

**PET OWNERS EXPERIENCES OF SEPARATION FROM THEIR PETS****\*Tanuja Munegowda, S Shrinithi, Sacheth Kiran Donni, Sanjana S, Shreya Chheda, Ved Kapur & Vijayalaya Srinivas T.**

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**Abstract**

Humans have the benefits of living together, it could also include their relationships with their pets. The human-pet relationship is always a special relationship with mutual support. Their support could be in the form of emotional needs or physical protection. This study aimed to understand the separation anxiety of pet owners. The study followed the interpretative phenomenological approach. The major themes of the study were Reason for having the pet, Emotional reciprocation, Personal interaction with pet, Anticipation of separation from pet, Experience post-separation, Concerns about pet wellbeing during separation and History of past pets.

**Keywords:**Pet, Pet owners, Relationships, Interactions, Anticipation, Separation.

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**INTRODUCTION**

Human-pet relationships have always been about symbiosis and mutual support. The support can be in the form of protection and emotional trust on the human side and food and companionship on the pets' side. In contrast to other social interactions, getting a pet to respond favourably is typically not problematic. Because pets don't judge people by their social skills or personalities, they offer comfort and relief, which is uncommon in all other human-human social encounters. It only makes sense to extend social support to human-animal interactions. According to the definition, social support results from one or more of the following: 1) the experience of being taken care of; 2) the conviction that one is loved, revered, and cherished; and 3) the feeling of being a part of a mutually beneficial network. The idea that social support acts as a buffer during times of crisis and protects against pathological states, and speeds up the healing process from disease is embedded within this paradigm (Martin *et al.*, 2021). People frequently emphasise the emotional support and self-esteem obtained from the relationship when discussing the benefits of pet ownership. Pets offer emotional support and affection during traumatic situations like divorce or grief (Martin *et al.*, 2021). These advantages have a strong historical foundation. In addition to recovering from some illnesses more quickly than non-pet owners, pets may shield their owners against falling unwell. Additionally, research has shown that after getting a pet, pet owners experience less health issues than non-pet owners (Friedmann & Thomas, 1995). The COVID-19 epidemic presented a unique chance to learn more about how pets may support their owners socially, attenuate heightened feelings of stress, anxiety, and depression, and promote happiness. Dogs may be able to lessen feelings of discomfort, anxiety, despair, and loneliness, according to the findings of a non-peer-reviewed survey study that examined the relationship, experiences, and worries of human-pet dog dyads during the pandemic specifically. After COVID-19 pneumonia spread globally, social segregation practices like the working-from-home policy have been strengthened globally.

Compared to the equivalent seasons in 2019, the general population's average daily hours spent at home have significantly increased after the pandemic, along with the unemployment rate. Nevertheless, news reports have also shown a rise in adopting dogs and cats from animal shelters (Ho *et al.*, 2021). However, recent research has also suggested that having pets during the COVID-19 epidemic may have had a negative impact on individuals because of the limited resources available (e.g., veterinary care, pet supplies). Although prior research has demonstrated pet relationships' physiological, psychological, and social benefits, more recent data supports the contrary. According to Beike's research from the year 2022, participants who owned pets did not significantly vary from non-pet owners in terms of their level of happiness, and their relationships with other people suffered as a result. An unhealthy overdependence on pets for social engagement resulting from being unable to be around people owing to the COVID-19 pandemic is one possible contributing factor to this. The pandemic saw increased dependence on pets for humans' emotional and social needs due to chronic isolation. According to a prior study, during the lockdown, pets exhibited certain behavioral changes that were indicative of stress (Bowen *et al.*, 2020). Evidence indicates that people turn to their dogs to restore social connection when they feel socially isolated. In one study, participants were made to feel lonely and then started to anthropomorphism (attribute humanlike qualities to their dogs, such as consideration and sympathy) to them. Additionally, one study discovered that those who had a close emotional connection to their pets were less likely to have a doctor propose a fake surgery so they wouldn't have to be separated from them (Peacock *et al.*, 2012). On happiness and depression surveys, those who did this received lower and higher results, respectively (Epley *et al.*, 2008). There is a chance that people's relationships with their pets will continue to negatively affect them when quarantine ends and people start to return to work or reconnect with their social circles. An increase in separation anxiety is one potential side effect which was shown to cause distress proportional to the degree of attachment with pets (Hennesy, 1997).

