfaction, life meaning, positive relations with others, vitality, and overall well-being, but higher stress and search for meaning), in line with prior work (e.g., Zilcha-Mano et al., 2011). Avoidant attachment to one's companion animal presented a mixed pattern of associations with the well-being variables, showing positive correlations with life satisfaction and with stress, but a negative correlation with positive relations with others.

Interestingly, a few significant correlations were observed between the prosocial inclinations toward one's companion animal variables and some of the well-being variables; this suggests that caring and feeling affection for one's animal can be accompanied by higher well-being (e.g., higher vitality, more positive relations with others, and higher overall well-being). Yet, the modest size of these associations also suggests that these mutual benefits are far from automatic among guardians, and that third variables could moderate the association between caring for one's companion animal and deriving well-being benefits from such caring behaviors.

Table 1

Correlations Among the Main Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Caring for the companion animal	.88														
2. Affection for the companion animal	.69***	.93													
3. Positive contact with the companion animal	.61***	.57***	.89												
4. Human-companion animal compatibility	.20***	.19***	.22***	.82											
5. Quality of the human-companion animal relation	.69***	.65***	.70***	.31***	.84										
6. Avoidant attachment to the companion animal	-.46***	-.52***	-.36***	-.17***	-.43***	.66									
7. Anxious attachment to the companion animal	.09*	.15***	.15***	-.17***	.11*	.28***	.85								
8. Unconditional acceptance of the companion animal	.64***	.68***	.49***	.10*	.56***	-.61***	.03	.80							
9. Life satisfaction	.10*	.05	.11**	.42***	.18***	.09*	-.10*	-.05	.93						
10. Stress	-.12**	-.03	-.06	-.45***	-.20***	.09*	.25***	-.05	-.57***	.88					
11. Presence of life meaning	.07	.01	.04	.40***	.11*	.06	-.13**	-.04	.69***	-.52***	.92				
12. Search for meaning	.03	.09*	.11**	-.05	.07	.05	.27***	.00	-.14**	.24***	-.25***	.93			
13. Positive relations with others	.19***	.14**	.14***	.48***	.23***	-.12**	-.17***	.08	.50***	-.54***	.53***	-.16***	.92		
14. Vitality	.17***	.08*	.14**	.50***	.28***	.03	-.10*	-.01	.68***	-.67***	.65***	-.08	.59***	.94	
15. Overall well-being	.15***	.07	.11*	.54***	.23***	-.01	-.20***	.01	.84***	-.81***	.83***	-.29***	.75***	.87***	.72

Note. Scale reliabilities (omegas) for each measure are presented on the diagonal.

*$p < .05$. **$p < .01$. ***$p < .001$.

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Hierarchical Multiple Regressions

To systematically test how each of the relational factors uniquely contributes to predicting the prosocial inclinations and the well-being variables relative to the others, and over and above the sociodemographic and social resources variables, hierarchical multiple regressions were conducted. In these regressions, Step 1 included the sociodemographic and social resources variables, and Step 2 included the relational factors. All variance inflation factors values were below 3, confirming that multicollinearity was not a problem in these analyses. Nevertheless, supplementary analyses, which account for the intercorrelations among the independent variables when predicting the outcomes (i.e., relative weight analyses) (Tonidandel & LeBreton, 2011) were conducted and are presented in the supplementary materials document. Although some differences could be noted across the findings observed in these supplementary analyses and those observed in the multiple regression analyses presented herein, such disparities are not uncommon in the literature (Tonidandel et al., 2009).

As can be seen in Table 2 (at Step 2 of the hierarchical regressions), when predicting affection for one's companion animal, some of the sociodemographic and social resources variables significantly predicted this prosocial inclination outcome. Specifically, age predicted lower affection for one's companion animal. Furthermore, relationship status, number of companion animals, and resources available to care for one's companion animal predicted high affection for one's companion animal. In terms of the relational factors, contact with one's companion animal, quality of the human-companion animal relation, and unconditional acceptance of one's companion animal—as relational factors denoting a more positive relationship with one's animal—all positively predicted affection for one's companion animal; anxious attachment with the companion animal also positively predicted affection for one's companion animal. In contrast, avoidant attachment - which also denotes lower engagement toward one's companion animal - predicted lower affection. When predicting caring for one's companion animal, the resources available to care for the companion animal positively predicted this prosocial inclination variable, along with the relational variables of: contact with one's companion animal, quality of the human-companion animal relation, and unconditional acceptance of one's companion animal.

Table 2

Hierarchical Regressions Predicting Affection for One's Companion Animal and Caring for One's Animal

