

Article

Beyond the Behavior: Caregiver Guilt, Burden, and Well-Being Among Owners of Dogs with Behavior Problems

Lori Kogan ^{1,*} , Jennifer Currin-McCulloch ²  and Valerie Bogie ³ ¹ Department of Clinical Sciences, Colorado State University, Fort Collins, CO 80523, USA² School of Social Work, Colorado State University, Fort Collins, CO 80523, USA;
jen.currin-mcculloch@colostate.edu³ Insight Animal Behavioral Services, P.C., Chicago, IL 60618, USA; valerie@insightfulanimals.com

* Correspondence: lori.kogan@colostate.edu

Abstract

Dog behavior problems are a common source of stress for owners, yet the psychological mechanisms underlying this distress remain poorly understood. This cross-sectional study online survey examines relationships among dog behavioral characteristics, caregiver guilt, burden, psychological outcomes, social context, veterinary communication quality, and decision-making regarding rehoming and euthanasia. Among 565 participants, 33% met criteria for probable anxiety, 20% for probable depression, and 78% for elevated caregiver burden; 53% reported feeling alone, and 40% reported feeling socially isolated. Dog behavior burden was associated with caregiver guilt, caregiver burden, and decision-making related to euthanasia and rehoming, but not with depression or life satisfaction. In contrast, caregiver guilt was consistently associated with higher anxiety, higher depression, greater caregiver burden, and lower life satisfaction. Informal and self-guided resources were widely used but perceived as less effective, and although veterinarians were commonly consulted, they were rated as less helpful than board-certified veterinary behaviorists, trainers, or prescribed medications. Findings suggest that caregiver distress may be driven less by the objective severity of behavior problems and more by how these experiences are interpreted, evaluated, and socially reinforced, highlighting the importance of addressing caregiver experiences alongside canine behavior.

Keywords: behavior; euthanasia; rehoming; guilt; depression; anxiety; caregiver burden; life satisfaction; veterinary communication



Academic Editor: Jan S. Suchodolski

Received: 27 April 2026

Revised: 27 May 2026

Accepted: 28 May 2026

Published: 2 June 2026

Copyright: © 2026 by the authors.

Licensee MDPI, Basel, Switzerland.

This article is an open access article distributed under the terms and conditions of the [Creative Commons Attribution \(CC BY\)](https://creativecommons.org/licenses/by/4.0/) license.

1. Introduction

Dogs are among the most popular companion animals in the United States, present in approximately 45% of households [1]. The human–dog bond is typically characterized by strong emotional attachment and reciprocal well-being [2]. Dogs have been shown to provide numerous benefits to owners, including increased well-being [3–9], stress reduction [10–12], a buffer against depression [13–17] and anxiety [18–20], and social isolation [12,13,21,22]. The social support dimension of dog ownership may be especially significant: dog owners report receiving comparable or greater support from their dogs than from most human relationship partners and describe their relationships with their dogs as involving fewer negative interactions than their human relationships [23,24]. Yet, dog ownership comes at a cost, including substantial financial expenditures, time demands, constraints on daily life and travel, concerns regarding dogs' health and well-being, and

anticipatory grief over eventual loss [25,26]. In addition, behavior problems, including aggression, fear, anxiety, and separation-related distress, are common in pet dogs and represent a significant source of stress for owners [27,28].

Dog behavior problems are broadly defined as behaviors perceived as problematic or dangerous and represent one of the leading reasons for relinquishment and euthanasia of companion dogs [29–31]. Problem behaviors such as leash reactivity, aggression, severe fear and anxiety, and separation-related behavior are common [32,33]. Yet not all owners perceive or report these behaviors as problems; research suggests that approximately 65% of owners whose dogs exhibit undesirable behaviors do not view them as warranting intervention. Confidence level, prior experience, and coping styles all play key roles in owners' perceptions [32,34,35]. For those who do identify behaviors as a problem, however, the impact on well-being can be significant. A growing body of literature documents the negative effects of dog behavior problems on owners, including increased stress, frustration, social withdrawal, anxiety, depression, and reduced life satisfaction [29,36].

Central to understanding these detrimental effects is caregiver burden, defined as the strain that comes from providing ongoing care for a loved one with challenging needs [37]. Originally developed in human medicine to describe the experience of caring for individuals with chronic or terminal illness, caregiver burden has been increasingly recognized in veterinary contexts [38]. Owners of dogs with behavior problems experience caregiver burden at rates comparable to or exceeding those seen in owners of dogs with serious physical conditions [37,39,40]. In a retrospective analysis of clinical records from a veterinary behavior referral practice, for example, 69% of owners met criteria for significant burden [39].

Less examined, but equally important, is the role of guilt in the experience of owners managing dog behavior problems. Drawing from Doka's [41] framework of disenfranchised grief (sorrow that is not publicly acknowledged or socially supported), Kogan et al. [42] introduced the concept of disenfranchised guilt to describe the unrecognized emotional burden experienced by pet owners who feel they have fallen short in their caregiving responsibilities. Guilt in this context is rarely named or validated, yet it is a common and distressing feature of pet ownership [42]. Prior work has established that dog-related guilt is prevalent, associated with symptoms of anxiety and depression, and tied to perceived caregiving inadequacy and role conflict, including concerns about training practices, meeting the dog's behavioral and emotional needs, and balancing competing demands [42–44]. These findings suggest that guilt may function as a key psychological mechanism connecting the experience of behavior problems to broader owner distress, yet this pathway has not been directly examined among owners of dogs with significant behavior challenges.

The social context in which owners of dogs with behavior problems operate can further compound negative effects. Owners of dogs with behavior problems frequently report feeling judged by others, stigmatized for their dogs' behavior in public, and misunderstood by friends, family, and even professionals [45–47]. Despite the widespread availability of online communities and informal support resources, many owners report feeling isolated and alone in managing their dogs' challenges [45]. Access to professional behavior support, particularly board-certified veterinary behaviorists, is often limited by cost, availability, and referral barriers [29,48]. In addition, while veterinarians play an important role in this context, many report feeling undertrained in behavior and inadequately prepared to support clients with behavior-related challenges [49,50]. Together, these intersecting challenges—elevated caregiver burden, social stigma, limited professional support, and inadequate veterinary preparation—create conditions in which owners may experience

significant psychological distress, including guilt, yet receive little guidance on how to navigate the difficult decisions that often follow.

These contextual pressures also suggest that the relationship between caregiver guilt and psychological distress is unlikely to be straightforward. Guilt may reflect broader psychological vulnerability, arise from repeated frustration with unsuccessful interventions, or develop alongside other forms of caregiver stress rather than functioning as a simple cause of distress [51–54]. Transactional models of stress and coping suggest that emotional responses and caregiving appraisals continuously influence one another, making it difficult to determine whether guilt is primarily a driver or result of owner distress [53]. To date, however, the specific role of caregiver guilt, within this broader stress process, has not been directly examined among owners of dogs with significant behavior challenges, and the pathways linking guilt to psychological outcomes in this population remain unclear.

The present study was designed to examine the psychological, social, and decision-making experiences of dog owners managing behavior problems, with a specific focus on the role of caregiver guilt. Using a cross-sectional online survey, we assessed the relationships among dog behavior characteristics, caregiver guilt, caregiver burden, psychological outcomes (anxiety, depression, and life satisfaction), social context, veterinary communication quality, and decision-making related to rehoming and euthanasia. We hypothesized that caregiver guilt would emerge as an important factor linking behavior-related challenges to owner psychological distress, and that social context and veterinary communication would independently shape both psychological outcomes and critical caregiving decisions.

2. Materials and Methods

2.1. Study Design and Recruitment

This study utilized a cross-sectional, anonymous online survey to examine the experiences of individuals caring for dogs with behavior problems, with a focus on caregiver guilt and burden, psychological well-being, social context, veterinary communication, and decision-making related to rehoming or euthanasia. Participants were recruited through a convenience sample via online platforms, including email listservs, social media groups, and forums specifically related to dog ownership and behavior challenges. No formal exclusion criteria beyond adult status were applied, and eligibility was based on self-identification as someone currently experiencing behavior problems with their dog. No objective behavioral or clinical criteria were used to verify the presence or severity of behavior problems.

Recruitment materials invited adult individuals who were currently experiencing behavior issues with their dog to participate. The survey was administered using Qualtrics (Provo, UT, USA) and took approximately 10 min to complete. All participants provided informed consent before beginning the survey. This study was approved by Colorado State University's Institutional Review Board (Protocol #7699).

2.2. Measures

The survey included measures assessing dog behavior characteristics, caregiver guilt, caregiver burden, psychological well-being, social context (e.g., stigma and support), resource use, veterinary communication, coping and social support, decision-making related to rehoming or euthanasia, and demographic characteristics.

Dog behavior characteristics were assessed by asking participants to indicate whether their dog had exhibited a range of behavior problems, including aggression toward unfamiliar people, aggression toward familiar people, aggression toward familiar animals, aggression toward unfamiliar animals, resource guarding, severe fear/anxiety, separa-

tion anxiety, noise phobia, destructive behavior, house-soiling, and leash reactivity. For each endorsed behavior, participants reported duration using four categories (<3 months, 3–12 months, 1–3 years, >3 years) and severity using four response options ranging from “bothers me a little bit” to “bothers me a great deal.” Participants also reported whether any behavior problems had resulted in injury to another animal or a person, with response options of no injury, minor injury, or serious injury. Injury variables were dichotomized (no injury vs. any injury) for analysis.

A composite behavior burden score was calculated by multiplying presence, duration, and severity for each behavior, and these scores were then summed to create a total behavior burden score. Presence was coded as 0 (absent) or 1 (present), and duration and severity were coded on ordinal scales ranging from 1 to 4.

Caregiver guilt was assessed using a dog-adapted version of the Caregiver Guilt Questionnaire (CGQ) originally developed by Losada et al. [52]. Items were modified to reflect caregiving for a dog with behavior challenges. The adapted measure assessed five domains of guilt: guilt about doing wrong by the dog (7 items; e.g., feeling bad about negative emotions or reactions toward the dog), guilt about failing to meet caregiving challenges (6 items; e.g., feeling one is not doing a good enough job; one item reverse-coded), guilt about self-care (4 items; e.g., feeling bad about engaging in non-caregiving activities), guilt about neglecting others (2 items; e.g., feeling one is not adequately attending to other relationships), and guilt toward other people (3 items; e.g., negative feelings toward others who do not share caregiving responsibilities). Items were rated on a Likert-type scale ranging from 1 (never) to 5 (always or almost always), and subscale scores were calculated as the sum of items within each domain after reverse coding where appropriate. Higher scores indicated greater guilt. In the present study, internal consistency for the subscales ranged from acceptable to excellent ($\alpha = 0.75\text{--}0.91$), and the total caregiver guilt score demonstrated acceptable reliability ($\alpha = 0.71$). These values are comparable to those reported for the original Caregiver Guilt Questionnaire (CGQ), in which Cronbach’s α coefficients were 0.89 for guilt about doing wrong by the care recipient, 0.76 for guilt about failing to meet caregiving challenges, 0.69 for guilt about self-care, 0.86 for guilt about neglecting others, and 0.61 for guilt toward other people, with an overall scale reliability of $\alpha = 0.88$.

