

# Canine separation-related problem behaviours – part 1: social living and owner absence

Members of the veterinary profession will have noticed the demise of the term 'separation anxiety', along with the previous assumption that all canine separation problems boil down to an excessive intensity of the human-canine bond. A range of replacement terms for separation anxiety have materialised: 'separation disorder', 'separation syndrome', 'separation-related problems' and 'separation-related behaviours' are just some, all of which are now regularly used to replace the term 'separation anxiety'. This article produces a summary of the profession's current understanding of the issues associated with owner absence-related problems in dogs. Further articles will consider options for behavioural modification to support the needs of dogs whilst owners are absent.

10.12968/coan.2023.0023

**Claire Hargrave**, ABTC Registered Clinical Animal Behaviourist. Email: [erwwastad@aol.com](mailto:erwwastad@aol.com)

**Key words:** Anxiety | canine | fear | frustration | separation-related behaviour | separation-related problems

**Submitted:** 27 July 2023; accepted for publication following double-blind peer review: 11 August 2023

Previously generally referred to as 'separation anxiety', the greater understanding of the range of factors that can result in a dog expressing problem behaviours during owner absence has resulted in the range of conditions generally falling under the broad term of separation-related problems. But, despite the wide variety of factors that may result in a dog failing to cope during the absence of its owners, one or more of the widely accepted range of separation-related behaviours can be shown in any one of many separation-related problem scenarios, often making the specific identification of causative factors extremely complex – not least as the problems, by definition, occur in the absence of the owner who subsequently is unable to provide accurate details of exactly when or why the problem behaviours occur. Despite this, figures suggest that 22–55% of companion dogs experience separation-related problems (Bradshaw et al, 2002b; Mills and Mills, 2003) at some stage in their life, and the 2022 PDSA Animal Welfare Report found 11% of the canine population to be currently suffering whilst owners are absent. With behaviour problems remaining one of the most common reasons for the relinquishment of dogs, this makes the condition, and the inconvenience to owners that is associated with separation-related problems, a substantial welfare problem for the domestic dog population.

## The advantages of social living

Sociality and social connectedness are considered to be adaptive (MacMillan, 2016), bringing benefits such as safety, parental care, improved food acquisition and mate procurement. For social species, being socially separated greatly increases the chances of starvation and predation; hence in many species the social state is strongly favoured, creating a selective pressure for social connectivity. Evidence suggests that, within social species, social affiliation and attachment activates and rewards specific mechanisms within the brain (MacMillan, 2016) and that when socially isolated, social animals experience emotional pain and a sense of a lack of safety (Bowlby, 1973).

Dogs are social obligates and companion dogs heavily rely upon their owners for both their social (which social individuals they come into contact with and which they do not) and physical (access to food, water, shelter, exercise, toileting opportunities) needs (Denenberg, 2021). Very few owners can allow their dog to continually accompany them, and hence, periods of separation from owners is part of virtually every dog's experience. Yet, within canine society, such periods of social isolation would be unlikely to occur. From birth, the puppy is reliant upon the proximity of the dam for warmth and food. Indeed, the dam is 'primed' to respond to the vocalisations of the distressed puppy that rolls away from its source of warmth, heavily reinforcing vocalisation as a

primary response to the distress of social isolation and a tool for resolving that distress (Mills et al, 2013). With the expectation of care and the provision of social companionship being reinforced from birth, it could be questioned whether the state of being a domestic dog predisposes the animal to separation-related problems.

### Failure to cope – but so many potential reasons

What seems to be universally accepted regarding the range of canine separation-related problems, is that, with only a few exceptions (such as opportunities for behaviours that owner presence usually prevents, such as scavenging or 'boredom'-related searches for mental stimulation), they have a common underlying factor – at some stage during an owner's absence from the dog, the dog's concept of safety is impaired and the dog fails to cope (Figure 1). As such, the resultant behaviours could be considered 'coping strategies' (Palestrini, 2010). Because approximately 45% of owners leave their dogs every day, and 28% of dogs are left for over 4 hours at a time (Bradshaw, 2002a), impairment of welfare during owner absence is likely to affect a considerable proportion of dogs.