	Affection for one's companion animal		Caring for one's companion animal	
	β	**95% CI**	**β**	**95% CI**
Step 1				
Gender	.14**	[0.099, 0.394]	.11**	[0.050, 0.357]
Age	.00	[-0.026, 0.029]	.08	[-0.002, 0.055]
Work arrangement	-.02	[-0.179, 0.122]	.04	[-0.088, 0.224]
Income	-.09	[-0.060, 0.006]	-.05	[-0.049, 0.018]
Education	-.01	[-0.057, 0.048]	-.02	[-0.065, 0.044]
Number of children	-.16***	[-0.198, -0.059]	-.17***	[-0.212, -0.067]
Relationship status	.08	[-0.025, 0.286]	.03	[-0.110, 0.213]
Perceived social status	-.03	[-0.065, 0.036]	-.05	[-0.078, 0.026]
Number of companion animals	.17***	[0.045, 0.138]	.14***	[0.034, 0.130]
Caretaker status	.11*	[0.043, 0.325]	.07	[-0.022, 0.271]
Ressources to care for companion animal	.32***	[0.226, 0.389]	.36***	[0.279, 0.448]
ΔR^2	.20***		.21***	
Step 2				
Gender	.02	[-0.064, 0.137]	.02	[-0.082, 0.142]
Age	-.07*	[-0.040, -0.003]	.01	[-0.018, 0.023]
Work arrangement	-.01	[-0.110, 0.091]	.04	[-0.036, 0.187]
Income	-.04	[-0.033, 0.011]	.00	[-0.023, 0.025]
Education	.01	[-0.028, 0.042]	-.01	[-0.047, 0.031]
Number of children	-.01	[-0.059, 0.037]	-.03	[-0.078, 0.028]
Relationship status	.07*	[0.011, 0.217]	.02	[-0.086, 0.144]
Perceived social status	-.01	[-0.041, 0.029]	-.03	[-0.052, 0.026]
Number of companion animals	.06*	[0.000, 0.063]	.04	[-0.012, 0.058]
Caretaker status	-.01	[-0.113, 0.078]	-.04	[-0.182, 0.030]
Resources available to care for companion animal	.07*	[0.009, 0.130]	.10**	[0.032, 0.166]
Positive contact with the companion animal	.14***	[0.063, 0.238]	.15***	[0.080, 0.275]
Human-companion animal compatibility	.02	[-0.071, 0.119]	-.02	[-0.131, 0.080]
Quality the human-companion animal relation	.24***	[0.128, 0.276]	.35***	[0.224, 0.388]
Avoidant attachment to the companion animal	-.22***	[-0.329, -0.157]	-.07	[-0.175, 0.016]
Anxious attachment to the companion animal	.16***	[0.086, 0.199]	.06	[-0.009, 0.118]
Unconditional acceptance of the companion animal	.34***	[0.443, 0.718]	.31***	[0.396, 0.701]
ΔR^2	.45***		.40***	
R^2	.65***		.61***	

Note. Gender was coded such that male = +1, female = +2. Participants who indicated 'other' for their gender or did not complete the question about gender were excluded from these analyses (n = 20). Relationship status was coded such that not being in a relationship = 0, being a relationship (married, common-law union) = +1. The work arrangement variable was coded such that full time = +1 and other work arrangements (i.e., part-time, self-employed, unemployed, student, homemaker, retired) = 0. The education variable was coded such that having obtained a pre-University diploma = 0, and a University diploma = +1. The caretaker status variable was coded such that being the primary carer for the companion animal = +1, sharing equal responsibility with another person = 0, and not being the primary caretaker of the companion animal = -1.
*p < .05. **p < .01. ***p < .001.

When predicting the well-being variables, and as can be seen in Table 3 (at Step 2 of the hierarchical regressions), some of the sociodemographic and social resources variables significantly predicted these variables. Specifically, age predicted lower stress and search for meaning. Education level positively predicted life satisfaction, life meaning, vitality, and overall well-being. Number of children also positively predicted life satisfaction, life meaning, vitality, and overall well-being. Relationship status (i.e., being in a relationship) positively predicted life satisfaction, life meaning, positive relationships with others, and overall well-being. Perceived social status predicted positively life satisfaction, life meaning, vitality, and overall well-being but lower stress. Finally, resources available to care for companion animals positively predicted life satisfaction, life meaning, positive relations with others, vitality, and overall well-being but lower stress.

Over and above these sociodemographic and social resources variables, the relational factors also contributed to predicting the well-being outcomes, as can be seen in Table 3. Specifically, human-companion animal compatibility predicted nearly all of the well-being variables (i.e., higher life satisfaction, meaning in life, positive relations with others, vitality, and overall well-being but lower stress). Quality of the human-companion animal relation predicted three well-being variables (i.e., higher life satisfaction, and vitality, but lower stress) as well as higher overall well-being. While unconditional acceptance of one's companion animal negatively predicted search for meaning, contact with one's companion animal positively predicted stress, suggesting less beneficial implications of such contacts for pet owners' well-being. In terms of attachment, an anxious attachment to one's companion animal predicted lower well-being (i.e., higher stress, search for meaning and lower overall well-being). In contrast, avoidant attachment to one's companion animal positively predicted higher well-being (i.e., higher life satisfaction, life meaning, vitality, and overall well-being).