Caregiver burden was assessed using the Canine Caregiver Burden Assessment Tool–Abbreviated (CCBAT-A; Spitznagel, [40]). This 5-item measure assesses perceived burden associated with caring for a dog over the past four weeks. Items included statements such as “Caring for my dog has been tiring,” “I have felt embarrassed by my dog’s behavior,” “I have been unable to care for my dog as much as I would like to,” “I have worried that my dog will need more care in the future,” and “Overall, I have felt burdened by the care I provide for my dog.” Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Items were summed to create a total score, with higher scores indicating greater caregiver burden. Internal consistency in the present sample was acceptable ($\alpha = 0.78$), consistent with the range reported in the validation study ($\alpha = 0.72\text{--}0.73$; Spitznagel, [40]). A score of ≥ 12 has been suggested as indicative of elevated caregiver burden (Spitznagel, [40]).

Psychological well-being was assessed using validated screening measures. Anxiety was assessed using the GAD-2, a two-item validated screening measure [55]. Participants rated how often they had been bothered by feeling nervous, anxious, or on edge and by not being able to stop or control worrying over the past two weeks on a scale from 0 (not at all) to 3 (nearly every day). Scores were summed to create a total score ranging from 0 to 6, with higher scores indicating greater anxiety ($\alpha = 0.88$). Depression was assessed using the PHQ-2, a two-item validated measure assessing how often participants had been bothered over the past two weeks by little interest or pleasure in doing things and by feeling down,

depressed, or hopeless [55]. The same 0 to 3 response scale was used, and summed scores ranged from 0 to 6, with higher scores indicating greater depressive symptoms ($\alpha = 0.92$). Life satisfaction was assessed using the Cantril Ladder [56]. Participants rated their current life on a scale from 0 (worst possible life) to 10 (best possible life), with higher scores indicating greater well-being.

Social norms and external pressure were assessed by asking participants to report their agreement with statements related to social judgment, stigma, and pressure associated with their dog's behavior problems. Items included statements such as "People have made me feel like I am a 'bad dog owner' because of my dog's issues," "I feel pressure to keep my dog no matter what," "I feel pressure to rehome/euthanize my dog for safety reasons," "I feel that society judges owners of dogs with behavior problems harshly," and "Advice from others made me feel more guilty." Responses ranged from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater perceived stigma or pressure.

Resource use and helpfulness were assessed by asking participants which resources they had used to help with their dog's behaviors, including a veterinarian, friends/family, dog trainer, internet resources (e.g., Reddit, Facebook), board-certified veterinary behaviorist, online videos, prescribed medication, supplements, and shelters/rescue consultation. For each selected resource, participants rated helpfulness on a 5-point scale ranging from 1 (not at all helpful) to 5 (extremely helpful).

Veterinary communication was assessed using a multi-item scale developed for this study. Nine items assessed perceived empathy, clarity, understanding, and support from the veterinarian, including comfort discussing behavior issues, perceived understanding of the emotional impact of the dog's behavior, referral to a specialist, empathy and respect, listening, explanation of treatment options, sharing of resources, provision of clear nonjudgmental information, and perceived judgment. Responses ranged from 1 (strongly disagree) to 5 (strongly agree). One item assessing perceived judgment was reverse-coded. Items were summed to create a total score, with higher scores reflecting more positive veterinary communication. Internal consistency was high ($\alpha = 0.907$).

Coping and social support were assessed using Likert-type items ranging from 1 (strongly disagree) to 5 (strongly agree). Items included reaching out to others (e.g., for emotional support, participation in online or facilitated support groups, comfort talking openly about the dog's behavior problems), avoidant coping (e.g., trying to manage the dog's behavior entirely alone, avoiding discussion because of fear of judgment, socially isolating because of the dog's behavior challenges), and perceived social support and isolation (e.g., worrying others would judge the owner, having a strong social support network, feeling alone in managing their dog's behavior issues). These items were analyzed individually and as conceptually related constructs.

Decision-making related to relinquishment was assessed by asking participants whether they had ever considered rehoming or euthanizing their dog because of behavior issues. Response options were "Yes, considered rehoming," "Yes, considered euthanasia," "Yes, considered both," and "No."

The survey also included several open-ended questions asking participants to describe the hardest part of caring for a dog with significant behavior problems, what they wished veterinarians, trainers, or others understood about their experience, and what they were most proud of in how they had cared for their dog. These qualitative data will be analyzed separately in another paper and are not included in the present analyses.

Demographic variables included age, gender, race, ethnicity, country of residence, presence of children in the household, years of dog ownership, and household gross income.

2.3. Data Analysis

All analyses were conducted using SPSS (Chicago, IL, USA) version 31.01 statistical software. Descriptive statistics (means, standard deviations, ranges, and frequencies) were calculated for all study variables to characterize the sample and key constructs. Denominators for descriptive statistics varied slightly due to item-level missing data.

Pearson product-moment correlations were computed among all primary continuous study variables, including behavior burden, caregiver guilt (total and subscale scores), psychological outcomes, caregiver burden, life satisfaction, and veterinary communication.

To examine predictors of psychological and well-being outcomes, a series of multivariable general linear models (GLMs) was conducted. Separate models were estimated for anxiety (GAD-2), depression (PHQ-2), caregiver burden (CCBAT-A; included as a predictor in all models except when specified as the dependent variable), and life satisfaction (Cantril ladder score). Continuous predictors in each model included veterinary communication, total behavior burden, caregiver burden, and total caregiver guilt. Demographic covariates included age (categorical) and the presence of children in the household (yes/no). All models were estimated using Type III sums of squares, with statistical significance evaluated at $\alpha = 0.05$. All predictors were entered simultaneously into each model. Effect sizes were reported as partial eta squared (η^2).

A multinomial logistic regression model was conducted to examine predictors of having considered rehoming or euthanasia due to dog behavior problems. The outcome variable was treated as nominal with four categories: no consideration (reference group), considered rehoming, considered euthanasia, and considered both rehoming and euthanasia. Predictors included veterinary communication, total behavior burden, caregiver burden, total caregiver guilt, injury to another animal (yes/no), injury to a person (yes/no), and presence of children in the household. Parameter estimates are presented as log-odds coefficients (B), standard errors, odds ratios (OR), and 95% confidence intervals. Model fit was evaluated using likelihood ratio tests and pseudo- R^2 indices [57–59]. All predictors were retained in the multinomial model regardless of statistical significance to allow for consistent comparison across outcome categories and to avoid bias associated with stepwise variable selection procedures.

Measures reflected varying recall periods consistent with instrument design, including the past two weeks for anxiety and depression, the past four weeks for caregiver burden, and more general or cumulative experiences for caregiver guilt, social pressure, coping behaviors, and perceived support.

Visual inspection of the behavior burden score indicated moderate positive skew. Given the large sample size and the robustness of general linear models to moderate violations of normality, analyses were conducted using the untransformed variable. For general linear models, residual diagnostics were examined to confirm that model assumptions (linearity, homoscedasticity, and absence of influential outliers) were adequately met. For the multinomial logistic regression model, multicollinearity and overall model fit were evaluated using variance inflation factors and likelihood-based fit indices. Variance inflation factors indicated no evidence of problematic collinearity among predictors.

All analyses were conducted using available data. Cases with missing data on variables included in a given model were excluded using listwise deletion. Given the low proportion of missing data across variables, listwise deletion was deemed appropriate and unlikely to bias results. As a result, sample sizes vary slightly across analyses.

3. Results

A total of 565 participants completed the survey. Participants were primarily White (493/565, 87.3%), non-Hispanic or Latina/o/x, women (479/565, 84.8%), with no children

under the age of 18 in the household (456/531, 85.9%), living in the United States (473/532, 88.9%) (Table 1). The majority of participants (279/530, 52.6%) reported owning dogs for more than 15 years.

Table 1. Participant demographic characteristics.

Variable (N)	Category	n (%)
Race (N = 565) ^a	American Indian or Alaska Native	3 (0.5)
	Asian	14 (2.5)
	Black or African American	5 (0.9)
	Native Hawaiian or Pacific Islander	1 (0.2)
	White	493 (87.3)
	Another race	12 (2.1)
	Prefer not to say	18 (3.2)
Gender (N = 565)	Woman	479 (84.8)
	Man	31 (5.5)
	Nonbinary/transgender/other	55 (9.7)
Ethnicity (N = 496)	Hispanic or Latina/o/x	33 (6.7)
	Not Hispanic or Latina/o/x	463 (93.3)
Country (N = 532)	United States	473 (88.9)
	Other countries	59 (11.1)
Children in Household (N = 531)	Yes	75 (14.1)
	No	456 (85.9)
Income (N = 450)	Under \$25,000	13 (2.9)
	\$25,000–\$49,999	38 (8.4)
	\$50,000–\$74,999	64 (14.2)
	\$75,000–\$99,999	72 (16.0)
	\$100,000–\$149,999	95 (21.1)
	\$150,000–\$199,999	70 (15.6)
	\$200,000 or more	98 (21.8)
Years Owning Dogs (N = 530)	<1 year	6 (1.1)
	1–3 years	47 (8.9)
	4–7 years	101 (19.1)
	8–15 years	97 (18.3)
	>15 years	279 (52.6)
Age (N = 529)	18–24	14 (2.6)
	25–34	128 (24.2)
	35–44	140 (26.5)
	45–54	96 (18.1)
	55–64	84 (15.9)
	65–74	62 (11.7)
	75+	5 (0.9)

Note. ^a Race was assessed using a select-all-that-apply format.

Age was reported by 529 participants. The largest groups were ages 35–44 (140/529, 26.5%) and 25–34 (128/529, 24.2%). For those who reported income ($n = 450$), the largest proportions reported annual household incomes of \$200,000 or more (98/450, 21.8%) and \$100,000–\$149,999 (95/450, 21.1%) (Table 1).

3.1. Descriptive Statistics and Clinical Thresholds

Descriptive statistics for primary study variables are presented in Table 2. Participants reported moderate levels of psychological distress, caregiver burden, and guilt related to managing their dog’s behavior problems. Mean anxiety scores on the GAD-2 were 2.16 (SD = 1.89; $n = 564$), and mean depression scores on the PHQ-2 were 1.44 (SD = 1.80; $n = 564$).

Table 2. Descriptive statistics and clinical thresholds for primary study variables.

Variable	<i>n</i>	Mean (SD)	Range	Clinical Cutoff	<i>n</i> (%) Above Cutoff
Anxiety (GAD-2)	564	2.16 (1.89)	0–6	≥3	186 (33.0%)
Depression (PHQ-2)	564	1.44 (1.80)	0–6	≥3	112 (19.9%)
Total Caregiver Guilt	565	56.61 (14.36)	25–104	—	—
Doing Wrong by Dog	565	21.18 (6.56)	7–35	—	—
Failing to Meet Challenges	565	16.37 (4.80)	6–29	—	—
Self-Care	565	8.31 (3.29)	3–15	—	—
Neglecting Others	565	5.04 (2.23)	2–10	—	—
Toward Other People	564	5.71 (2.61)	3–15	—	—
Caregiver Burden	565	15.03 (4.57)	5–25	≥12	438 (77.5%)
Life Satisfaction (Cantril Ladder)	539	6.15 (1.85)	0–10	—	—
Veterinary Communication	551	32.89 (7.84)	9–45	—	—

Note. GAD-2 = Generalized Anxiety Disorder-2; PHQ-2 = Patient Health Questionnaire-2.

Using established screening thresholds (scores ≥ 3), 186 of 564 participants (33.0%) met criteria for probable anxiety, and 112 of 564 (19.9%) met criteria for probable depression. These rates are higher than those observed in the general U.S. adult population, where approximately 12–15% and 8–10% of adults, respectively, screen positive on the GAD-2 and PHQ-2 using the same thresholds [60].