Mendl (2010) estimated that 50% of the dog population are subject to some form of separation-related problem at some stage during their life and, as such, the manner in which dogs deal with their separation from owners (whether for short or prolonged periods) could be considered to be a substantial welfare problem for the companion dog (Casey, 2022). Estimates of the incidence of separation-related problems within the canine population rely upon owner reporting and, as such, diagnosis is based largely upon owner perception and, often, upon owner inconvenience. Because of this heavy slant upon the owner's inability to cope with their dog's separation-related behaviours, the animal's underlying emotional state and welfare is often overlooked.

In addition to a dog's inability to cope during owner absence, there is also the subset of dogs that experience a strong motivation to explore their environment or to scavenge for food; behaviours that are likely to be strongly discouraged during owner presence. However, if owners who are exiting a home fail to remove resources that they value from the dog's environment and simultaneously fail to provide resources that the dog can explore and use for enrichment activities, then destruction of owner belongings, furnishings and such is to be expected during owner absence.

When considering 'initiating factors' such as those mentioned in *Figure 1*, it is important to recognise that these factors are 'triggering' a response within an individual, and that each individual will also have different 'predisposing factors' (such as genetics and the environments experienced both pre- and post-birth) that will affect temperament, capacity to 'cope' and the ability to recover from events, as well as the animal's resultant 'mood'. However, pre-disposing factors are not limited to an animal's early development, and if an animal is experiencing challenges such as chronic pain, then the resultant, enhanced vulnerability to failing to cope may result in the animal showing emotions related to self-preservation in a wide range of situations, including during owner absence (Horwitz and Neilson, 2007).

### Are some dogs particularly predisposed to separation-related problems?

Lenkei et al (2021) list several possible causes and risk factors for the development of separation-related problems, including genetics, the puppy breeding environment (this will have both pre- and post-birth effects (Hargrave, 2018)) and the environment within the puppy's home. In their 2004 paper, Appleby and Pluijmakers explain the essential role, from the end of the puppy's third week of age, of the development of the 'secure environmental base'; ensuring that the puppy has a wide experience of social and environmental stimuli to provide a concept of environmental coping and safety. This sense of safety enables the puppy to confidently explore and inhabit its environment and, whilst doing so, encounter an increasing set of stimuli within a framework of safety, thereby increasing its neural plasticity and general resilience. Not only does the existence of a widening set of stimuli that are associated with safety and coping reduce the likelihood of the development of anxiety and fear, but the associated, widening sense of security can be an adequate alternative to seeking access to owners at times when coping is compromised.

Additionally, it is essential that a puppy is allowed to gradually experience social isolation, within a framework that doesn't disturb the puppy's sense of safety (Casey, 2022). Many owners still appear to think that competency with social isolation will naturally develop if the young puppy is left on its own, for example, at night; however, the resulting distress can markedly disturb the puppy's developing sense of security and predispose it to further owner absent distress. Current thinking is that puppies should remain with owners, even overnight, and that separations should be gradually increased in order not to distress the puppy. One study (Manteca et al, 2016) suggests that the chronic stress associated with separation-related problems may reduce the life expectancy of affected dogs and predispose sufferers to a range of diseases. Hence, separation-related problems are a common and considerable welfare problem for the companion dog population; but traditional treatments are often complex and protracted. As a result (and possibly due to owners finding difficulty in maintaining compliance), many dogs affected by separation-related problems have been relinquished or euthanised.

### Separation-related problems and noise sensitivities, fears and phobias

A comorbidity of 30–50% has been suggested between owner absence problems and sound fears (Storengen and Lingaas, 2015), with separation-related problems being seen to worsen with concurrent sensitivity to noises and noise fears worsening when a dog is left alone and an established coping strategy of seeking an owner is unavailable (Ballantyne, 2018). Holland et al's (2021) study suggested that dogs with existing sound sensitivities will be particularly vulnerable to separation-related problems if a sound event has occurred during owner absence and disturbed the dog's concept of safety within the home, predisposing to attempts to exit the home.