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Table 3

Hierarchical Regressions Predicting the Well-Being Outcomes

	β [95% CI]						
	Life satisfaction	**Stress**	**Presence of life meaning**	**Search for meaning**	**Positive relations with others**	**Vitality**	**Overall well-being**
Step 1							
Gender	.01 [-0.231, 0.271]	.04 [-0.065, 0.158]	-.00 [-0.266, 0.249]	.04 [-0.170, 0.394]	-.03 [-0.235, 0.122]	-.08 [-0.519, 0.014]	-.04 [-0.242, 0.081]
Age	.00 [-0.045, 0.049]	-.20*** [-0.069, -0.027]	.08 [-0.003, 0.093]	-.14** [-0.133, -0.028]	.10* [0.003, 0.069]	.03 [-0.033, 0.066]	.11** [0.010, 0.070]
Work arrangement	.04 [-0.123, 0.388]	-.01 [-0.128, 0.099]	.01 [-0.227, 0,296]	.05 [-0.147, 0.426]	.07 [-0.043, 0.319]	.04 [-0.136, 0.406]	.04 [-0.084, 0.244]
Income	.03 [-0.037, 0.073]	.03 [-0.017, 0.032]	-.10 [-0.109, 0.004]	-.11 [-0.122, 0.002]	-.10 [-0.075, 0.004]	-.06 [-0.093, 0.025]	-.05 [-0,053, 0.018]
Education	.13** [0.044, 0.222]	-.04 [-0.055, 0.024]	.11* [0.015, 0.197]	.02 [-0.079, 0.121]	.06 [-0.022, 0.105]	.15** [0.050, 0.239]	.11* [0.015, 0.130]
Number of children	.11** [0.050, 0.286]	-.05 [-0.083, 0.023]	.13** [0.062, 0.305]	-.05 [-0.205, 0.061]	.07 [-0.017, 0.151]	.13** [0.060, 0.311]	.13** [0.041, 0.193]
Relationship status	.16*** [0.234, 0.764]	.04 [-0.069, 0.167]	.15** [0.173, 0.716]	-.04 [-0.423, 0.172]	.09 [-0.010, 0.365]	.02 [-0.217, 0.345]	.10* [0.019, 0.359]
Perceived social status	.31*** [0.197, 0.368]	-.26*** [-0.134, -0.057]	.28*** [0.152, 0.327]	-.06 [-0.144, 0.048]	.15** [0.026, 0.148]	.23*** [0.108, 0.289]	.30*** [0.115, 0.225]
Number of companion animals	.02 [-0.060, 0.097]	-.03 [-0.046, 0.024]	-.01 [-0.094, 0.067]	-.04 [-0.127, 0.049]	.00 [-0.054, 0.057]	-.01 [-0.097, 0.070]	.01 [-0.046, 0.055]
Caretaker status	-.05 [-0.395, 0.085]	.03 [-0.074, 0.139]	-.03 [-0.344, 0.148]	.04 [-0.157, 0.381]	-.02 [-0.207, 0.134]	.00 [-0.252, 0.256]	-.04 [-0.225, 0.084]
Resources to care for the companion animal	.25*** [0.313, 0.590]	-.26***[-0.252, -0.129]	.16*** [0.127, 0.410]	.00 [-0.154, 0.157]	.28*** [0.214, 0.410]	.26*** [0.295, 0.588]	.28*** [0.230, 0.407]
R^2 Δ	.35***	.21***	.21***	.06**	.16***	.20***	.30***
Step 2							
Gender	.03 [-0.154, 0.334]	.03 [-0.062, 0.152]	.01 [-0.235, 0.273]	.06 [-0.105, 0.457]	-.04 [-0.253, 0.079]	-.07 [-0.456, 0.039]	-.03 [-0.217, 0.079]
Age	-.03 [-0.060, 0.029]	-.15*** [-0.056, -0.017]	.05 [-0.021, 0.072]	-.12** [-0.121, -0.018]	.04 [-0.016, 0.044]	-.02 [-0.056, 0.035]	.05 [-0.007, 0.047]
Work arrang.	.01 [-0.224,0.262]	.02 [-0.087, 0.125]	-.02 [-0.311, 0.195]	.03 [-0.181, 0.378]	.03 [-0.098, 0.232]	.00 [-0.245, 0.248]	.00 [-0.147, 0.147]
Income	.06 [-0.016,0.089]	.01 [-0.024, 0.022]	-.07 [-0.094, 0.016]	-.10 [-0.114, 0.007]	-.05 [-0.054, 0.017]	-.01 [-0.060, 0.047]	-.01 [-0.034, 0.030]
Education	.12**[0.036, 0.206]	-.04 [-0.055, 0.019]	.11* [0.020, 0.197]	-.00 [-0.099, 0.096]	.08 [-0.008, 0.108]	.14** [0.051, 0.223]	.12** [0.024, 0.126]
Number of children	.08*[0.001, 0.232]	-.03 [-0.066, 0.036]	.10* [0.015, 0.256]	-.06 [-0.215, 0.051]	.04 [-0.039, 0.118]	.10* [0.028, 0.262]	.09* [0.013, 0.154]
Relationship status	.16***[0.263, 0.763]	.04 [-0.065, 0.154]	.16*** [0.203, 0.723]	-.04 [-0.416, 0.160]	.10* [0.023, 0.363]	.02 [-0.180, 0.327]	.10* [0.049, 0.351]
Perceived social status	.23***[0.126, 0.294]	-.16** [-0.097, -0.023]	.20*** [0.080, 0.256]	-.07 [-0.159, 0.036]	.02 [-0.048, 0.067]	.12* [0.012, 0.184]	.18*** [0.051, 0.153]
Number of companion animals	.03[-0.044, 0.108]	-.03 [-0.045, 0.022]	-.01 [-0.085, 0.073]	-.01 [-0.101, 0.074]	.00 [-0.049, 0.054]	-.00 [-0.080, 0.074]	.01 [-0.038, 0.054]
Caretaker status	-.07[-0.451, 0.010]	.03 [-0.068, 0.135]	-.04 [-0.365, 0.117]	-.00 [-0.276, 0.256]	-.05 [-0.245, 0.069]	-.03 [-0.333, 0.135]	-.05 [-0.244, 0.036]
Resources to care for the companion animal	.18***[0.171, 0.463]	-.16*** [-0.180, -0.052]	.10* [0.011, 0.316]	.01 [-0.147, 0.189]	.16*** [0.084, 0.283]	.13** [0.072, 0.369]	.17*** [0.102, 0.279]
Positive contact with the companion animal	.01 [-0.197, 0.227]	.11* [0.003, 0.189]	-.06 [-0.336, 0.105]	.12 [-0.007, 0.481]	-.06 [-0.225, 0.062]	-.07 [-0.355, 0.074]	-.08 [-0.233, 0.023]
Human-companion animal compatibility	.24*** [0.438, 0.898]	-.28*** [-0.420, -0.218]	.26*** [0.442, 0.921]	.02 [-0.206, 0.324]	.42*** [0.565, 0.876]	.34*** [0.680, 1.146]	.37*** [0.493, 0.771]

	β [95% CI]						
	Life satisfaction	**Stress**	**Presence of life meaning**	**Search for meaning**	**Positive relations with others**	**Vitality**	**Overall well-being**
Quality of the human-companion animal relation	.16** [0.069, 0.428]	-.18** [-0.194, -0.037]	.10 [-0.034, 0.340]	.03 [-0.156, 0.257]	.10 [-0.019, 0.224]	.28*** [0.251, 0.614]	.19*** [0.082, 0.299]
Avoidant attach. to the companion animal	.19*** [0.194, 0.610]	-.07 [-0.149, 0.034]	.13* [0.048, 0.482]	-.01 [-0.294, 0.230]	-.00 [-0.146, 0.137]	.15** [0.086, 0.509]	.13** [0.042, 0.294]
Anxious attach. to the companion animal	-.07 [-0.262, 0.012]	.17*** [0.059, 0.180]	-.09 [-0.283, 0.003]	.23*** [0.204, 0.521]	-.06 [-0.155, 0.032]	-.07 [-0.254, 0.024]	-.13** [-0.217, -0.051]
Unconditional accept. of the companion animal	-.01 [-0.364, 0.300]	-.01 [-0.155, 0.136]	.03 [-0.249, 0.444]	-.14* [-0.803, -0.038]	.02 [-0.192, 0.259]	-.02 [-0.404, 0.269]	.02 [-0.162, 0.240]
R^2 Δ	.08***	.12***	.07***	.07***	.17***	.16***	.16***
Total R^2	.43***	.33***	.29***	.13***	.32***	.36***	.46***