Participants reported relatively high levels of caregiver guilt, with a mean total guilt score of 56.61 (SD = 14.36; $n = 565$). Across subscales, the highest levels of guilt were observed for guilt about doing wrong by the dog ($M = 21.18$, SD = 6.56), followed by guilt about failing to meet caregiving challenges ($M = 16.37$, SD = 4.80), guilt related to self-care ($M = 8.31$, SD = 3.29), guilt about neglecting others ($M = 5.04$, SD = 2.23), and guilt toward other people ($M = 5.71$, SD = 2.61), suggesting that guilt was a prominent and multifaceted experience among participants.

Caregiver burden scores in the present study were notably higher than those reported in the initial validation of the Canine Caregiver Burden Assessment Tool (CCBAT-A); [40]. In that study, mean CCBAT-A scores in a behavioral sample were 11.55 (SD = 4.26), compared to 15.03 (SD = 4.57) in the present sample. Scores in the current study also exceeded those observed in both the overall validation samples ($M \approx 11.0$) and healthy pet owner samples ($M = 8.84$), indicating substantially elevated caregiver burden. Consistent with this pattern, 77.5% of participants in the present study met criteria for elevated burden, suggesting that caregiving strain in this population may be particularly high and potentially reflective of more severe behavioral challenges or cumulative caregiving demands.

Participants reported moderate levels of overall life satisfaction, with a mean score of 6.15 (SD = 1.85; $n = 539$) on the Cantril ladder. Based on established categorizations, 53 of 539 participants (9.8%) were classified as “suffering” (scores 0–3), 215 (39.9%) as “struggling” (scores 4–6), and 271 (50.3%) as “thriving” (scores 7–10), indicating variability in well-being across the sample. Compared to general population benchmarks, where mean Cantril ladder scores in U.S. samples typically fall between 6.5 and 7.0 and a greater proportion of individuals are classified as thriving, participants in the present study reported slightly lower life satisfaction, with fewer individuals thriving and more classified as struggling or suffering, suggesting modestly reduced overall well-being [61]. Participants also reported moderately positive veterinary communication ($M = 32.89$, SD = 7.84; $n = 551$), indicating generally favorable but variable experiences with veterinary interactions.

3.2. Dog Behavior Characteristics

Participants reported a wide range of behavior problems. The most commonly reported issues were severe fear/anxiety (304/565, 53.8%), aggression toward unfamiliar animals (300/565, 53.1%), and leash reactivity (297/565, 52.6%) (Table 3).

Table 3. Prevalence, duration, and perceived severity of dog behavior problems (N = 565).

Behavior	<i>n</i> (%) Reporting	Duration > 3 Years <i>n</i> /N (%)	“Quite a Bit” or “A Great Deal” <i>n</i> /N (%)
Severe Fear/Anxiety	304 (53.8)	183/302 (60.6)	197/303 (65.0)
Aggression Toward Unfamiliar Animals	300 (53.1)	166/297 (55.9)	178/297 (59.9)
Leash Reactivity	297 (52.6)	171/295 (58.0)	183/294 (62.3)
Aggression Toward Unfamiliar People	260 (46.0)	143/259 (55.2)	165/260 (63.5)
Separation Anxiety	194 (34.3)	108/194 (55.7)	117/192 (60.9)
Resource Guarding	187 (33.1)	95/185 (51.4)	80/185 (43.2)
Noise Phobia	164 (29.0)	92/161 (57.1)	80/164 (48.8)
Aggression Toward Familiar Animals	132 (23.4)	49/130 (37.7)	105/130 (80.8)
Aggression Toward Familiar People	79 (14.0)	34/79 (43.0)	63/79 (79.7)
Destructive Behavior	65 (11.5)	25/65 (38.5)	36/65 (55.4)
House-Soiling	59 (10.4)	30/59 (50.8)	36/59 (61.0)

Among participants who reported each behavior, the majority indicated that problems were chronic in nature, with over half reporting durations greater than three years for several key behaviors. Specifically, 183/302 (60.6%) participants reporting severe fear/anxiety, 171/295 (58.0%) reporting leash reactivity, 92/161 (57.1%) reporting noise phobia, 166/297 (55.9%) reporting aggression toward unfamiliar animals, 108/194 (55.7%) reporting separation anxiety, 143/259 (55.2%) reporting aggression toward unfamiliar people, and 95/185 (51.4%) reporting resource guarding indicated that these issues had persisted for more than three years (Table 3).

Participants also reported a substantial perceived impact of behavior problems. Across several behavior types, a majority indicated that behaviors “bothered them quite a bit” or “a great deal.” For example, among those reporting aggression toward unfamiliar people, 165/260 (63.4%) participants reported high levels of impact. Similarly, high perceived impact was reported for aggression toward unfamiliar animals (178/297, 59.9%), separation anxiety (117/192; 60.9%), leash reactivity (183/294, 62.3%), and severe fear/anxiety (197/303, 65.0%) (Table 3).

3.3. Injury and Rehoming and/or Euthanasia Decisions

A substantial proportion of participants reported that their dog’s behavior had resulted in injury to another animal or a person. Specifically, 146/564 (25.9%) participants reported that their dog had caused injury to another animal, including 82/564 (14.5%) minor injuries and 64/564 (11.3%) serious injuries requiring medical attention, while 418/564 (74.1%) reported no such injuries. Injuries to people were reported more frequently. Overall, 230/564 (40.8%) participants indicated that their dog had caused injury to a person, including 180/564 (31.9%) minor injuries and 50/564 (8.9%) serious injuries, whereas 334/564 (59.2%) reported no injuries to a person.

When examining decision-making, 206/557 (37.0%) participants reported having considered rehoming and/or euthanizing their dog due to behavior issues. Specifically, 104/557 (18.7%) had considered rehoming only, 47/557 (8.4%) had considered euthanasia only, and 55/557 (9.9%) had considered both rehoming and euthanasia, while 351/557 (63.0%) reported no such considerations.

3.4. Perceived Social Pressure and Judgment

Descriptive analyses were conducted to examine participants' perceptions of social judgment, pressure, and guilt related to their dog's behavior problems. Overall, a substantial proportion of participants reported experiencing negative social evaluation and pressure related to their dog's behavior.

A total of 230/556 (41.4%) participants agreed or strongly agreed that others had made them feel like a "bad dog owner," and similarly, 247/557 (44.3%) participants agreed or strongly agreed that they felt pressure to keep their dog "no matter what." In contrast, relatively few participants (50/557, 9.0%) endorsed pressure to rehome or euthanize their dog for safety reasons (Table 4).

Table 4. Perceptions of social pressure, judgment, and guilt related to dog behavior problems.

Statement	Strongly Disagree <i>n</i> (%)	Disagree <i>n</i> (%)	Neutral <i>n</i> (%)	Agree <i>n</i> (%)	Strongly Agree <i>n</i> (%)
Felt Like a "Bad Dog Owner" (N = 556)	126 (22.7)	123 (22.1)	77 (13.8)	168 (30.2)	62 (11.2)
Pressure to Keep Dog No Matter What (N = 557)	120 (21.5)	94 (16.9)	96 (17.2)	127 (22.8)	120 (21.5)
Pressure to Rehome/Euthanize for Safety (N = 557)	365 (65.5)	106 (19.0)	36 (6.5)	38 (6.8)	12 (2.2)
Society Judges Owners Harshly (N = 557)	14 (2.5)	18 (3.2)	57 (10.2)	254 (45.6)	214 (38.4)
Advice from Others Increased Guilt (N = 556)	105 (18.9)	129 (23.2)	143 (25.7)	134 (24.1)	45 (8.1)

Perceived societal judgment was highly prevalent, with over four in five participants (468/557, 84.0%) agreeing or strongly agreeing that society judges owners of dogs with behavior problems harshly. Finally, 179/556 (32.2%) participants agreed or strongly agreed that advice from others made them feel more guilty (Table 4).

3.5. Use of Support Resources and Perceived Helpfulness

Participants reported using a wide range of resources to address their dog's behavior problems. The most commonly used resources were dog trainers (85.0%), prescribed medications (80.5%), and veterinarians (77.7%). Over half of participants also reported using board-certified veterinary behaviorists (59.5%), internet-based resources (57.7%), online videos (56.6%), and supplements (51.0%) (Table 5).

Table 5. Use of support resources and perceived helpfulness (N = 565; ordered by helpfulness).

Resource	Used <i>n</i> (%)	Not Used <i>n</i> (%)	N (Helpfulness)	% Very/Extremely Helpful
Board-certified Veterinary Behaviorist	336 (59.5)	229 (40.5)	330	69.7
Prescribed Medication	455 (80.5)	110 (19.5)	452	58.2
Dog Trainer	480 (85.0)	85 (15.0)	475	52.4
Veterinarian	439 (77.7)	126 (22.3)	435	28.2
Shelters/Rescue Consultation	75 (13.3)	490 (86.7)	75	22.7
Friends/Family	253 (44.8)	312 (55.2)	251	21.5
Internet Resources	326 (57.7)	239 (42.3)	323	20.5
Online Videos	320 (56.6)	245 (43.4)	318	18.0
Supplements	288 (51.0)	277 (49.0)	285	10.2

Perceived helpfulness varied substantially across resource types. Among those who used each resource, board-certified veterinary behaviorists were rated as the most helpful, with 69.7% of users reporting them as very or extremely helpful. Prescribed medications (58.2%) and dog trainers (52.4%) were also rated highly. In contrast, veterinarians were rated as very or extremely helpful by 28.2% of users (Table 5).

3.6. Social Support and Isolation

Participants reported a mixed pattern of both engagement with support resources and experiences of isolation related to their dog's behavior challenges (Table 6). A majority of participants indicated that they had reached out to others for emotional support, with 306/535 (57.2%) agreeing or strongly agreeing with this statement. Similarly, 361/534 (67.6%) participants reported feeling comfortable talking openly about their dog's behavior problems, and 290/533 (54.4%) indicated that they had a strong social support network. Engagement with more structured forms of support was less common. Approximately 227/535 (42.4%) participants reported participating in online message boards or chat groups, while only 156/534 (29.2%) reported participating in facilitated support groups.

Table 6. Social support engagement and perceptions (N = 533–535).

Statement	Strongly Disagree <i>n</i> (%)	Disagree <i>n</i> (%)	Neutral <i>n</i> (%)	Agree <i>n</i> (%)	Strongly Agree <i>n</i> (%)
Reached out for emotional support (N = 535)	56 (10.5)	97 (18.1)	76 (14.2)	235 (43.9)	71 (13.3)
Participate in online support communities (N = 535)	132 (24.7)	137 (25.6)	39 (7.3)	164 (30.7)	63 (11.8)
Participate in facilitated support groups (N = 534)	183 (34.3)	150 (28.1)	45 (8.4)	93 (17.4)	63 (11.8)
Comfortable talking about dog's behavior (N = 534)	13 (2.4)	76 (14.2)	84 (15.7)	221 (41.4)	140 (26.2)
Strong social support network (N = 533)	42 (7.9)	85 (15.9)	116 (21.8)	204 (38.3)	86 (16.1)

At the same time, a substantial proportion of participants endorsed experiences consistent with isolation or lack of support (Table 7). Nearly half of the participants (223/536; 41.6%) agreed or strongly agreed that they try to manage their dog's behavior entirely on their own. Similarly, 212/537 (39.5%) reported socially isolating due to their dog's behavior challenges, and 284/534 (53.2%) agreed or strongly agreed that they often feel alone in managing these issues. Concerns about social judgment were also common. A total of 206/534 (38.6%) participants reported avoiding discussions about their dog's behavior due to fear of judgment, and 206/534 (38.6%) reported worrying that others would judge them if they knew how difficult their dog's behavior is.