Diagnosed with SAD resulted in more severe anxiety and stress symptoms, higher levels of impairment, and higher neuroticism scores (Silove, 2010). Additionally, even after considering demographic variations, it has been discovered that attachment to an animal in a companion-level relationship positively correlates with psychological suffering among pet owners (Peacock *et al.*, 2012). Pet owners with separation anxiety also suffered unfavourable symptoms in addition to those experienced by persons with separation anxiety. In a recent study, researchers discovered that participants who experienced more animal separation anxiety also experienced more attachment anxiety than humans. Separation anxiety in this study was also strongly connected with separation anxiety in animals and humans (Dowsett *et al.*, 2020).

According to a survey conducted by the Human Animal Bond Research Institute (HABRI) in the United States, 36% of pet owners reported spending more time with their pets than before the pandemic began. The statistics point to how valuable human-animal bonds can be. It also asks questions about how we can use this special bond to improve human psychological well-being. To answer that question, we need to dig into core issues involving human experiences with pets and the impact the separation of pets can have on human minds. A phenomenological approach can be taken for a similar question on the human-pet relationship and dependence as it digs deeper into personal experiences that people have had and also the nature of the impact these experiences have created on them. The method also provides a space for self-exploration to understand the importance pets have in human lives and the contributions the relationship has made to developing the human self. Human-animal relationships have significant positive mental health implications, as research. This makes it essential to ensure that humans maintain human-pet relationships in good health. Pet owners must learn adaptive ways to deal with themselves when separated from their pets. Understanding the dynamics of the separation anxiety the owners face and identifying themes of related situations that trigger anxiety in a generalized population can be a stepping stone towards positive coping mechanisms.

This research study aims to understand pet owners and their experience of separation anxiety from pets. The study broadly targets the associated feelings of worry and stress pet owners are likely to experience on being away from their pets for a long time. Participants will be asked to choose what pet they own (or the pet they are closest to) and describe their emotions and experiences when they are away from their pets. To identify triggers and establish generalized findings, themes will be developed categorizing the negative feelings or actions separation experiences in the responses given by the participants during a semi-structured interview designed to give direction to the conversation with the pet owners. This will demonstrate whether most pet owners face separation anxiety and exhibit separation behaviors when they aren't around their pets. The results are likely to give doctors the benefit of understanding how to deal with pet owners whose pets have terminal diseases while also giving them an idea of how they can cope with issues arising from separation from pets on a larger prospective reach. The study would further explore the nature of these experiences in detail and give way for future research studies with an approach to develop and direct animal-assisted therapies. This study determines if there has been an increase in global interest in pet adoption immediately after the pandemic and if the effect has been sustainable in 8 months. A Google Trends search using keywords related to pet adoption was done. The top countries' datasets included Australia, the United States, Canada, New Zealand, the United Kingdom, Singapore, the Philippines, and Malaysia. The adoption of dogs and cats peaked between April and May 2020, which was the early phase of the pandemic. There was an interest in cat adoption because of its indoor living. The global interest in pet adoption surged in the early stage of the pandemic but was not sustainable. After the COVID-19 vaccine, there is a concern for separation anxiety when the owners would leave their homes for work (Ho *et al.*, 2021). A study conducted by Martin and others tried to understand the correlation between having pets and depression and the social support of individuals during the COVID-19 pandemic. They compared the correlation between a group of pet owners and another group of individuals who were extremely interested in adopting one. The results showed that dog owners showed significantly higher levels of social support and lower scores on depression in comparison to potential pet owners (Martin *et al.*, 2021).

Noah Ross (2022) found evidence that when people feel socially disconnected, they turn to their pets to reestablish their social connections. His research showed that separation anxiety experienced by people from their pets, people or other things did predict anxiety levels and effects on physical health. A significant finding was that people who got pets during the COVID-19 pandemic resorted to their pets to compensate for their social connectedness and developed overdependence.