Note. Gender was coded such that male = +1, female = +2. Participants who indicated 'other' for their gender or did not complete the question about gender were excluded from these analyses (n = 20). Relationship status was coded such that not being in a relationship = 0, being a relationship (married, common-law union) = +1. The work arrangement variable was coded such that full time = +1 and other work arrangements (i.e., part-time, self-employed, unemployed, student, homemaker, retired) = 0. The education variable was coded such that having obtained a pre-University diploma = 0, and a University diploma = +1. The caretaker status variable was coded such that being the primary carer for the companion animal = +1, sharing equal responsibility with another person = 0, and not being the primary caretaker of the companion animal = -1.

*p < .05. **p < .01. ***p < .001.

Moderation Analyses

To test the moderating role of the relational factors in the associations between guardians' caring for their companion animal and their psychological well-being, six moderation analyses (see Table 4) were conducted using PROCESS analyses (Model 1; Hayes, 2022) with bias-corrected 95% confidence intervals, 5,000 bootstrapped samples. The overall well-being measure was used as the dependent variable in these analyses. All variables used in these analyses were standardized. We probed the significant interaction by testing the conditional effect of caring for one's companion animal at two levels of the moderator—i.e., one standard deviation (*SD*) below the mean and one *SD* above the mean.

Table 4

Moderation Analyses With PROCESS Predicting the Overall Well-Being Variable

			95% CI		
Effect	**R^2**	**β**	**LLCI**	**ULCI**	***p***
Moderating role of contact with one's companion animal					
Caring for the companion animal		.14	.03	.25	.0130
Positive contact with the companion animal		.03	-.08	.13	.6420
Caring for the companion animal X Positive contact with the companion animal		.01	-.06	.07	.8284
Total Model	.02				.0059
Moderating role of human-companion animal compatibility					
Caring for the companion animal		.06	-.01	.14	.1013
Human-companion animal compatibility		.52	.44	.59	.0000
Caring for the companion animal X Human-companion animal compatibility		.07	.00	.14	.0389
Total Model	.30				.0000
Moderating role of the quality of the human-companion animal relation					
Caring for the companion animal		.01	-.11	.13	.9094
Quality of the human-companion animal relation		.25	.13	.37	.0000
Caring for the companion animal X Quality of the human-companion animal relation		.04	-.03	.10	.2579
Total model	.05				.0000
Moderating role of avoidant attachment with one's companion animal					
Caring for the companion animal		.19	.09	.28	.0002
Avoidant attachment		.07	-.03	.18	.1734
Caring for the companion animal X Avoidant attachment		-.00	-.07	.06	.9412
Total Model	.03				.0021

Effect	R^2	β	95% CI LLCI	95% CI ULCI	*p*
Moderating role of anxious attachment with one's companion animal					
Caring for the companion animal		.16	.08	.25	.0001
Anxious attachment		-.22	-.30	-.14	.0000
Caring for the companion animal X Anxious attachment		-.06	-.13	.02	.1321
Total model	.07				.0000
Moderating role of unconditional acceptance of one's companion animal					
Caring for the companion animal		.27	.15	.38	.0000
Unconditional acceptance		-.14	-.25	-.03	.0100
Caring for the companion animal X Unconditional acceptance		.04	-.04	.11	.3338
Total model	.04				.0001

As can be seen in Table 4, the main effects observed for the relational factors on guardians' psychological well-being revealed positive effects for: human-companion animal compatibility and quality of the human-companion animal relation, and negative effects for: anxious attachment to one's companion animal and unconditional acceptance of one's companion animal. In terms of the moderating role of the relational factors, only one significant moderation effect was uncovered, for human-companion animal compatibility. Simple slope analyses revealed that the effect of caring for one's companion animal on psychological well-being was not significant at low (*M*-1*SD*; β = -0.01, *P* = .871, 95% CI [−0.10, 0.08]), nor at moderate levels of human-companion animal compatibility (*M*; β = 0.06, *P* = .101, 95% CI [−0.01, 0.14]). However, at high levels of human-companion animal compatibility (*M*+1*SD*), caring for one's companion animal had a significant positive effect on guardians' well-being (β = 0.13, *P* = .017, 95% CI [0.02, 0.24]).

Discussion

Investigating the psychological factors that operate within human-companion animal relations has the potential to clarify which specific features of the human-companion animal relationship may contribute to higher well-being among guardians of companion animals and promote more mutuality within human-companion animal relationships. Covering different relational factors relevant to the human-companion animal relation, the current study explored which of these factors predict both the guardians' well-being and their prosocial inclinations toward their companion animal (i.e., feeling affection and caring for their animal). We also tested the interplay between the guardians' well-being and their tendency to care for their companion animals and explored which relational factor could yield mutual benefits for both humans and their animals, in line with a One Health Approach. Given the role of sociodemographic factors and the resources available

to care for one's companion animal, such sociodemographic and resource-related variables were also accounted for in the current study.