3.7. Correlations Among Study Variables

Pearson product–moment correlations were computed for all primary study variables (Table 8). Behavior burden was positively and significantly associated with total caregiver guilt ($r = 0.25$, $p < 0.001$) and with all five guilt subscales ($r_s = 0.10$ – 0.20 , all $p_s \leq 0.014$), with small but consistent effects across domains. Behavior burden was also positively associated with caregiver burden ($r = 0.27$, $p < 0.001$) and depression ($r = 0.08$, $p = 0.047$), while negatively associated with life satisfaction ($r = -0.15$, $p < 0.001$), and not significantly associated with anxiety ($r = 0.08$, $p = 0.073$). Guilt subscales were moderately to strongly intercorrelated with total guilt ($r_s = 0.59$ – 0.84) and with one another ($r_s = 0.28$ – 0.54 , all $p_s < 0.001$), supporting their treatment as related but distinct dimensions.

Table 7. Social isolation, avoidance, and perceived lack of support (N = 534–537).

Statement	Strongly Disagree <i>n</i> (%)	Disagree <i>n</i> (%)	Neutral <i>n</i> (%)	Agree <i>n</i> (%)	Strongly Agree <i>n</i> (%)
Manage Dog’s Behavior Entirely Alone (N = 536)	79 (14.7)	153 (28.5)	81 (15.1)	155 (28.9)	68 (12.7)
Avoid Discussing due to Fear of Judgment (N = 534)	133 (24.9)	178 (33.3)	83 (15.5)	112 (21.0)	28 (5.2)
Socially Isolate due to Behavior Challenges (N = 537)	95 (17.7)	141 (26.3)	89 (16.6)	155 (28.9)	57 (10.6)
Worry Others Would Judge Me (N = 534)	106 (19.9)	138 (25.8)	84 (15.7)	150 (28.1)	56 (10.5)
Feel Alone Managing Behavior Issues (N = 534)	57 (10.7)	120 (22.5)	73 (13.7)	200 (37.5)	84 (15.7)

Total caregiver guilt showed the strongest bivariate associations with outcomes, positively associated with anxiety ($r = 0.50$), depression ($r = 0.40$), and caregiver burden ($r = 0.62$), and negatively associated with life satisfaction ($r = -0.41$; all $ps < 0.001$). Among the guilt subscales, guilt about doing wrong by the dog showed the highest correlations with anxiety ($r = 0.37$), depression ($r = 0.27$), and caregiver burden ($r = 0.49$), while guilt about failing to meet caregiving challenges was most strongly associated with caregiver burden ($r = 0.50$). Veterinary communication was negatively associated with anxiety ($r = -0.17$), depression ($r = -0.16$), caregiver burden ($r = -0.11$), and total guilt ($r = -0.09$), and positively associated with life satisfaction ($r = 0.13$; all $ps \leq 0.027$), though not significantly associated with behavior burden ($r = 0.07$, $p = 0.099$). Among outcomes, anxiety and depression were strongly intercorrelated ($r = 0.66$, $p < 0.001$), and both were inversely associated with life satisfaction (anxiety: $r = -0.46$; depression: $r = -0.57$) and positively associated with caregiver burden (anxiety: $r = 0.44$; depression: $r = 0.33$; all $ps < 0.001$). Caregiver burden was also negatively associated with life satisfaction ($r = -0.43$, $p < 0.001$).

3.8. Multivariable Analyses

Predictors of Anxiety (GAD-2)

The multivariable general linear model conducted to predict anxiety (GAD-2) was statistically significant, $F(11, 513) = 18.46$, $p < 0.001$, explaining 28.4% of the variance in anxiety scores (adjusted $R^2 = 0.268$) (Table 9). Caregiver guilt emerged as the strongest predictor of anxiety, with higher guilt associated with higher anxiety scores ($B = 0.044$, $SE = 0.007$, $p < 0.001$, $\eta p^2 = 0.079$). Caregiver burden was also a significant predictor, with higher burden associated with increased anxiety ($B = 0.079$, $SE = 0.020$, $p < 0.001$, $\eta p^2 = 0.029$). Veterinary communication was significantly associated with lower anxiety, such that more positive communication was associated with reduced anxiety ($B = -0.021$, $SE = 0.009$, $p = 0.022$, $\eta p^2 = 0.010$).

Dog behavior burden was not a statistically significant predictor ($p = 0.067$), nor were demographic variables. Neither the presence of children in the household ($p = 0.219$) nor age group ($p = 0.071$) was a significant predictor.

Table 8. Pearson Correlations among behavior burden, caregiver guilt, veterinary communication, and primary study outcomes.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	M	SD	<i>n</i>
1. Total Caregiver Guilt	—	−0.094 *	0.501 ***	0.396 ***	0.624 ***	−0.412 ***	0.245 ***	0.836 ***	0.777 ***	0.671 ***	0.594 ***	0.614 ***	56.61	14.36	565
2. Veterinary Communication	−0.094 *	—	−0.166 ***	−0.161 ***	−0.113 **	0.131 **	0.070	−0.037	−0.099 *	−0.043	−0.091 *	−0.107 *	32.89	7.84	551
3. Anxiety (GAD-2)	0.501 ***	−0.166 ***	—	0.656 ***	0.435 ***	−0.460 ***	0.075	0.369 ***	0.346 ***	0.400 ***	0.345 ***	0.387 ***	2.16	1.89	564
4. Depression (PHQ-2)	0.396 ***	−0.161 ***	0.656 ***	—	0.329 ***	−0.572 ***	0.084 *	0.271 ***	0.302 ***	0.312 ***	0.287 ***	0.304 ***	1.44	1.80	564
5. Caregiver Burden	0.624 ***	−0.113 **	0.435 ***	0.329 ***	—	−0.429 ***	0.272 ***	0.486 ***	0.502 ***	0.379 ***	0.437 ***	0.435 ***	15.03	4.57	565
6. Life Satisfaction	−0.412 ***	0.131 **	−0.460 ***	−0.572 ***	−0.429 ***	—	−0.150 ***	−0.284 ***	−0.347 ***	−0.262 ***	−0.307 ***	−0.314 ***	6.15	1.85	539
7. Behavior Burden	0.245 ***	0.070	0.075	0.084 *	0.272 ***	−0.150 ***	—	0.200 ***	0.179 ***	0.198 ***	0.196 ***	0.103 *	—	—	565
Caregiver Guilt Subscales															
8. Doing Wrong by Dog	0.836 ***	−0.037	0.369 ***	0.271 ***	0.486 ***	−0.284 ***	0.200 ***	—	0.540 ***	0.388 ***	0.275 ***	0.365 ***	21.18	6.56	565
9. Failing to Meet Challenges	0.777 ***	−0.099 *	0.346 ***	0.302 ***	0.502 ***	−0.347 ***	0.179 ***	0.540 ***	—	0.348 ***	0.337 ***	0.346 ***	16.37	4.80	565
10. Self-Care	0.671 ***	−0.043	0.400 ***	0.312 ***	0.379 ***	−0.262 ***	0.198 ***	0.388 ***	0.348 ***	—	0.537 ***	0.363 ***	8.31	3.29	565
11. Neglecting Others	0.594 ***	−0.091 *	0.345 ***	0.287 ***	0.437 ***	−0.307 ***	0.196 ***	0.275 ***	0.337 ***	0.537 ***	—	0.423 ***	5.04	2.23	565
12. Toward Other People	0.614 ***	−0.107 *	0.387 ***	0.304 ***	0.435 ***	−0.314 ***	0.103 *	0.365 ***	0.346 ***	0.363 ***	0.423 ***	—	5.71	2.61	564

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 9. General linear model predicting anxiety (GAD-2).

Predictor	B	SE	F	<i>p</i>	Partial η^2
Veterinary Communication	−0.021	0.009	5.28	0.022	0.010
Behavior Burden	−0.006	0.003	3.38	0.067	0.007
Caregiver Burden	0.079	0.020	15.44	<0.001	0.029
Total Caregiver Guilt	0.044	0.007	44.19	<0.001	0.079
Children in Household	−0.254	0.206	1.52	0.219	0.003
Age	—	—	1.95	0.071	0.022

Note. $F(11, 513) = 18.46$, $p < 0.001$, $R^2 = 0.284$, adjusted $R^2 = 0.268$.

3.9. Predictors of Depression (PHQ-2)

The multivariable general linear model conducted to predict depression (PHQ-2) was statistically significant, $F(11, 513) = 9.74$, $p < 0.001$, explaining 17.3% of the variance in depression scores (adjusted $R^2 = 0.155$) (Table 10). Caregiver guilt emerged as the strongest predictor of depression, with higher guilt associated with higher depression scores ($B = 0.033$, $SE = 0.007$, $p < 0.001$, $\eta^2 = 0.043$). Caregiver burden was also a significant predictor, with higher burden associated with increased depression ($B = 0.049$, $SE = 0.021$, $p = 0.017$, $\eta^2 = 0.011$). Veterinary communication was significantly associated with lower depression, such that more positive communication was associated with reduced depression ($B = -0.023$, $SE = 0.009$, $p = 0.014$, $\eta^2 = 0.012$).

Table 10. General linear model predicting depression (PHQ-2).

Predictor	B	SE	F	<i>p</i>	Partial η^2
Veterinary Communication	−0.023	0.009	6.13	0.014	0.012
Behavior Burden	−0.001	0.003	0.03	0.853	<0.001
Caregiver Burden	0.049	0.021	5.73	0.017	0.011
Total Caregiver Guilt	0.033	0.007	23.17	<0.001	0.043
Children in Household	−0.525	0.212	6.15	0.013	0.012
Age	—	—	0.88	0.510	0.010

Note. $F(11, 513) = 9.74$, $p < 0.001$, $R^2 = 0.173$, adjusted $R^2 = 0.155$.

Dog behavior burden was not significantly associated with depression ($p = 0.853$). The presence of children in the household was significantly associated with depression, with participants who reported having children showing lower depression scores compared to those without children ($B = -0.525$, $SE = 0.212$, $p = 0.013$, $\eta^2 = 0.012$). Age was not a significant predictor of depression, $F(6, 513) = 0.88$, $p = 0.510$, $\eta^2 = 0.010$.

3.10. Predictors of Caregiver Burden

The multivariable general linear model conducted to predict caregiver burden was statistically significant, $F(10, 515) = 36.06$, $p < 0.001$, explaining 41.2% of the variance in caregiver burden (adjusted $R^2 = 0.400$) (Table 11). Caregiver guilt emerged as the strongest predictor of caregiver burden, with higher guilt associated with substantially higher burden ($B = 0.196$, $SE = 0.012$, $p < 0.001$, $\eta^2 = 0.346$). Dog behavior burden was also a significant predictor, with higher behavior burden associated with greater caregiver burden ($B = 0.024$, $SE = 0.007$, $p < 0.001$, $\eta^2 = 0.022$).

Table 11. General linear model predicting caregiver burden.

Predictor	B	SE	F	p	Partial η^2
Veterinary Communication	−0.033	0.020	2.79	0.096	0.005
Behavior Burden	0.024	0.007	11.37	<0.001	0.022
Total Caregiver Guilt	0.196	0.012	272.66	<0.001	0.346
Children in Household	0.697	0.454	2.36	0.125	0.005
Age	—	—	0.88	0.510	0.010

Note. $F(10, 515) = 36.06$, $p < 0.001$, $R^2 = 0.412$, adjusted $R^2 = 0.400$.

Veterinary communication was not a statistically significant predictor of caregiver burden ($p = 0.096$), nor were demographic variables (age, $p = 0.510$; children in home, $p = 0.125$).