In a study, Lee S. (2020) found that the DSM-5 model of grief applied to pet owners with deceased pets after studying a sample of 395 individuals. This finding supports our research question that pet owners may experience anxiety upon separation from their pets. Research conducted by Dowsett and others attempted to check the relationship between the separation anxiety that arises as a result of separation from human companions and the anxiety that is a result of separation from pets. Their sample included 313 participants who completed pet and companion separation anxiety questionnaires. A strong positive correlation was found between separation anxiety from pets and human companions. This correlation was higher, especially in people with lower social support (Dowsett *et al.*, 2020). This points to the fact that there is a similarity in the value that people ascribe to pets and human companions. In that sense, this study is an extrapolation of attachment theory to animal companions.

Clearly *et al.* (2020) conducted a study to understand "The unbreakable Bond: The Mental Health Benefits and Challenges of Pet Ownership for People Experiencing Homelessness". The paper explores two firsthand narratives of the relationship between a person and their pets during homelessness and the subsequent search for accommodation. The narratives emphasize the importance of supporting, expanding and creating new pet-friendly crisis and permanent accommodation options for pet owners experiencing homelessness. Research has established beneficial relationships between pets and their owners' physical health, and more recent studies have revealed the good impacts of pets on the negative elements of mental health. However, more research needs to be done regarding the relationship between dogs and the good aspects of mental health, such as happiness. 263 American people participated in the current study by completing an online survey using Amazon Mechanical Turk. The findings show that

pet owners had higher life satisfaction than non-owners, but there was no difference in other well-being indicators, personality traits, emotion control, or need fulfillment, indicating that owners did show symptoms of anxiety. The Big Five personality traits (extraversion, agreeableness, and neuroticism in particular), emotion regulation strategy, and need fulfillment acted as mediators in the association between the type of pet a person owned and well-being. Additionally, self-described "dog people" exhibited patterns similar to those of dog owners compared to "cat people" however the effects were frequently less pronounced. The benefits of owning a dog are obvious, even if there may be few distinctions between people who own pet animals and those who do not, as claimed by the researcher. Future directions and implications were considered in the study.

## METHODOLOGY

### Sample

The sample size for the study was 6 adult participants, which included 3 males and 3 females

### Procedure

The design follows a social constructivist perspective that attempts to perceive human-pet relationships as dependent on how Indian cultural and social systems discern relationships with non-human animals. The research will explore humans ‘lived experiences’ associated with separation from pets. It involves understanding the affective states during the separation phase and how people manage the same. In essence, the phenomenological experiences of pet separation will be captured through the research. The approach also emphasizes maintaining individuality and the authenticity of the lived experiences. In that sense, it would take an idiographic approach. Pet owners would be taken for the study, and informed consent from the participants would be taken. A semi-structured interview was conducted. The questions pertained to their relationship between their pets and the way they experience separation anxiety from pets. The interview would be recorded, transcribed, and used for analysis. The transcripts of all the data will be analyzed through thematic analysis. The transcripts will be read, and initial comments will be made. The researchers will look for emergent themes that are common in all transcripts. Further similar subthemes will be categorised under larger grand themes.