The Role of the Relational Factors in Predicting Guardians' Prosocial Inclinations Toward Their Companion Animal and Psychological Well-Being

Three relational factors experienced within the human-companion animal relationship consistently predicted the guardians' prosocial inclinations toward their companion animal (i.e., their affection for their companion animal and caring behaviors) in the hierarchical multiple regressions, namely: positive contact with the companion animal, quality of the human-companion animal relation, and unconditional acceptance of the companion animal. Both the quality of the human-companion animal relation and the positive contact with the companion animal variables capture the positive emotions (e.g., satisfaction, happiness, fun, joy) experienced in the relationship and while interacting with one's companion animal. As well, unconditional acceptance of one's companion animal involves a deep sense of acceptance of the animal. Together, these relational factors promoted a feeling of affection and love toward one's companion animal and fueled a greater tendency to provide care and exert continuous efforts to ensure the well-being of the animal.

In addition, an anxious attachment to one's companion animal predicted more affection toward this animal; this association aligns with prior work showing that feeling psychologically connected to and committed toward other animals—in the form of solidarity with animals—is associated positively with an anxious attachment to one's companion animal (Amiot & Bastian, 2017), suggesting that anxiously attached individuals can also experience a high level of personal involvement and care toward their companion animal, possibly fueled by the fear of losing a valued companion or of harm to the human-companion animal relationship. In contrast, an anxious attachment to one's companion animal, given the distance that this attachment type involves putting between oneself and one's companion animal, predicted lower affection toward this animal.

When predicting the guardians' own levels of psychological well-being, the relational factor pertaining to human-companion animal compatibility emerged as a particularly consistent predictor of the well-being variables. This positive role of human-companion animal compatibility in predicting pet owners' well-being aligns with prior work (e.g., El-Alayli et al., 2006; George et al., 1998; Sneddon et al., 2022). Interestingly, this more 'cognitive' relational factor did not significantly predict guardians' tendency to care or feel affection for their companion animal (i.e., as prosocial inclinations toward their animal). This pattern of findings suggests that this relational factor may provide a sense of familiarity, reassurance and comfort to the guardians which could also have beneficial implications for their own well-being, but without necessarily promoting positive attitudes and behaviors toward their companion animal per se.

It should be noted that the measure of human-companion animal compatibility employed herein involved perceptions of similarity reported by the guardians themselves. Our findings show that this subjective perception of being similar to one's companion animal plays a clear role in predicting guardians' well-being. Yet, more objective measures of similarity may not have yielded the same findings. Future research could use more objective measures of human-companion animal similarity, and directly compare the role of perceived similarity as reported by different informants (e.g., owner, breeder, family members) in predicting guardians' well-being. Similarity in the 'eye of the beholder'—possibly also based on small cues observed on a day-to-day basis when interacting with one's companion animal—may likely remain a potent predictor of well-being in such future work.

Quality of the human-companion animal relation, however, predicted both higher affection and caring for one's companion animal, as well as higher well-being for guardians, possibly because of the positive emotions (e.g., satisfaction, happiness) experienced when reporting higher relationship quality with one's companion animal. Indeed, the experience of positive emotions, as 'broadening' emotions, has been associated with more prosocial tendencies toward others, but it could also have positive implications for individual well-being (Fredrickson, 2013). As well, unconditional acceptance of one's companion animal significantly positively predicted both affection and caring for one's animal, along with a lower search for meaning, as an indicator of ill-being.

In line with prior research, anxious attachment to one's companion animal was associated with lower well-being in the current study (e.g., Zilcha-Mano et al., 2011; Ellis et al., 2024). However, avoidant attachment to the companion animal was associated with *higher* well-being, and more specifically: higher life satisfaction, meaning in life, and vitality. It should be noted that our correlations uncovered a mixed pattern of associations between avoidant attachment to one's companion animal and some well-being variables (i.e., positive associations with life satisfaction but also with stress, and a negative association with positive relations with others). This suggests ambiguity in the role played by an avoidant attachment to one's companion animal. Because it involves establishing a form of distance with one's animal, this attachment style may actually help to 'free' guardians from being overinvested in their relationship with their companion animal and potentially allow them to nurture their own individual well-being. Indeed, in a recent systematic review of the studies testing the associations between attachment to companion animals and depression (Ellis et al., 2024), when attachment to one's companion animal is conceptualised and assessed as a strong attachment bond between pet owners and their animals, 12 studies have found a positive association between such attachment and depression, while 4 studies have found a negative association, suggesting some possible psychological benefits from experiencing a less intense bond with one's companion animal.

Interestingly, the positive contact with companion animal relational factor predicted higher stress among guardians, while it also positively predicted the variables pertaining to affection and caring for one's companion animal. This relational variable hence appears particularly beneficial to these prosocial inclinations toward one's animal, as behavioral and attitudinal variables that involve intergroup helping (i.e., companion animals being from distinct species relative to humans), but not to human well-being per se.

The Role of the Sociodemographic Variables

The sociodemographic factors as well as the variables capturing the resources available to care for one's companion animal also played a role in predicting pet owners' prosocial inclinations toward their companion animal and their own well-being. Specifically, age predicted lower affection for one's companion animal, suggesting more affinity with animals among younger participants. Furthermore, relationship status (being in a committed relationship), number of companion animals, and resources available to care for one's companion animal predicted higher affection for one's companion animal, suggesting that having a social network comprised of both humans and animals could facilitate feelings of affection for one's companion animal per se. Resources available to care for the companion animal also positively predicted caring for one's animal.

The sociodemographic and social resources variables significantly predicted the well-being variables. The associations uncovered herein generally aligned with prior research, showing that: being older is associated with higher well-being and better mental health (Orpana, 2008); having higher socioeconomic status, education level, and being married is associated with higher well-being (Diener et al., 1993; Orpana, 2008). While being a parent has been associated with higher well-being in some studies but not others (Nelson et al., 2014), it was associated positively with some of the well-being measures in the current sample (i.e., life satisfaction, meaning in life, vitality, overall well-being). In line with prior work, perception of social status also positively predicted well-being (Adler et al., 2000). As well, access to more resources to care for one's companion animal predicted higher well-being.