In the author's experience, the social restrictions associated with COVID-19 resulted in many dogs losing competencies. The upset to the previously routine daily soundscape (Hargrave, 2022)

**Figure 1. Factors that can result in a dog experiencing difficulty in coping during owner absence (the list is not exhaustive and factors may be cumulative):**

Potential initiating factors	Maintaining factors
Young animals with attachment problems associated with the dam and breeding environment (including early weaning)	Animal may never have developed the necessary competency for time spent in social isolation
Pups retained with the dam post puberty eg single pups retained by owners following a family dog's misalliance	Animal may never have developed the necessary competency for time spent in social isolation
Dog of any age whose owners have always been present or who have not adequately prepared the dog for periods of social isolation	Animal may never have developed the necessary competency for time spent alone
Genuine over-attachment or reliance upon owner presence	Continuous meeting of the dog's need for mental stimulation via human attention and interaction
Rescued or re-homed dogs	Constant expectation of 'loss' of a secure social base and loss of secure access to resources
'Lap-dog' breeds, especially those that maintain neotenous features	Neotenous appearance retained into adulthood and attracting increased human attention and 'caring'
Adolescent and mature dogs experiencing inconsistencies in owner-dog relationship	A lack of security and consistency in relationships disturbing coping
Dogs experiencing changes in routine regarding access to owners	School holidays, maternity or long term sickness leave, shift alterations – all are periods of sustained owner access that can disturb independence
Underlying health problems	Learning and discomfort or pain associated with acute or chronic conditions – discomfort being more obvious when exposed to reduced levels of stimulation associated with family activity
Loss of secure social base because of a bereavement or change in human social structure (for example children leaving home, adult separations)	Lack of access to a secure social relationship
Loss of the secure environmental base (for example because of house move, holiday or kennel environment)	Lack of predictable access to resources that have previously enhanced welfare
Lack of resilience to the domestic environment	Sound sensitivity, increase in the intensity of social activity in a home etc
Confinement distress	The need to use, for example, a crate to prevent destructive behaviours
Frustration related responses to external stimuli resulting in destruction or soiling	For example, continuous exposure to passing pedestrians, delivery personnel
Social frustration	In response to barking dogs, noisy neighbours or pedestrians
Learnt anxiety or fear-related responses to sounds (for example, because of previous exposure to aversive sounds during owner absence like fireworks, building or road works, fire-alarms or emergency vehicles)	Lack of alternative stimulation during owner absence enhancing focus on auditory and visual stimuli based outside the home
Learnt anxiety or fear responses due to trauma during owner absence, for example following exposure to a burglary, inappropriate care provision during owner absence, physical injury during owner absence	As event occurred during owner absence, there is an expectation of re-occurrence while owners are absent
Age-related changes in cognition and coping, enhancing increased reliance upon owner proximity	Gradual development of cognitive and physical changes
Predatory related destruction for example because of rodent or squirrel activity in cavity walls or attic	Recurring opportunity for predatory activity (scratching, digging and the like) while owners are absent and unable to interrupt
Fear of punishment on the owner's return due to learning associated with previous owner behaviour in response to previous separation related behaviours such as soiling or destruction	Increasing distress as the time of owner return is predicted

caused an increase in the incidence of sound sensitivity to everyday activities, and the resultant emotional responses of seeking (access to owners), anxiety, fear and frustration, can all enhance the emotions of panic, loss and grief if owners are unavailable during sound incidents. This situation is further intensified if pain is also involved.