## RESULTS

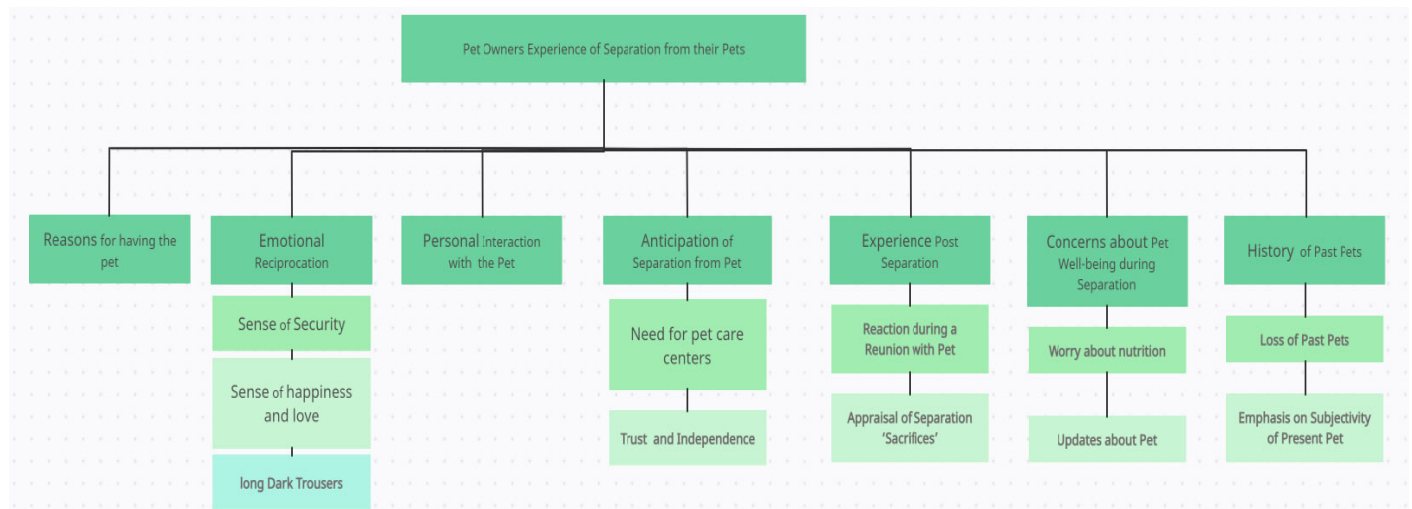


Figure 1. Hierarchy of Categories

Table 1. Description of Emerging themes

Theme 1	Description	Examples from transcript
Reasons For Having the Pet	The various factors influencing the individual to adopt a pet	And so my parents' new way, or innovative way to take our time from TV and games also gives us a pet (transcript 7) I was really excited about the idea of having a pet, but mostly since I was an animal lover (transcript 6)
Theme 2		
Emotional Reciprocation	The level of emotional intimacy established with the pet through interaction	
Subthemes	Description	Examples from Transcript
Sense of Security	Feeling at ease and a sense of psychological safety is reflected with the pet	Whenever I'm with them, it feels that I'm home.(transcript 7)
Sense of Happiness and Love	Feeling of comfort The presence of the pet provides contentment and emotional intimacy.	I feel at ease, he always sleeps beneath my legs. If eel loved. (transcript 1) "We can say we're happy about Joy" (transcript 5)