3.11. Predictors of Life Satisfaction

The multivariable general linear model conducted to predict life satisfaction was statistically significant, $F(11, 497) = 12.15$, $p < 0.001$, explaining 21.2% of the variance in life satisfaction (adjusted $R^2 = 0.195$) (Table 12). Caregiver burden emerged as the strongest predictor of life satisfaction, with higher burden associated with lower life satisfaction ($B = -0.105$, $SE = 0.021$, $p < 0.001$, $\eta p^2 = 0.048$). Caregiver guilt was also a significant predictor, with higher guilt associated with lower life satisfaction ($B = -0.024$, $SE = 0.007$, $p < 0.001$, $\eta p^2 = 0.023$).

Table 12. General linear model predicting life satisfaction (Cantril ladder).

Predictor	B	SE	F	p	Partial η^2
Veterinary Communication	0.017	0.009	3.42	0.065	0.007
Behavior Burden	−0.002	0.003	0.28	0.594	0.001
Total Caregiver Guilt	−0.024	0.007	11.84	<0.001	0.023
Caregiver Burden	−0.105	0.021	25.03	<0.001	0.048
Children in Household	0.424	0.215	3.88	0.049	0.008
Age	—	—	1.71	0.118	0.020

Note. $F(11, 497) = 12.15$, $p < 0.001$, $R^2 = 0.212$, adjusted $R^2 = 0.195$.

Veterinary communication was not a statistically significant predictor of life satisfaction ($B = 0.017$, $SE = 0.009$, $p = 0.065$, $\eta p^2 = 0.007$), although the direction of the association suggested that more positive communication may be associated with higher life satisfaction. Dog behavior burden was not significantly associated with life satisfaction ($p = 0.594$).

The presence of children in the household was significantly associated with life satisfaction, with participants who reported having children showing higher life satisfaction compared to those without children ($B = 0.424$, $SE = 0.215$, $p = 0.049$, $\eta p^2 = 0.008$). Age was not a significant predictor of life satisfaction ($p = 0.118$).

3.12. Predictors of Rehoming and Euthanasia Consideration

A multinomial logistic regression analysis was conducted to examine factors associated with having considered rehoming, euthanasia, or both (reference category = no consideration). The overall model was statistically significant, $\chi^2(21) = 160.25$, $p < 0.001$, with good model fit (Nagelkerke $R^2 = 0.299$) (Table 13).

Table 13. Multinomial logistic regression predicting consideration of rehoming and/or euthanasia.

Predictor	Outcome	B	SE	OR	95% CI	<i>p</i>
Veterinary Communication	Rehoming	0.034	0.017	1.04	[1.00, 1.07]	0.039
	Euthanasia	−0.027	0.021	0.97	[0.93, 1.02]	0.204
	Both	−0.056	0.021	0.95	[0.91, 0.99]	0.007
Behavior Burden	Rehoming	−0.012	0.006	0.99	[0.98, 1.00]	0.055
	Euthanasia	0.026	0.008	1.03	[1.01, 1.04]	<0.001
	Both	0.013	0.008	1.01	[1.00, 1.03]	0.091
Caregiver Burden	Rehoming	0.138	0.036	1.15	[1.07, 1.23]	<0.001
	Euthanasia	0.167	0.053	1.18	[1.07, 1.31]	0.002
	Both	0.175	0.054	1.19	[1.07, 1.32]	0.001
Total Caregiver Guilt	Rehoming	0.021	0.011	1.02	[1.00, 1.04]	0.059
	Euthanasia	−0.032	0.016	0.97	[0.94, 1.00]	0.047
	Both	0.036	0.016	1.04	[1.01, 1.07]	0.022
Children in Household (Yes vs. No)	Rehoming	0.628	0.322	1.87	[1.00, 3.52]	0.051
	Euthanasia	−0.462	0.548	0.63	[0.22, 1.84]	0.399
	Both	0.302	0.456	1.35	[0.55, 3.31]	0.508
No Injury to Another Animal (vs. Injury)	Rehoming	−0.155	0.301	0.86	[0.48, 1.55]	0.607
	Euthanasia	−0.792	0.358	0.45	[0.22, 0.91]	0.027
	Both	−1.101	0.349	0.33	[0.17, 0.66]	0.002
No Injury to a Person (vs. Injury)	Rehoming	−0.258	0.253	0.77	[0.47, 1.27]	0.307
	Euthanasia	−0.798	0.360	0.45	[0.22, 0.91]	0.027
	Both	−0.330	0.345	0.72	[0.37, 1.41]	0.339

Note. $\chi^2(21) = 160.25$, $p < 0.001$. Nagelkerke $R^2 = 0.299$. OR = odds ratio; CI = confidence interval.

Likelihood ratio tests indicated that veterinary communication, behavior burden, caregiver burden, caregiver guilt, and injury to another animal significantly contributed to the model, whereas injury to a person and the presence of children in the household were not significant at the model level. Caregiver burden was a consistent predictor across all outcomes, with higher burden associated with increased likelihood of considering rehoming (OR = 1.15, $p < 0.001$), euthanasia (OR = 1.18, $p = 0.002$), and both rehoming and euthanasia (OR = 1.19, $p = 0.001$). Behavior burden was specifically associated with euthanasia consideration, with higher behavior burden increasing the likelihood of euthanasia (OR = 1.03, $p < 0.001$) but not rehoming alone ($p = 0.055$).

Caregiver guilt demonstrated different effects across outcomes. Higher guilt was associated with increased likelihood of considering both rehoming and euthanasia (OR = 1.04, $p = 0.022$) and showed a marginal positive association with rehoming ($p = 0.059$). In contrast, higher guilt was associated with a decreased likelihood of euthanasia alone (OR = 0.97, $p = 0.047$).

Veterinary communication was associated with decision-making patterns, with higher communication scores associated with increased likelihood of considering rehoming (OR = 1.04, $p = 0.039$) and decreased likelihood of considering both rehoming and euthanasia (OR = 0.95, $p = 0.007$) but was not significantly associated with euthanasia alone.

Injury variables demonstrated different associations across decision-making outcomes. Compared to owners whose dogs had not caused injury to another animal, those whose dogs had caused injury were more likely to have considered euthanasia alone and both outcomes (ORs = 0.45 and 0.33 for the no-injury reference category, $ps \leq 0.002$). A similar pattern was observed for injury to a person: owners whose dogs had not caused injury to a person were less likely to have considered euthanasia alone relative to those whose dogs had injured a person (OR = 0.45, $p = 0.027$), though injury to a person did not reach significance at the model level ($p = 0.128$).

4. Discussion

The present study examined the psychological, social, and decision-making experiences of dog owners managing behavior problems, with a particular focus on the role of caregiver guilt. Our results show a clear pattern in which caregiver guilt acts as a key factor linking dog behavior problems to psychological distress. Notably, one-third of participants in our study met criteria for probable anxiety, 20% for probable depression, and 78% for elevated caregiver burden, underscoring the fact that a significant number of caregivers of dogs with behavior problems experience psychological distress. These results are consistent with research indicating that dog behavior problems are associated with elevated stress and reduced well-being among owners [29,45].

Our findings build on prior work conceptualizing pet-related guilt as a form of disenfranchised guilt—an unrecognized emotional burden that is not socially acknowledged, validated, or supported [42]—drawing from the broader framework of disenfranchised grief [41]. Prior research has shown that dog-related guilt mirrors parental guilt, is associated with role conflict, and predicts symptoms of anxiety and depression, particularly in relation to training and caregiving practices [39,42–44,62]. The present findings extend this literature by demonstrating that guilt is not only associated with distress but may function as a link between behavior-related challenges and anxiety, depression, caregiver burden, and life satisfaction.

Although behavior problems in our sample were common, chronic, and perceived as highly impactful, their direct association with psychological outcomes was limited once caregiver guilt was accounted for, challenging the intuitive assumption that behavior problems alone drive caregiver distress. While behavior burden was associated with caregiver guilt, caregiver burden, and decision-making related to euthanasia and rehoming, it was not associated with depression or life satisfaction and showed only a small and counterintuitive relationship with anxiety after adjustment. In contrast, caregiver guilt was consistently associated with higher anxiety, higher depression, greater caregiver burden, and lower life satisfaction. This pattern mirrors results reported by Barcellos et al., who found that the impact of behavior problems is mediated by caregiver perceptions and emotional responses [29], as well as broader caregiving literature suggesting that subjective appraisal and resultant emotions are stronger predictors of distress than actual caregiving demands [52,53,63,64].

These findings underscore the importance of how owners perceive their caregiving role. Guilt related to failing to meet caregiving challenges, neglecting others, and inadequate self-care emerged as particularly impactful, suggesting that competing role demands and feelings of inadequacy are key drivers of distress. These findings may also reflect the tension many dog owners feel between idealized expectations of what constitutes a “good dog owner” and the practical realities of managing an individual dog’s needs [44]. This is consistent with both human caregiving [52,65] and pet-related literature that suggests guilt is often tied to perceived shortcomings and competing life demands [26,42,43].

While moral distress and relational ethics were not directly assessed in the present study, these frameworks offer a useful theoretical lens for interpreting these findings. The concept of disenfranchised guilt, as applied here, intersects with broader caregiving literature. In human caregiving contexts, guilt is often closely tied to moral distress, or the experience of feeling unable to fully meet the perceived needs of a dependent despite significant emotional investment [66]. Among owners of dogs with behavior problems, this tension may manifest as recognizing that a dog’s needs exceed what can realistically be provided. The disproportionate representation of women in our sample may also reflect broader patterns in which caregiving labor, including care for companion animals, is unevenly distributed and often insufficiently recognized or supported [67,68]. Relational

ethics frameworks, which emphasize the moral weight of ongoing care relationships and the obligations that emerge from them, also offer a useful lens for understanding why owners may experience guilt as persistent and difficult to resolve [67]. Together, these perspectives may help explain why guilt emerges as both pervasive and difficult to resolve among owners managing chronic behavior-related challenges. The broader social context also appears to play a role in reinforcing these processes: 84% of participants in our study reported feeling that owners of dogs with behavior problems are judged harshly, and 32% reported that interactions with others increased their feelings of guilt. Paradoxically, while 57% of participants indicated they reach out for emotional support, 43% participate in online support communities, and 29% participate in support groups, the majority (53%) reported feeling alone, and 40% reported feeling socially isolated. These results suggest that available support may not be sufficient, and echo previous findings in which owners of dogs with behavior challenges reported feeling judged and misunderstood [45,69]. Notably, participants in our study reported substantially greater pressure to keep their dog “no matter what” (44%) compared to pressure to rehome or euthanize for safety reasons (9%), suggesting that continued ownership, regardless of risk or negative impact, may be a current cultural norm. This social pressure may directly impact guilt levels by reinforcing the message that ‘responsible’ ownership means keeping a dog regardless of circumstances, making owners who consider rehoming or euthanasia question their decisions [46,47].