Testing the Interplay Between Human Well-Being and Caring for Companion Animals

While research investigating human-companion animal relations has focused mainly on human well-being and health, an important perspective to take is the companion animal's welfare, and the possible interplay between the guardians' own well-being and their tendency to care for their companion animal. When exploring which relational factor may facilitate a positive linkage between the guardians' tendency to care for their companion animal and their own psychological well-being, we found a significant role

for human-companion animal compatibility. Specifically, guardians who reported higher levels of compatibility with their companion animal displayed a significant positive association between caring for their animal and their own psychological well-being. Conceptually, human-companion animal compatibility itself involves perceiving a link between one's own personal characteristics and the characteristics of one's companion animal. In this sense, this relational variable could facilitate deriving a personal well-being advantage from caring for one's (more similar) companion animal and experiencing benefits from such behaviors, specifically by creating a cognitive passage between the self and the companion animal, and easing this flow of benefits, from one's companion animal to oneself. Despite being a promising variable to investigate to better understand human-companion animal relations, which could also potentially be used to ensure a good human-companion animal 'match' when adopting a new animal, knowledge on human-companion animal compatibility remains limited. The current findings extend our knowledge of the role of such compatibility for pet owners' well-being, while also taking into account the direct linkages that exist between human and animal wellness, in line with emerging research on the interplay between companion animal and owner health and wellness (e.g., Koskela et al., 2024).

Limitations and Future Research

While the current study relied on a large and diverse dataset, the design employed remains correlational, and no causality can be inferred based on the current findings. Longitudinal designs should hence be employed in future research to provide an indication of the direction of these associations. Furthermore, other measures or methods for capturing mutuality within human-companion animal relationships could potentially be developed and employed. For example, self-reported or objective measures (e.g., veterinary assessments) could be used to assess animals' well-being more directly, and the associations with their guardian's well-being could be directly tested, also in line with the One Health Approach. As well, future work could further investigate the role played by the guardians' unconditional acceptance of their companion animal, including how far it is appropriate to accept some of their animal's behaviors. Indeed, some behaviors are clearly unacceptable (e.g., aggressivity) and need to be modified and managed by the guardians. While the current measure of unconditional acceptance did not capture such level of details, future research should keep these considerations in mind and develop fined-grained measures of unconditional acceptance.

Importantly, the current findings will need to be replicated using larger representative samples. Most of our predictions were confirmed. Overall, findings aligned with prior empirical work on human-companion animal relations to suggest a generally beneficial role for the relational factors tapping into more positive and mutual human-companion animal relationships. However, future studies will need to reproduce the specific pattern of associations uncovered herein to ensure its generalizability. Such studies could

include a cross-cultural component to capture possible similarities but also differences across cultures and samples. Confirming the stability of the current findings in other samples will also be important given the high intercorrelations observed among the predictors included in our regression models.

Indeed, and despite the acceptable variance inflation factor indices observed in the current study, some of the independent variables were highly correlated (i.e., up to a correlation of .70 observed between some of the relational factors). In the current research, we were particularly interested in teasing the role of these specific relational factors apart and identifying which specific ones predicted both human well-being outcomes and caring for one's companion animal. Given this objective, a multiple regression approach, which kept each of these relational factors distinct and allowed a fine-grain analysis of their roles in predicting these outcomes, was hence most appropriate. However, our statistical approach may have not fully dealt with the overlapping variance existing between the independent variables, nor considered issues such as colliders, confounders, and suppressors. Future research could directly test the underlying factorial structure of these relational factors, and whether these specific relational factors can be represented by one general latent factor, as well as which of these relational factors are most important in defining this latent factor. Statistical approaches based on latent variables models within the structural equation modeling framework (Kline, 2023), or the Schmid-Leiman solution (Schmid & Leiman, 1957; Wolff & Preising, 2005), could be particularly useful to this aim. This approach would allow tests of whether this latent factor predicts positive relations with companion animals and human well-being.

Finally, given the particularly clear role uncovered for human-companion animal compatibility in the current study, understanding the specific compatibilities that are most important when predicting the well-being and prosocial inclination outcomes could be further investigated. In other words, what are the most important specific compatibility attributes? Also, the implications of this relational factor could be further tested when predicting additional and consequential outcomes, such as guardians' motivation to engage in activities that involve their companion animal (training, sports), and companion animal relinquishment. Future work could also be conducted to test if this relational factor also predicts actual care behavior (e.g., taking one's companion animal to the vet when sick, regular feeding, making sure one's companion animal has appropriate levels of socialisation and activities). Such findings would add more evidence for the need to devise empirically-based methods to promote human-companion animal compatibility so as to maximise successful companion animal adoption and their integration in human lives.

Animal Welfare Implications

While a main focus in research investigating human-companion animal relations has been on the health and well-being experienced by humans within this relationship (e.g.,

Amiot & Bastian, 2015; Herzog, 2011), commentators are recognizing the importance of accounting for animals' own needs and welfare within these relationships (e.g., Amiot & Santerre-Bélec, 2022). Doing so has the potential to improve the care given to animals in our societies, and, more broadly, to raise the social status of non-human animals. Such changes could have direct benefits to the health and welfare of animals. The current findings contribute to this discussion, by first identifying which relational factors predict increased prosociality toward companion animals (i.e., greater affection and more caring behaviors for the companion animal). Our findings identified three such relational factors, namely: the quality of the human-companion animal relation, unconditional acceptance of one's companion animal, and positive contact with one's animal. Promoting these factors socially and individually and developing strategies to nurture these factors within the human-companion animal relationship could have direct benefits for companion animals' welfare. Second, the relational factor pertaining to human-companion animal compatibility was found to accentuate the positive association between caring for one's animal and reporting higher well-being among guardians. This finding suggests that prospective guardians should mindfully select a companion animal with whom they are likely to be compatible; doing so may allow them to derive more benefits from their companion animal's presence and to potentially develop a more mutualistic relation with their animal.