Theme 3	Description	Examples from transcript
Personal Interaction with the Pet	The mode of communication exercised by the petowner with their dog	He is very playful so jumps around me. It akehim for a walk every morning for around half an hour (transcript 1).
Theme 4	Description	
Anticipation of Separation from Pet	Actions taken to ensure Pet isnot left alone action taken toensure the pet is not left alone	
Subthemes	Description	Examples from transcript
Resistance to Separation	Need to stay with the petorac commodate a pet in plans	Some or the other way we manage one of our family members will be at home and take care of her and that's how we have been doing it but most of the times we feel that is not a really working solution (Transcript3)
Need for Pet care Centers	Search for the safe temporary spaces	And if it is outstation or more than one day two days or something like that, then we'll have to also identify pet caretakers and we have been doing that but we have never been comfortable to leave her in a pet day careoracarestation (Transcript 3)
Trust and Independence	The need to make the pet feel that he/she can trust the owner and learn that a separation from the owner/caregiver is temporary.	"And she should know that okay, even though we are leaving somewhere and going and we are coming back and picking her up. So she should not be anxious about it. So that way we need to train her." (Transcript 5) leaving somewhere and going and we are coming back and picking her up. So she should not be anxious about it. So that way we need to train her." (Transcript 5)
Theme 5		
Experience Post Separation	The ways in which separation can influence the outlook of the pet towards the pet owners	
Subthemes	Description	Examples from transcript
Examples from transcript	The happy moments with the pets post a term of separation from the pet	"I do miss him and hence when I do get to see him after a certain duration, I feel happy and loved and hence I spend more time with him." (Transcript 1)
Appraisal of Separation as 'Sacrifices'	Conceptualising /making meaning out of having to cut some ends for the well-being of each other	"I feel a bit sad honestly, but it is manageable and I understand certain sacrifices have to be made for the happiness of myself and Bruno."(Transcript 1)
Theme 6		
Concerns about Pet Well being during Separation	Apprehension about pet wellness during the course of separation	
Subthemes	Description	Examples from transcript
Worry about Nutrition	Need for updates regarding the appropriate food intake	"But if it is for a longer period of time, or if it's quite late in the night, and nobody is at home, then we'll be wondering how she will be and what she will be doing at home, whether she's just waiting for us or whether she's hungry. So those kinds of thoughts will be coming when we are away. But we will just want to come back home sooner whenever we leave her and go" (Transcript 5)
Updates about Pet	Inquiring about the health of the pet by contacting the family members or caretakers during separation	"It was tough on us as a family but we got regular updates on his well-being and health so it was all fine." (Transcript 1)
Theme 7		
History of Past Pets	The experience and the journey shared about the pet	
Subthemes	Description	Examples from transport
Loss of Past Pets	The death of a previous pet points to the distinct way of perceiving separation from the pet	"first, I'll talk about Chunmun, she died at the age of... 3 years, yeah" (transcript 2)
Emphasis on Subjectivity of Present Pet	Despite the experiences with past pets, the subjectivity of each pet poses varying demands thereby differentially affecting experiences of separation.	"Even when we went, our previous pets used to stay around home and our neighbors used to feed them. But with Joy, we have taken care of in such a way that we don't leave her outside our home compound or area. She will always be inside then so that it is safer. The safety is what is very important for us so that she doesn't go out and then get injured by any other fights with other dogs outside or doesn't get hit by any vehicles on the road or doesn't get harmed by other people. We are taking care of her more than the previous pets and then naturally that makes us anxious if we want to leave her and go." (Transcript 5)

## DISCUSSION

In the process of exploring our respondents' experience of separation from their pets, 6 major themes emerged (1) Reason for Having the Pet, (2) Emotional Reciprocation, (3) Personal Interaction with the Pet, (4) Anticipation of Separation from Pet, (5) Experience Post-Separation, and (6) Concerns about Pet Wellbeing during Separation and (7) History of Past Pets. The underlying reasons for having a pet and the emotional exchange between the pet and the individual can potentially impact the intensity of the experiences of separation from pets. The report attempts to connect these two primary themes (Theme 1 and Theme 2) that act as foundations for understanding the subsidiary themes that answer the research objectives.

### *Reasons for having the pet*

Our respondents expressed different reasons for adopting a pet dog. For some, there was a transfer of pet ownership, and they agreed to house them. Some consciously bought a pet for their children to shift their attention from the TV to taking care of the dogs, while for some, it was a mere inclination to have a pet in their life.

### ***Emotional Reciprocation***

Participants described their natural interaction and relationship with their pet dogs to be reciprocal, where they feel a sense of security and a sense of happiness and love. This encompasses their feelings of loneliness warded off by the pet's presence. Pet owners often consider their pets their children or a close family member they care for. Findings by Zhe Hui Gan et al. (2019) informed us of the relationship pet owners share with their pets regarding comfort, safety, social inclusion, participation, purposeful routine, structure, and a meaningful role. Since a few pet owners achieve a sense of meaning by being a part of their pet's activities, time spent away from them is shaded with thoughts about the pet's wellbeing. A few pet owners mentioned how their pet understands when they are having a tough time and be around them to soothe them. Pet owners anticipated their reunion time with their pets and expressed willingness to make the most of their time.

### ***Sense of security***

One participant commented that they felt a sense of home during their interactions with their pet. This points to the sense of psychological safety and feeling secured that a pet can offer.

### ***Sense of happiness and love***

The existence of pets as a part of the family has created an environment for deep emotional intimacy with the owners, providing them feelings of happiness and contentment.