The social and physical environments in which dogs and their caregivers live may further shape these experiences. Behaviors such as leash reactivity, fear and anxiety, aggression, and separation-related distress are shaped not only by individual canine temperament and history, but also by the social and physical environments. Housing density, limited access to outdoor space, urban noise and stimulation, long periods of social isolation, and contemporary lifestyle demands may all contribute to the development or exacerbation of behavioral challenges [70,71]. Training culture may further compound these experiences, as owners are often presented with inconsistent guidance, conflicting online advice, and the emotional and financial demands of behavior modification efforts [44]. Although these contextual factors were not directly assessed in the present study, they represent theoretical considerations that warrant attention in future research examining caregiver guilt and burden. Framing behavior problems within this broader context may help reduce the self-blame that underlies much of the guilt described here by recognizing that many contributing factors extend beyond individual owner actions alone. In addition to societal pressure and its impact on the emotional well-being of dog owners, we found gaps in available support. For example, while veterinarians were among the most frequently consulted resources, they were rated as less helpful than specialized services such as board-certified veterinary behaviorists, prescribed medications, and dog trainers. While board-certified veterinary behaviorists were seen as very/extremely helpful by 70% of respondents who used them, the utilization rate was low (60%), suggesting common barriers to access (e.g., availability, cost, referral pathways) [48,72]. In contrast, informal and self-guided resources were widely used but perceived as less effective. This pattern supports prior research demonstrating variability in perceived effectiveness of behavior support and barriers to accessing specialized care [48,69,72].

The discrepancy between the most frequently used resources and those perceived as most helpful highlights a potential gap in access to behavioral care and suggests that general veterinary care may not fully meet the needs of owners managing complex behavior problems [49,73]. Clearer delineation of roles, appropriate referrals, and stronger interdisciplinary collaboration may help improve access to effective, coordinated support.

At the same time, the quality of communication within veterinary interactions may also play an important role in shaping caregiver experiences. Although the present study did not assess the content or quality of veterinary interactions in depth, the prior literature offers guidance regarding what constitutes supportive communication in this context. Owners of dogs with behavior problems frequently report feeling judged, dismissed, or poorly understood in veterinary settings and may perceive that veterinarians underestimate the emotional burden associated with managing chronic behavioral challenges [49,73]. In contrast, communication experiences perceived as helpful tend to share several common features, including acknowledgment of the emotional impact of the dog's behavior, non-judgmental discussion of difficult decisions, clear explanation of treatment options, and referral to appropriate specialists when needed [74–76]. The veterinary communication measure used in the present study assessed several of these domains, including empathy, perceived understanding, listening, and clarity of information, but did not capture the specific language used or the interactional dynamics of individual consultations. Future research using observational or qualitative methods may help identify which communication practices most effectively reduce caregiver guilt and burden and inform training resources tailored to the needs of this population.

In contrast to psychological outcomes, behavior burden played a more direct role in decision-making related to rehoming and euthanasia. Greater behavior burden was associated with increased likelihood of considering euthanasia alone but not rehoming alone or both outcomes combined. Injury to another animal was associated with increased likelihood of euthanasia consideration but decreased likelihood of considering both rehoming and euthanasia. Injury to a person was also associated with euthanasia consideration at the parameter level, though it did not reach significance at the model level. These injury-related findings are consistent with studies identifying aggression and safety concerns as key drivers of relinquishment and euthanasia [30,69,77–79].

Notably, we found that higher caregiver guilt was associated with reduced likelihood of having considered euthanasia, suggesting that guilt may inhibit owners from pursuing euthanasia even when behavior severity might otherwise warrant it. This pattern suggests that guilt may act as a constraining emotion that causes distress, but at the same time, limits perceived options [42,43,80]. Veterinary communication, as a central point of contact for guidance and support, may be particularly influential in shaping both the emotional experience of guilt and subsequent care decisions.

Veterinary communication was related to both psychological outcomes and decision-making, though the patterns of association varied. More positive communication was significantly associated with lower anxiety and depression, suggesting a consistent protective effect on caregiver psychological well-being. In addition to these mental health benefits, higher-quality communication was associated with reduced likelihood of having considered both rehoming and euthanasia, suggesting that empathetic, nonjudgmental communication may help prevent escalation toward the most severe decision-making outcomes. At the same time, higher communication scores were associated with an increased likelihood of having considered rehoming alone, which may reflect that owners receiving higher-quality communication are better informed about rehoming as a humane and legitimate option. Taken together, these findings suggest veterinarians can play a key role not only in managing behavior problems but also in mitigating caregiver distress through effective communication, empathy, validation, and appropriate referral. This aligns with previous research demonstrating the positive impact of client-centered veterinary communication on improved trust, adherence, and compliance [74–76,81].

In sum, these findings support a dual-process framework in which behavior burden and safety concerns primarily drive decision-making, while caregiver guilt and caregiver

burden drive psychological outcomes. Notably, these findings suggest that caregiver distress may be driven less by the specific behavioral characteristics of the dog as reported by owners and more by how those experiences are emotionally interpreted and evaluated. Recognizing how these factors interact can help professionals across veterinary, behavioral, and mental health fields develop more individualized, empathetic, and effective support strategies for dog caregivers.

4.1. Practical Implications

The findings from this study have direct implications for veterinarians, behaviorists, and trainers, highlighting the importance of addressing the emotional experience of caregivers, particularly guilt, alongside dogs' behavior problems. For veterinarians, these results suggest that communication plays a critical role in shaping both psychological outcomes and decision-making trajectories. Empathetic and nonjudgmental interactions may help reduce caregiver guilt, mitigate distress, and prevent escalation leading to relinquishment or euthanasia. Yet, despite strong evidence demonstrating the importance of communication skills [82], many veterinarians report graduating from school feeling inadequately prepared for difficult client conversations [50,83,84]. This can be especially consequential for owners of dogs with behavior problems who often present to veterinary settings with high levels of guilt, burden, and distress [76]. These challenges can be further compounded by the fact that many veterinarians do not feel adequately trained in behavior [49]. Board-certified veterinary behaviorists offer a solution and are particularly well-positioned to address both behavioral and psychosocial aspects of care. Integrating assessment of caregiver guilt into clinical practice and supporting owners in reframing expectations, addressing moral distress, and navigating uncertainty are ways in which veterinary behaviorists can help support owners. Given prior findings that pet-related guilt is closely tied to perceived caregiving inadequacy and role conflict [42,43], directly addressing these perceptions may be especially valuable. Veterinary social workers could play a key role in these situations.

Dog trainers, who often maintain ongoing contact with clients, also represent an opportunity for owner support. Trainers should be encouraged to avoid blame-based language, help owners set realistic expectations, recognize signs of caregiver distress, and validate feelings of guilt. Given that many owners report guilt related specifically to training interactions, including concerns about consistency and use of corrective responses [44], addressing these experiences directly may be particularly important. In addition, expanding access to support systems, including peer support groups and services that provide temporary relief from caregiving demands, could help reduce owner isolation and mitigate caregiver burden.

Regardless of the source, support and guidance should be individualized and context-specific. Every dog and owner differ, and standardized recommendations are likely to be less effective than specifically tailored plans that address each individual circumstance [85,86].

4.2. Limitations and Future Directions

There are several limitations to the current study that should be noted. The sample was recruited through online platforms and consisted primarily of White, affluent, U.S.-based women with extensive dog ownership experience. This profile likely reflects the population most actively engaged in online dog behavior communities, but it limits the generalizability of our findings. Experiences of caregiver guilt, burden, and help-seeking behavior differ across gender, race, socioeconomic status, and cultural context [65,87]. For example, financial barriers to accessing board-certified veterinary behaviorists or

prescribed medications may be less salient in this sample than in lower-income populations, potentially impacting the perceived helpfulness of these specialized resources. Similarly, cultural norms around pet ownership, caregiving responsibilities, and attitudes toward euthanasia can vary considerably and were not captured here [88]. Future research should include more diverse samples to examine whether the relationships among guilt, burden, and psychological distress replicate across demographic groups.

It should also be noted that behavior burden in the present study was assessed entirely through owner self-report, and therefore reflects subjective caregiver perception rather than an objective measure of behavioral severity. Although the composite score incorporated the presence, duration, and perceived impact of specific behaviors, these ratings are themselves subject to individual differences in perception, tolerance, and interpretation. The study therefore cannot distinguish between the actual severity of a dog's behavioral problems and the owner's appraisal of that severity. Furthermore, the study assessed whether participants had used various support resources, but did not evaluate treatment intensity, duration, adherence, or prior intervention history. Guilt and emotional burden may differ substantially between owners who have pursued extensive, sustained efforts without improvement and those who have only engaged minimally. The absence of treatment engagement data limits the degree to which guilt can be interpreted independently of caregiving effort and treatment history, and future research should incorporate a more detailed assessment of intervention engagement to better contextualize these findings.

In addition, it should also be noted that "considering euthanasia" was not defined in terms of clinical justification, legal context, or precipitating circumstances. Responses therefore likely reflected a range of motivations, including concerns related to chronic behavioral deterioration, public safety, injury risk, quality of life, treatment failure, housing limitations, social pressure, and caregiver burden. As such, euthanasia consideration in the present study should not be interpreted as synonymous with clinically or ethically justified behavioral euthanasia. Behavioral euthanasia is further shaped by legal and ethical frameworks that vary across jurisdictions. For example, some countries place substantial legal restrictions on euthanasia of behaviorally problematic dogs unless specific criteria related to dangerousness or incurable suffering are met [89]. These contextual distinctions were not assessed in the present study and should be considered when interpreting findings related to euthanasia decision-making.

All measures relied on self-report, and constructs such as guilt and social judgment may be subject to social desirability bias. Additionally, while the CGQ was adapted for use with dog owners, it has not undergone formal psychometric validation in this population. The behavior burden composite, while conceptually grounded, is also a novel measure without established psychometric properties and warrants further validation. The cross-sectional design of the study further limits interpretation of the findings, as causal relationships and directionality cannot be determined. Although caregiver guilt emerged as a consistent predictor of psychological outcomes across multivariable models, the directionality of these associations cannot be established from the present data. It is equally plausible that elevated anxiety and depression contribute to heightened guilt, or that guilt and psychological distress are mutually reinforcing over time. Similarly, the relationship between perceived behavior burden and caregiver guilt may be bidirectional, with distress amplifying the perceived severity of behavioral challenges. Longitudinal research examining whether guilt precedes or follows psychological distress, and whether interventions targeting caregiver guilt improve both human and animal outcomes, is suggested as the next step of research. Future research could also benefit from examining attachment style as a potential moderator of the guilt-distress pathway, given research that

suggests insecurely attached owners are particularly vulnerable to perceiving behavioral problems as failures in caregiving [90].

5. Conclusions

This study demonstrates that the impact of dog behavior problems on owners is shaped not only by the behaviors themselves but by how those challenges are interpreted and experienced. While behavior problems were common and often highly distressing, caregiver guilt emerged as a stronger, more consistent predictor of negative psychological outcomes. This finding extends prior work on pet-related guilt by identifying it as a key explanatory pathway connecting behavior challenges to well-being outcomes. In contrast, behaviors and safety concerns played a more direct role in shaping euthanasia and rehoming decisions. The findings also highlight the role of social context, including stigma, judgment, and inconsistent support, in shaping caregiver experiences.

Taken together, the results of this study highlight the need to view behavioral problems through a One Welfare lens, recognizing the interconnectedness of the well-being of dogs and their caregivers [69,91]. Successful solutions, rather than those based solely on behavior, must be comprehensive, individualized, interdisciplinary, and caregiver-focused. Addressing caregiver guilt, validating the challenges involved, and enhancing access to appropriate support resources are essential. At their essence, successful solutions will be those that recognize the interconnected nature of human and animal well-being and the need to support both members of the human–animal dyad.

Author Contributions: Conceptualization, L.K., J.C.-M. and V.B.; methodology, L.K., J.C.-M. and V.B.; formal analysis, L.K.; data curation, L.K.; writing—original draft preparation, L.K.; writing—review and editing, L.K., J.C.-M. and V.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: This study was conducted in accordance with the Declaration of Helsinki, and was approved by the Institutional Review Board at Colorado State University (protocol # 7811, approved 3 March 2026).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data available upon request.