Conclusion

The role of companion animals in promoting human health and well-being is contested in the empirical literature. The current study contributed to this debate by focusing on which specific relational factors, experienced within the human-companion animal relationship, contribute to the guardians' well-being as well as to their prosocial inclinations toward their companion animals. By doing so, the current findings allowed to identify the relational factors that promote greater mutuality within human-companion animal relations. While companion animals are ubiquitous and normative in many human societies, uncovering which specific aspects within the human-companion animal relationship could be individually and socially promoted appears useful for building more sustainable human-companion animal relations.

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Data Availability: The data and codes that support the findings presented in this manuscript can be accessed, for verification purposes only (see Amiot et al., 2025). Researchers interested in collaborating on the current dataset can contact the lead author of the paper.

Supplementary Materials

For this article, data and code are available (see Amiot et al., 2025).

- Data, Code (see Amiot et al., 2025)
- Supplementary tables, measures, results, questionnaire (see Amiot et al., 2026)

Index of Supplementary Materials

Amiot, C. E., Gagné, C., & Bastian, B. (2025). *Pet presence correlational study* [Data, Code]. OSF. https://osf.io/7rznx

Amiot, C. E., Gagné, C., & Bastian, B. (2026). *Supplementary materials to "Capturing the relational factors within human-companion animal relationships that predict human psychological well-being and caring for companion animals"* [Tables, measures, results, questionnaire]. PsychOpen GOLD. https://doi.org/10.23668/psycharchives.21905

References

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology, 19*(6), 586–592. https://doi.org/10.1037/0278-6133.19.6.586

Aknin, L. B., Barrington-Leigh, C. P., Dunn, E. W., Helliwell, J. F., Burns, J., Biswas-Diener, R., Kemeza, I., Nyende, P., Ashton-James, C. E., & Norton, M. I. (2013). Prosocial spending and well-being: Cross-cultural evidence for a psychological universal. *Journal of Personality and Social Psychology, 104*(4), 635–652. https://doi.org/10.1037/a0031578

American Veterinary Medical Association. (n.d.). *Pet ownership*. Retrieved January 27, 2025, from https://www.avma.org/resources-tools/pet-owners/responsible-pet-ownership

Amiot, C. E., & Bastian, B. (2015). Toward a psychology of human–animal relations. *Psychological Bulletin, 141*(1), 6–47. https://doi.org/10.1037/a0038147

Amiot, C. E., & Bastian, B. (2017). Solidarity with animals: Assessing a relevant dimension of social identification with animals. *PLoS One, 12*(1), Article e0168184. https://doi.org/10.1371/journal.pone.0168184

Amiot, C. E., & Bastian, B. (2023). What is beneficial in our relationships with pets? Exploring the psychological factors involved in human–pet relations and their associations with human wellbeing. *Anthrozoös, 36*(4), 579–603. https://doi.org/10.1080/08927936.2023.2210437

Amiot, C. E., Gagné, C., & Bastian, B. (2022). Pet ownership and psychological well-being during the COVID-19 pandemic. *Scientific Reports, 12*, Article 6091. https://doi.org/10.1038/s41598-022-10019-z

Amiot, C. E., & Santerre-Bélec, L. (2022). Toward more equal and mutual human-pet relations: Insights and possible solutions based on social psychological theories. *Frontiers in Veterinary Science, 9*, Article 1009267. https://doi.org/10.3389/fvets.2022.1009267

Animal Medicines Australia. (2022). *Pets in Australia: A national survey of pets and people - Animal Medicines Australia* [National Survey]. Animal Medicines Australia (AMA). https://animalmedicinesaustralia.org.au/report/pets-in-australia-a-national-survey-of-pets-and-people-2/

Arluke, A., & Rowan, A. N. (2020). *Underdogs: Pets, people, and poverty*. The University of Georgia press.

AVMA. (2024). *U.S. pet ownership statistics*. American Veterinary Medical Association (AVMA). https://www.avma.org/resources-tools/reports-statistics/us-pet-ownership-statistics

Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment* (2nd ed., Vol. 1). Basic Books.

Byrne, D. E. (1971). *The attraction paradigm*. Academic Press.

Canadian Animal Health Institute. (2022). *Biennial pet population survey shines a light on how pet population statistics changed over the course of the COVID-19 pandemic, and pet owner habits*. Canadian Animal Health Institute (CAHI). https://cahi-icsa.ca/press-releases/2022-latest-canadian-pet-population-figures-released

Cassels, M. T., White, N., Gee, N., & Hughes, C. (2017). One of the family? Measuring young adolescents' relationships with pets and siblings. *Journal of Applied Developmental Psychology, 49*, 12–20. https://doi.org/10.1016/j.appdev.2017.01.003

Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-Group Friendships and Intergroup Attitudes: A Meta-Analytic Review. *Personality and Social Psychology Review, 15*(4), 332–351. https://doi.org/10.1177/1088868311411103

Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research, 28*(3), 195–223. https://doi.org/10.1007/BF01079018

El-Alayli, A., Lystad, A. L., Webb, S. R., Hollingsworth, S. L., & Ciolli, J. L. (2006). Reigning cats and dogs: A pet-enhancement bias and its link to pet attachment, pet-self similarity, self-enhancement, and well-being. *Basic and Applied Social Psychology, 28*(2), 131–143. https://doi.org/10.1207/s15324834basp2802_3

Ellis, A., Hawkins, R. D., Stanton, S. C. E., & Loughnan, S. (2024). The association between companion animal attachment and depression: A systematic review. *Anthrozoös, 37*(6), 1067–1105. https://doi.org/10.1080/08927936.2024.2384210

Fredrickson, B. L. (2013). Positive Emotions Broaden and Build. In P. Devine & A. Plant (Eds.), *Advances in experimental social psychology* (Vol. 47, pp. 1–53). Elsevier. https://doi.org/10.1016/B978-0-12-407236-7.00001-2

George, R., Jones, B., Spicer, J., & Claire Budge, R. (1998). Health correlates of compatibility and attachment in human-companion animal relationships. *Society & Animals : Social Scientific Studies of the Human Experience of Other Animals, 6*(3), 219–234. https://doi.org/10.1163/156853098X00168

HABRI. (2021). *Benchmark survey of U.S. pet owners*. https://habri.org/pet-owners-survey/

Harding, M. J. (2018). Access to veterinary care for low-income Canadians. *The Canadian Veterinary Journal, 59*(10), 1121–1122.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). The Guilford Press.