### ***Personal interaction with pet***

The mode of interaction with the pet becomes an essential part of the pet owner's relationship with the pet. Pet owners describe their involvement in pet activities in various ways, like playing with them, taking them for a car drive, taking them out to play, planning their food timings, etc. Their level of involvement differed to a great extent and possibly had an impact on how they responded to the separation period from the pet. For example, one participant expressed concern over their pet's anxious attachment pattern when they were away and how it affected the dog's appetite. A few pet owners purposely leave their pets by themselves to ensure that they do not overly get dependent on the pet owners.

### ***Anticipation of Separation from Pet***

A lot of times, humans encounter social, personal or professional situations where taking the pet along is not an option, e.g. traveling abroad, visiting the hospital, attending social gatherings where the pet's presence may not be appreciated, etc. This calls for a temporary separation from the pets. The response of pet owners to leaving their pets alone ranges from not leaving the pet on its own to being comfortable leaving the pet with a pet care center for up to a month.

### ***Resistance to Separation***

Not all pet owners are comfortable leaving their pets alone in the house, and they consider them an integral part of their plans. A few pet owners are highly involved in planning the pet's daily activities, like having food and going for a walk, while others are dependent on their family members for such caregiving functions. One pet owner described how they would not be comfortable leaving their pet in the pet care centre, alone, for over a month while they can comfortably leave them for a couple of weeks as they did during their family trip abroad. On the contrary, most pet owners travel locally and ensure pet provisions and accommodations. A few insist on having at least one family member with the pet. Herzog (2022) reviewed and studied the experience of separation anxiety in pet owners and found that pet owners who experienced separation anxiety from pets tended to take their dogs everywhere they go and often worried about their pet's well-being while they were away from them. Unwillingness to leave the pet on its own may be a sign of pet-related separation anxiety in pet owners. However, findings in the American context suggested a trend of childless dog owners and those having limited friendships having higher separation anxiety while away from their pets. This needs to be carefully explored in the Indian context, which has a higher prevalence of a collectivistic and family systems culture.

### ***Need for pet care centers***

Pet owners who were comfortable leaving their pets with someone else often entrusted their pets with their neighbors, family, or friends. Many of them expressed concern over how they needed more pet care centers in case they had to leave their pet.

### ***Trust and Independence***

Cats, for that matter, are self-sufficient in their daily care, while dogs are mammals that thrive on human companionship and affiliation. A few pet owners are unwilling to leave their pets alone, even for a single day. While a few pet owners are mindful of purposely leaving their pets alone to ensure they learn to be independent and care for themselves. This points towards their efforts to build a secure attachment with the pet.

### ***Experience post separation***

The psychological reaction of the participants in situations that involve them getting back together with their pet after a period of being separated shows the extent of attachment with the pet. This can differentially affect their ways of experiencing separation from their pet with varying intensities.

### ***Reaction during a Reunion with Pet***

Reunions with pets are often viewed very positively by pet owners. They look forward to spending more time with them.

### ***Appraisal of Separation as 'Sacrifices'***

Leaving behind their pet to pursue their career or education in a place away from their home is often seen as a sacrifice.

### ***Concerns about Pet-wellbeing during Separation***

Some participants reported their apprehensions related to how well their pet is coping up with separation.

### ***Worry about Nutrition***

One participant reported that they would be worried about the possibility of their pet staying hungry during the period of separation. They find it hard to cope with the uncertainty towards fulfillment of basic nutritional needs of their pet. This can further make them more reluctant towards depending on pet care centers during separation.

### ***Updates about Pet***

A participant reports how difficult it was for them and their family to deal with separation. They consistently inquired about their pet's wellbeing. The participant reports that their worries reduced in their severity after getting these updates making it easier to deal with separation. Many pet owners also mentioned how they feel concerned about their pet's well-being, eating, and napping schedules in their time away from them. However, since many of these things are taken care of by the other family members, a few pet owners have some riddance.

### ***History of past pets***

Underlying presumption was that the presence of previous pets reduces the intensity of apprehension that arises out of separation from present pets. In other words, long-term pet owners who have experience living with multiple pets find it easier to deal with separation relative to new pet owners.