Conflicts of Interest: Author Valerie Bogie was employed by Insight Animal Behavioral Services. The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

1. AVMA. 2025 AVMA Pet Ownership & Demographics Sourcebook; American Veterinary Medical Association: Schaumburg, IL, USA, 2024.
2. de Souza, M.C.; Bastos, G.Q.; Tokumaru, R.S. Attachment theory applied to the human-dog relationship. *J. Vet. Behav.* **2025**, *82*, 8–19. [[CrossRef](#)]
3. McConnell, A.R.; Lloyd, E.P.; Humphrey, B.T. We Are Family: Viewing Pets as Family Members Improves Wellbeing. *Anthrozoös* **2019**, *32*, 459–470. [[CrossRef](#)]
4. McDonald, S.E.; Matijczak, A.; Nicotera, N.; Applebaum, J.W.; Kremer, L.; Natoli, G.; O’Ryan, R.; Booth, L.J.; Murphy, J.L.; Tomlinson, C.A.; et al. ‘He was like, my ride or die’: Sexual and Gender Minority Emerging Adults’ Perspectives on Living with Pets During the Transition to Adulthood. *Emerg. Adulthood* **2021**, *10*, 1008–1025. [[CrossRef](#)]
5. Trigg, J. Examining the role of pets in cancer survivors’ physical and mental wellbeing. *J. Psychosoc. Oncol.* **2021**, *40*, 834–853. [[CrossRef](#)]
6. Bao, K.J.; Schreer, G. Pets and Happiness: Examining the Association between Pet Ownership and Wellbeing. *Anthrozoös* **2016**, *29*, 283–296. [[CrossRef](#)]

7. Brooks, H.L.; Rushton, K.; Lovell, K.; Bee, P.; Walker, L.; Grant, L.; Rogers, A. The power of support from companion animals for people living with mental health problems: A systematic review and narrative synthesis of the evidence. *BMC Psychiatry* **2018**, *18*, 31. [\[CrossRef\]](#) [\[PubMed\]](#)
8. Hajek, A.; König, H.-H. How do cat owners, dog owners and individuals without pets differ in terms of psychosocial outcomes among individuals in old age without a partner? *Aging Ment. Health* **2020**, *24*, 1613–1619. [\[CrossRef\]](#)
9. Gee, N.R.; Rodriguez, K.E.; Fine, A.H.; Trammell, J.P. Dogs Supporting Human Health and Well-Being: A Biopsychosocial Approach. *Front. Vet. Sci.* **2021**, *8*, 630465. [\[CrossRef\]](#)
10. Wheeler, E.A.; Faulkner, M.E. The ‘pet effect’: Physiological calming in the presence of canines. *Soc. Anim.* **2015**, *23*, 425–438. [\[CrossRef\]](#)
11. Friedmann, E. The role of pets in enhancing human well-being: Physiological effects. In *The Waltham Book of Human-Animal Interaction: Benefits and Responsibilities of Pet Ownership*; Elsevier: Amsterdam, The Netherlands, 2013.
12. Allen, K.; Shykoff, B.E.; Izzo, J.L. Pet ownership, but not ace inhibitor therapy, blunts home blood pressure responses to mental stress. *Hypertension* **2001**, *38*, 815–820. [\[CrossRef\]](#) [\[PubMed\]](#)
13. McConnell, A.R.; Brown, C.M.; Shoda, T.M.; Stayton, L.E.; Martin, C.E. Friends with benefits: On the positive consequences of pet ownership. *J. Personal. Soc. Psychol.* **2011**, *101*, 1239–1252. [\[CrossRef\]](#) [\[PubMed\]](#)
14. Lem, M.; Coe, J.B.; Haley, D.B.; Stone, E.; O’Grady, W. The Protective Association between Pet Ownership and Depression among Street-involved Youth: A Cross-sectional Study. *Anthrozoös* **2016**, *29*, 123–136. [\[CrossRef\]](#)
15. Friedmann, E.; Thomas, S.A.; Son, H. Pets, Depression and Long-term Survival in Community Living Patients Following Myocardial Infarction. *Anthrozoös* **2011**, *24*, 273–285. [\[CrossRef\]](#)
16. Cheung, C.; Kam, P.K. Conditions for pets to prevent depression in older adults. *Aging Ment. Health* **2018**, *22*, 1627–1633. [\[CrossRef\]](#)
17. Watson, N.L.; Weinstein, M.L. Pet Ownership in Relation to Depression, Anxiety, and Anger in Working Women. *Anthrozoös* **1993**, *6*, 135–138. [\[CrossRef\]](#)
18. Jennings, L.B. Potential Benefits of Pet Ownership in Health Promotion. *J. Holist. Nurs.* **1997**, *15*, 358–372. [\[CrossRef\]](#)
19. Hussein, S.; Soliman, W.; Khalifa, A. Benefits of Pet’s Ownership, a Review Based on Health Perspectives. *J. Intern. Med. Emerg. Res.* **2021**, *2*, 1–9.
20. Wright, H. Pet Dogs Improve Family Functioning and Reduce Anxiety in Children with Autism Spectrum Disorder. *Anthrozoös* **2015**, *28*, 611–624. [\[CrossRef\]](#)
21. Maugeri, A. Dog Ownership and Cardiovascular Health: Results from the Kardiovize 2030 Project. *Mayo Clin. Proc. Innov. Q. Outcomes* **2019**, *3*, 268–275. [\[CrossRef\]](#)
22. Brown, C.M.; Hengy, S.M.; McConnell, A.R. Thinking about cats or dogs provides relief from social rejection. *Anthrozoös* **2016**, *29*, 47–58. [\[CrossRef\]](#)
23. McConnell, A.R.; Folmsbee, J.R.; Aldstadt, K.M. Furry Friends: Direct and Indirect Benefits of Human-Animal Relationships on Well-Being. *Soc. Personal. Psychol. Compass* **2025**, *19*, e70091. [\[CrossRef\]](#)
24. Turcsán, B.; Ujfalussy, D.J.; Kerepesi, A.; Miklósi, Á.; Kubinyi, E. Similarities and differences between dog–human and human–human relationships. *Sci. Rep.* **2025**, *15*, 11871. [\[CrossRef\]](#) [\[PubMed\]](#)
25. Gillet, L.; Turcsán, B.; Kubinyi, E. Perceived costs and benefits of companion dog keeping based on a convenience sample of dog owners. *Sci. Rep.* **2025**, *15*, 2515. [\[CrossRef\]](#)
26. Merkouri, A.; Graham, T.M.; O’Haire, M.E.; Purewal, R.; Westgarth, C. Dogs and the Good Life: A Cross-Sectional Study of the Association Between the Dog–Owner Relationship and Owner Mental Wellbeing. *Front. Psychol.* **2022**, *13*, 903647. [\[CrossRef\]](#)
27. Beaver, B.V. The prevalence of behavior problems in dogs in the United States. *J. Vet. Behav.* **2024**, *76*, 34–39. [\[CrossRef\]](#)
28. Serpell, J.A.; Powell, L.R. Prevalence and severity of behavior problems in dogs in the United States: A re-assessment. *J. Vet. Behav.* **2026**, *83*, 8–13. [\[CrossRef\]](#)
29. Barcelos, A.M.; Kargas, N.; Mills, D. The Effects of Dog Behavioural Problems on Owner Well-Being: A Review of the Literature and Future Directions. *Pets* **2024**, *1*, 53–69. [\[CrossRef\]](#)
30. Hitchcock, M.; Workman, M.K.; Guthrie, A.P.; Ruple, A.; Feuerbacher, E.N. Factors associated with behavioral euthanasia in pet dogs. *Front. Vet. Sci.* **2024**, *11*, 1387076. [\[CrossRef\]](#)
31. Kisley, M.A.; Chung, E.J.; Levitt, H. Investigating the Reasons behind Companion Animal Relinquishment: A Systematic Content Analysis of Shelter Records for Cats and Dogs, 2018–2023. *Animals* **2024**, *14*, 2606. [\[CrossRef\]](#)
32. Kinsman, R.H. Owner-Perceived Undesirable Behaviours in Young Dogs and Changes with Age. *Animals* **2025**, *15*, 1163. [\[CrossRef\]](#) [\[PubMed\]](#)
33. Lord, M.S. Owner perception of problem behaviours in dogs aged 6 and 9-months. *Appl. Anim. Behav. Sci.* **2020**, *232*, 105147. [\[CrossRef\]](#)
34. Pirrone, F.; Pierantoni, L.; Mazzola, S.M.; Vigo, D.; Albertini, M. Owner and animal factors predict the incidence of, and owner reaction toward, problematic behaviors in companion dogs. *J. Vet. Behav.* **2015**, *10*, 295–301. [\[CrossRef\]](#)