Herzog, H. (2011). The impact of pets on human health and psychological well-being: Fact, fiction, or hypothesis? *Current Directions in Psychological Science, 20*(4), 236–239. https://doi.org/10.1177/0963721411415220

Johnston, B. M., & Glasford, D. E. (2018). Intergroup contact and helping: How quality contact and empathy shape outgroup helping. *Group Processes & Intergroup Relations, 21*(8), 1185–1201. https://doi.org/10.1177/1368430217711770

Kanat-Maymon, Y., Wolfson, S., Cohen, R., & Roth, G. (2021). The benefits of giving as well as receiving need support in human–pet relations. *Journal of Happiness Studies, 22*(3), 1441–1457. https://doi.org/10.1007/s10902-020-00279-9

Kline, R. B. (2023). *Principles and practice of structural equation modeling* (5th ed.). Guilford.

Koskela, A., Törnqvist, H., Somppi, S., Tiira, K., Kykyri, V.-L., Hänninen, L., Kujala, J., Nagasawa, M., Kikusui, T., & Kujala, M. V. (2024). Behavioral and emotional co-modulation during dog–owner interaction measured by heart rate variability and activity. *Scientific Reports, 14*, Article 25201. https://doi.org/10.1038/s41598-024-76831-x

Lamic, A. (2022, July 8). *Unconditional love: The pets of Vancouver's Downtown Eastside*. CBC News. https://www.cbc.ca/news/canada/british-columbia/downtown-eastside-pets-1.6515178

Leconstant, C., & Spitz, E. (2022). Integrative model of human-animal interactions: A one health–one welfare systemic approach to studying HAI. *Frontiers in Veterinary Science, 9*, Article 656833. https://doi.org/10.3389/fvets.2022.656833

Mackenzie, J. S., & Jeggo, M. (2019). The one health approach—Why is it so important? *Tropical Medicine and Infectious Disease, 4*(2), Article 88. https://doi.org/10.3390/tropicalmed4020088

Mellor, D. J., Beausoleil, N. J., Littlewood, K. E., McLean, A. N., McGreevy, P. D., Jones, B., & Wilkins, C. (2020). The 2020 Five Domains Model: Including human–animal interactions in assessments of animal welfare. *Animals, 10*(10), Article 1870. https://doi.org/10.3390/ani10101870

Mueller, M. K., Callina, K. S., Richer, A. M., & Charmaraman, L. (2024). Longitudinal associations between pet relationship quality and socio-emotional functioning in early adolescence. *Social Development, 33*(1), Article e12718. https://doi.org/10.1111/sode.12718

Nelson, S. K., Kushlev, K., & Lyubomirsky, S. (2014). The pains and pleasures of parenting: When, why, and how is parenthood associated with more or less well-being? *Psychological Bulletin, 140*(3), 846–895. https://doi.org/10.1037/a0035444

Orpana, H. (2008). Using the national population health survey to identify factors associated with patterns of psychological distress over 10 years. *Healthcare Policy, 3*(4), 55–65. https://doi.org/10.12927/hcpol.2008.19921

Rodriguez, K. E., Herzog, H., & Gee, N. R. (2021). Variability in human-animal interaction research. *Frontiers in Veterinary Science, 7*, Article 619600. https://doi.org/10.3389/fvets.2020.619600

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships as developed in the client-centred framework. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 3, pp. 184–256). McGraw-Hill.

Schmid, J., & Leiman, J. M. (1957). The development of hierarchical factor solutions. *Psychometrika, 22*(1), 53–61. https://doi.org/10.1007/BF02289209

Sneddon, J., Ye, S., & Lee, J. A. (2022). The effect of similarity between owner's values and their perceptions of their pet's values on life satisfaction. *Frontiers in Psychology, 13*, Article 1029883. https://doi.org/10.3389/fpsyg.2022.1029883

Teo, J. T., & Thomas, S. J. (2019). Psychological mechanisms predicting wellbeing in pet owners: Rogers' core conditions versus bowlby's attachment. *Anthrozoös, 32*(3), 399–417. https://doi.org/10.1080/08927936.2019.1598660

Tonidandel, S., & LeBreton, J. M. (2011). Relative Importance Analysis: A Useful Supplement to Regression Analysis. *Journal of Business and Psychology, 26*(1), 1–9. https://doi.org/10.1007/s10869-010-9204-3

Tonidandel, S., LeBreton, J. M., & Johnson, J. W. (2009). Determining the statistical significance of relative weights. *Psychological Methods, 14*(4), 387–399. https://doi.org/10.1037/a0017735

Wiens, J., Pearson, T., & Whalen, C. (2024). Foster parents' experiences with animal companions while fostering children and youth. *Human-Animal Interactions, 12*(1), Article 21.

Wilson, G., & Cousins, J. (2003). Partner similarity and relationship satisfaction: Development of a compatibility quotient. *Sexual and Relationship Therapy, 18*(2), 161–170. https://doi.org/10.1080/1468199031000099424

Wolff, H.-G., & Preising, K. (2005). Exploring item and higher order factor structure with the Schmid-Leiman solution: Syntax codes for SPSS and SAS. *Behavior Research Methods, 37*(1), 48–58. https://doi.org/10.3758/BF03206397

Zilcha-Mano, S., Mikulincer, M., & Shaver, P. R. (2011). An attachment perspective on human–pet relationships: Conceptualization and assessment of pet attachment orientations. *Journal of Research in Personality, 45*(4), 345–357. https://doi.org/10.1016/j.jrp.2011.04.001

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