### ***Loss of Past Pet***

One subject reported that they were better able to grieve the death of their past pet by taking care of their puppies than the previous pet. ("ya, it was easier to cope because she was a little kid when we had her, so I know what it means to have her kids."; transcript 2).

### ***Emphasis on Subjectivity of PresentPet***

The personality of the pet seems to pose different demands on the owners based on their breed, gender, age and adaptability potential. One participant noted that the presence of a german shepherd increased their concern towards taking care of minute specifications in comparison to their previous Indie pets that posed less demands. Hence separation was a bigger concern for the present pet. Therefore it is important to focus on the requirements and adaptive capacities of the pet to determine the intensity of separation experiences that arise out of the same. This study aimed to understand the experiences of being separated from pets. The study attempted to explore different actions people take to ensure their pet is safe in their absence and also the feelings of apprehension regarding their pets. Seven participants were interviewed for the same. The analysis showed five major themes that emerged. They were - Reason for Adoption, Emotional Reciprocation, Personal Interaction with Pet, Planning for Separation from Pet and Concerns, Pet Well-being During Separation and History of past pets.

### ***ACKNOWLEDGMENT***

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### ***CONFLICT OF INTERESTS***

We authors declared no conflict of interest.

## REFERENCES

- Dowsett, E., Delfabbro, P., & Chur-Hansen, A. (2020). Adult separation anxiety disorder: The human-animal bond. *Journal of Affective Disorders*, 270, 90-96. <https://doi.org/10.1016/j.jad.2020.03.147> Ho, J., Hussain, S., & Sparagano, O. (2021). Did the COVID-19 Pandemic Spark a Public Interest in Pet Adoption? *Frontiers* <https://doi.org/10.3389/fvets.2021.647308>
- Ross, N. (n.d.). Relationship Between Pet and Human Separation Anxiety on Relationship Between Pet and Human Separation Anxiety on Owners' Anxiety and Physical Health Owners' Anxiety and Physical Health. Retrieved August 26, 2022, from <https://scholarworks.uark.edu/cgi/viewcontent.cgi?article=1023&context=psycuht>
- Martin, F., Bachert, K. E., Snow, L., Tu, H., Belahbib, J., & Lyn, S. A. (2021). Depression, anxiety, and happiness in dog owners and potential dog owners during the COVID-19 pandemic in the United States. <https://doi.org/10.1371/journal.pone.0260676> PLOS ONE, 16(12), e0260676.
- Cleary M, West S, Visentin D, Phipps M, Westman M, Vesik K, Kornhaber R. The Unbreakable Bond: The Mental Health Benefits and Challenges of Pet Ownership for People Experiencing Homelessness. *Issues Ment Health Nurs*. 2021 Aug;42(8):741-746. doi: 10.1080/01612840.2020.1843096. Epub 2020 Nov 16. PMID: 33196324.
- Pets and Happiness: Examining the Association between Pet Ownership and Wellbeing. (2016). *Anthrozoös*. <https://www.tandfonline.com/doi/abs/10.1080/08927936.2016.1152721>
- Holland, K. E. (2019). Acquiring a Pet Dog: A Review of Factors Affecting the Decision Making of Prospective Dog Owners. *Animals*, 9(4), 124. <https://doi.org/10.3390/ani9040124>
- Aragunde-Kohl, U., Gómez-Galán, J., Lázaro-Pérez, C., & Martínez-López, J. Á. (2020). Interaction and Emotional Connection with Pets: A Descriptive Analysis from Puerto Rico. *Animals*, 10(11), 2136. <https://doi.org/10.3390/ani10112136>
- Mikko Paldanius, Tuula Kärkkäinen, Kaisa Väänänen, & Häkkinen, J. (2011, May 7). Communication technology for human-dog interaction: Exploration of dog owners' experiences and expectations. *ResearchGate*; unknown. [https://www.researchgate.net/publication/221513673\\_Communication\\_technology\\_f\\_or\\_humandog\\_interaction\\_Exploration\\_of\\_dog\\_owners'\\_experiences\\_and\\_expectations](https://www.researchgate.net/publication/221513673_Communication_technology_f_or_humandog_interaction_Exploration_of_dog_owners'_experiences_and_expectations)

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