35. Samet, L. No Callback Required: Themes and Factors Associated with New Adopters Declining Free Dog Behavior Support. *J. Appl. Anim. Welf. Sci.* **2025**, 1–11. [\[CrossRef\]](#)
36. Barcelos, A.M.; Kargas, N.; Assheton, P.; Maltby, J.; Hall, S.; Mills, D.S. Dog owner mental health is associated with dog behavioural problems, dog care and dog-facilitated social interaction: A prospective cohort study. *Sci. Rep.* **2023**, *13*, 21734. [\[CrossRef\]](#)
37. Spitznagel, M.B.; Bennett, N.E.; Carlson, M.D. Supporting Caregivers: Overcoming Stress, Burnout, and Burden. *Vet. Clin. Small Anim. Pract.* **2026**, *56*, 507–519. [\[CrossRef\]](#)
38. Spitznagel, M.B.; Carlson, M.D. Caregiver Burden and Veterinary Client Well-Being. *Vet. Clin. North Am. Small Anim. Pract.* **2019**, *49*, 431–444. [\[CrossRef\]](#)
39. Kuntz, K.; Ballantyne, K.C.; Cousins, E.; Spitznagel, M.B. Assessment of caregiver burden in owners of dogs with behavioral problems and factors related to its presence. *J. Vet. Behav.* **2023**, *64–65*, 41–46. [\[CrossRef\]](#)
40. Spitznagel, M.B.; Martin, J.; Knudsen, E.; Gober, M. Development and Psychometric Validation of a Canine Caregiver Burden Assessment Tool. *Human-Animal Interactions*. 2025. Available online: <https://www.cabidigitallibrary.org/doi/10.1079/hai.2025.0052> (accessed on 7 April 2026).
41. Kogan, L.R.; Bussolari, C.; Currin-McCulloch, J.; Packman, W.; Erdman, P. Disenfranchised Guilt—Pet Owners’ Burden. *Animals* **2022**, *12*, 1690. [\[CrossRef\]](#) [\[PubMed\]](#)
42. Kogan, L.R.; Bussolari, C.; Currin-McCulloch, J.; Packman, W.; Erdman, P. Dog owners: Disenfranchised guilt and related depression and anxiety. *Hum.-Anim. Interact.* **2023**, *2023*, 1–16. [\[CrossRef\]](#)
43. Kogan, L.R.; Currin-McCulloch, J.; Packman, W.; Bussolari, C. Dog Training-Related Guilt: Prevalence and Associations with Owner Demographics and Self-Compassion. *Human-Animal Interactions*. 2025. Available online: <https://www.cabidigitallibrary.org/doi/10.1079/hai.2025.0043> (accessed on 8 April 2026).
44. Buller, K.; Ballantyne, K.C. Living with and loving a pet with behavioral problems: Pet owners’ experiences. *J. Vet. Behav.* **2020**, *37*, 41–47. [\[CrossRef\]](#)
45. Furtado, T.; Casey, R.; Upjohn, M.; Christley, R. In the Doghouse? An Exploration of Online Discussions Around the Challenges of Human-Dog Relationships. *Soc. Anim.* **2023**, *33*, 41–62. [\[CrossRef\]](#)
46. Hart, C.J.; King, T. ‘It’s Okay He’s Friendly’: Understanding the Experience of Owning and Walking a Reactive Dog Using a Qualitative Online Survey. *Anthrozoös* **2024**, *37*, 379–400. [\[CrossRef\]](#)
47. Todd, Z. Barriers to the adoption of humane dog training methods. *J. Vet. Behav.* **2018**, *25*, 28–34. [\[CrossRef\]](#)
48. Kogan, L.R.; Hellyer, P.W.; Rishniw, M.; Schoenfeld-Tacher, R. Veterinary Behavior: Assessment of Veterinarians’ Training, Experience, and Comfort Level with Cases. *J. Vet. Med. Educ.* **2020**, *47*, 158–169. [\[CrossRef\]](#)
49. Soo, P.L.; van Gelderen, I.F. A pilot study evaluating self-perceived competence in behavioral medicine of recent veterinary graduates. *J. Vet. Behav.* **2025**, *79*, 19–24. [\[CrossRef\]](#)
50. Treynor, W.; Gonzalez, R.; Nolen-Hoeksema, S. Rumination Reconsidered: A Psychometric Analysis. *Cogn. Ther. Res.* **2003**, *27*, 247–259. [\[CrossRef\]](#)
51. Losada, A.; Márquez-González, M.; Peñacoba, C.; Romero-Moreno, R. Development and validation of the Caregiver Guilt Questionnaire. *Int. Psychogeriatr.* **2010**, *22*, 650–660. [\[CrossRef\]](#) [\[PubMed\]](#)
52. Lazarus, R.S.; Folkman, S. *Folkman, Stress, Appraisal, and Coping*; Springer Publishing Company: Berlin/Heidelberg, Germany, 1984.
53. Nolen-Hoeksema, S.; Wisco, B.E.; Lyubomirsky, S. Rethinking Rumination. *Perspect. Psychol. Sci.* **2008**, *3*, 400–424. [\[CrossRef\]](#)
54. Kroenke, K.; Spitzer, R.L.; Williams, J.B.W.; Löwe, B. An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics* **2009**, *50*, 613–621. [\[CrossRef\]](#)
55. Cantril, H. *The Pattern of Human Concerns*; Rutgers University Press: New Brunswick, NJ, USA, 1965.
56. Cox, D.R.; Snell, J. Analysis of Binary Data. 1989. Available online: <https://api.taylorfrancis.com/content/books/mono/download?identifierName=doi&identifierValue=10.1201/9781315137391&type=googlepdf> (accessed on 7 April 2026).
57. McFadden, D. Conditional logit analysis of qualitative choice behavior. In *Frontiers in Econometrics*; Academic Press: New York, NY, USA, 1974; pp. 105–142.
58. Nagelkerke, N. A note on a general definition of the coefficient of determination. *Biometrika* **1991**, *78*, 691–692. [\[CrossRef\]](#)
59. Centers for Disease Control and Prevention. Symptoms of Anxiety Disorder and Depressive Disorder Among Adults: United States. Available online: <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm> (accessed on 7 April 2026).
60. Gallup. “Indicator: Life Evaluation Index,” Gallup.com. Available online: <https://www.gallup.com/394505/indicator-life-evaluation-index.aspx> (accessed on 7 April 2026).
61. Doka, K.J. *Disenfranchised Grief: Recognizing Hidden Sorrow*; Lexington Books: Lexington, MA, USA, 1989. Available online: <https://www.worldcat.org/title/disenfranchised-grief-recognizing-hidden-sorrow/oclc/20015907> (accessed on 16 May 2022).
62. Barrios, C.L.; Gornall, V.; Bustos-López, C.; Cirac, R.; Calvo, P. Creation and Validation of a Tool for Evaluating Caregiver Burnout Syndrome in Owners of Dogs (Canis lupus familiaris) Diagnosed with Behavior Disorders. *Animals* **2022**, *12*, 1185. [\[CrossRef\]](#)

63. Pearlin, L.I.; Mullan, J.T.; Semple, S.J.; Skaff, M.M. Caregiving and the Stress Process: An Overview of Concepts and Their Measures1. *Gerontologist* **1990**, *30*, 583–594. [[CrossRef](#)]
64. Vitaliano, P.P.; Zhang, J.; Scanlan, J.M. Is Caregiving Hazardous to One's Physical Health? A Meta-Analysis. *Psychol. Bull.* **2003**, *129*, 946–972. [[CrossRef](#)]
65. Pinquart, M.; Sörensen, S. Differences between caregivers and noncaregivers in psychological health and physical health: A meta-analysis. *Psychol. Aging* **2003**, *18*, 250–267. [[CrossRef](#)] [[PubMed](#)]
66. Jameton, A. Nursing practice: The ethical issues. In *Prentice-Hall Series in the Philosophy of Medicine*; Prentice-Hall: Englewood Cliffs, NJ, USA, 1984. Available online: <https://cir.nii.ac.jp/crid/1971149384755357253> (accessed on 21 May 2026).
67. Held, V. *The Ethics of Care: Personal, Political, and Global*; Oxford University Press: New York, NY, USA, 2005.
68. Donovan, J.; Adams, C. (Eds.) *The Feminist Care Tradition in Animal Ethics*; Columbia University Press: New York, NY, USA, 2007; 400p.
69. Puurunen, J. Inadequate socialisation, inactivity, and urban living environment are associated with social fearfulness in pet dogs. *Sci. Rep.* **2020**, *10*, 3527. [[CrossRef](#)] [[PubMed](#)]
70. Powell, L.; Stefanovski, D.; Dreschel, N.A.; Serpell, J. The impacts of household factors and proxies of human social determinants of health on dog behavior. *Prev. Vet. Med.* **2025**, *239*, 106520. [[CrossRef](#)]
71. Blackwell, E.J.; Twells, C.; Seawright, A.; Casey, R.A. The relationship between training methods and the occurrence of behavior problems, as reported by owners, in a population of domestic dogs. *J. Vet. Behav.* **2008**, *3*, 207–217. [[CrossRef](#)]
72. Roshier, A.L.; McBride, E.A. Veterinarians' perceptions of behaviour support in small-animal practice. *Vet. Rec.* **2013**, *172*, 267. [[CrossRef](#)]
73. Bard, A.M.; Main, D.C.J.; Haase, A.M.; Whay, H.R.; Roe, E.J.; Reyher, K.K. The future of veterinary communication: Partnership or persuasion? A qualitative investigation of veterinary communication in the pursuit of client behaviour change. *PLoS ONE* **2017**, *12*, e0171380. [[CrossRef](#)]
74. Kanji, N.; Coe, J.B.; Adams, C.L.; Shaw, J.R. Effect of veterinarian-client-patient interactions on client adherence to dentistry and surgery recommendations in companion-animal practice. *J. Am. Vet. Med. Assoc.* **2012**, *240*, 427–436. [[CrossRef](#)]
75. Pun, J.K.H. An integrated review of the role of communication in veterinary clinical practice. *BMC Vet. Res.* **2020**, *16*, 394. [[CrossRef](#)]
76. Patronek, G.J.; Glickman, L.T.; Beck, A.M.; McCabe, G.P.; Ecker, C. Risk factors for relinquishment of cats to an animal shelter. *J. Am. Vet. Med. Assoc.* **1996**, *209*, 582–588. [[CrossRef](#)] [[PubMed](#)]
77. Powdrill-Wells, N.; Taylor, S.; Melfi, V. Reducing Dog Relinquishment to Rescue Centres Due to Behaviour Problems: Identifying Cases to Target with an Advice Intervention at the Point of Relinquishment Request. *Animals* **2021**, *11*, 2766. [[CrossRef](#)]
78. Salman, M.D. Behavioral Reasons for Relinquishment of Dogs and Cats to 12 Shelters. *J. Appl. Anim. Welf. Sci.* **2000**, *3*, 93–106. [[CrossRef](#)]
79. Tangney, J.P.; Stuewig, J.; Mashek, D.J. Moral Emotions and Moral Behavior. *Annu. Rev. Psychol.* **2007**, *58*, 345–372. [[CrossRef](#)]
80. Shaw, J.R.; Adams, C.L.; Bonnett, B.N. What can veterinarians learn from studies of physician-patient communication about veterinarian-client-patient communication? *J. Am. Vet. Med. Assoc.* **2004**, *224*, 676–684. [[CrossRef](#)]
81. López-López, V.; Poblete Hormazábal, M.; Cofré González, S.; Sepúlveda Pérez, C.; Muñoz Pérez, C.; Zapata Lamana, R. Communication Skills Training in Veterinary Education: A Scoping Review of Programs and Practices. *Vet. Sci.* **2026**, *13*, 63. [[CrossRef](#)] [[PubMed](#)]
82. Kogan, L.R.; Cooney, K.A. Defining a 'Good Death': Exploring Veterinarians' Perceptions of Companion Animal Euthanasia. *Animals* **2023**, *13*, 2117. [[CrossRef](#)]
83. McDermott, M.; Tischler, V.; Cobb, M.; Robbé, I.; Dean, R. Veterinarian-Client Communication Skills: Current State, Relevance, and Opportunities for Improvement. *J. Vet. Med. Educ.* **2015**, *42*, 305–315. [[CrossRef](#)] [[PubMed](#)]
84. Daniels, J.T.; Busby, D.; Chase-Topping, M.; Brown, S.M. I wish he'd listen: Client-centered interviewing approaches are associated with higher compliance with behavioral modification advice in pet dog owners. *J. Vet. Behav.* **2023**, *63*, 22–30. [[CrossRef](#)]
85. Dinwoodie, I.R.; Zottola, V.; Dodman, N.H. An investigation into the effectiveness of various professionals and behavior modification programs, with or without medication, for the treatment of canine fears. *J. Vet. Behav.* **2022**, *55–56*, 101–110. [[CrossRef](#)]
86. Cohen, S.A.; Sabik, N.J.; Cook, S.K.; Azzoli, A.B.; Mendez-Luck, C.A. Differences within Differences: Gender Inequalities in Caregiving Intensity Vary by Race and Ethnicity in Informal Caregivers. *J. Cross Cult. Gerontol.* **2019**, *34*, 245–263. [[CrossRef](#)]
87. Kabboush, H.; Fodor, I.; Ózsvári, L.; Vetter, S. A Cross-Cultural Study of Veterinarians' Attitudes to the Euthanasia of Companion Animals. *Anthrozoös* **2024**, *37*, 89–105. [[CrossRef](#)]
88. Passantino, A. Euthanasia of companion animals: A legal and ethical analysis. *Ann. Ist. Super. Sanita* **2006**, *42*, 491–495. [[PubMed](#)]
89. Hawkins, R.D.; Ellis, A.; Robinson, C. Exploring the connection between pet attachment and owner mental health: The roles of owner-pet compatibility, perceived pet welfare, and behavioral issues. *PLoS ONE* **2025**, *20*, e0314893. [[CrossRef](#)]

90. Platto, S.; Normando, S.; Serres, A.; Manteca, X.; Temple, D. One welfare: Bibliometric review of world literature. *Front. Vet. Sci.* **2025**, *12*, 1627981. [[CrossRef](#)]
91. Truffert, M.; Gaultier, E.; Masson, S. Impact of hypersensitivity-hyperactivity syndrome on the quality of life of dogs and their owners. *Appl. Anim. Behav. Sci.* **2024**, *278*, 106363. [[CrossRef](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.