### Conclusions

Separation-related problems arise as a result of a wide range of predisposing and initiating conditions. The traditional allocation of the term 'separation anxiety' as a diagnosis for the wide range of canine behaviours that can occur during owner absence has re-

sulted in a 'one size fits all' approach to treatment, that in many cases will have been less targeted than would be desirable. More recent studies have identified a need for careful observation of symptoms (necessitating video evidence, as these behaviours occur during owner absence) and assessment of why they occur. This approach enables a more accurate identification of the emotional circuits likely to be involved in initiating behaviours, in particular the recognition of the role of frustration. The combination of more accurate identification of initiating circumstances and emotional activity enables clinicians to create targeted treatment protocols with a far better prognosis for these debilitating conditions. The above article has summarised the array of circumstances that may result in a dog experiencing separation-related problems; further articles will focus on other elements found in separation-related problems and behaviours (such as owner behaviour, learning behaviour and recognising canine emotions) as well as potential, and more targeted, treatment options. **CA**

### Conflicts of interest

The author declares that there are no conflicts of interest.

### Helpful sources of information

Fellowship of Animal Behaviour Clinicians: Find a Behaviourist | FAB Clinicians, Handouts | FAB Clinicians and Veterinary Q and A Sessions | FAB Clinicians. <https://fabclinicians.org>

Register of Certificated Clinical Animal Behaviourists (CCAB Certification Ltd): CCAB Certification | How to become a CCAB. <https://www.ccab.uk>

Lincoln University's Canine Anxiety Scale: The Lincoln Canine Anxiety Scale (LCAS) available from: <https://ipstore.lincoln.ac.uk/product/the-lincoln-canine-anxiety-scale-lcas>

Reconcile: Free Veterinary Webinars: Reconcile free e-learning series on separation disorder for dogs presented by Dr Sarah Heath, the UK's leading veterinary behavioural specialist. [fortehealthcare.com](https://www.fortehealthcare.com)

Battersea: Dealing With Stress And Separation Anxiety in Dogs | Battersea. <https://www.battersea.org.uk/pet-advice/dog-care-advice/stressed-dog-care>

Dogs Trust: Separation Anxiety In Dogs | Behaviour | Dogs Trust. <https://www.dogstrust.org.uk/dog-advice/understanding-your-dog/separation-anxiety-in-dogs>

PDSA: Separation anxiety in dogs | PDSA. <https://www.pdsa.org.uk/pet-help-and-advice/pet-health-hub/other-veterinary-advice/separation-anxiety-in-dogs>

RSPCA: Separation Anxiety in Dogs | RSPCA. <https://www.rspca.org.uk/adviceandwelfare/pets/dogs/behaviour/separationrelatedbehaviour>

### References

Appleby D, Pluijmakers J. Separation anxiety in dogs: the function of homeostasis in its development and treatment. *Clin Tech Small Anim Pract.* 2004;19(4):205–215. <https://doi.org/10.1053/j.ctsap.2004.10.002>

Ballantyne KC. Separation, confinement, or noises: what is scaring that dog? *Vet Clin North Am Small Anim Pract.* 2018;48(3):367–386. <https://doi.org/10.1016/j.cvsm.2017.12.005>

Bowlby J. Separation, anxiety, and anger, attachment and loss (Vol II). New York: Basic Books; 1973

Bradshaw JW, McPherson JA, Casey RA, Larter S. Aetiology of separation-related behaviour in domestic dogs. *Vet Rec.* 2002a;151(2):43–46. doi:10.1136/vr.151.2.43

Bradshaw JWS, Blackwell EJ, Rooney NJ, Casey RA. Prevalence of separation related behaviour in dogs in southern England. Presented at the 8th ESVCE Meeting on

### KEY POINTS

- Dogs can exhibit an array of separation related behaviours during owner absence.
- The behaviours presented by owners as separation related problems may not all be resultant of the dog experiencing distress.
- Not all separation related behaviours are exhibited as a result of a hyper-attachment to an owner.
- Dogs can experience distress during owner absence due to the activation of an array of, often concurrent, emotional systems.
- The activation of circuits associated with anxiety are not necessarily required for the existence of separation related problems or the expression of separation related behaviours.
- Successful treatment of separation related problems relies upon identification of the factors initiating the separation related behaviours and their associated emotional circuits.

Veterinary Behavioural Medicine. Granada, Spain, 2002b.

Casey R. The long-term impact of sudden changes in leaving patterns on dog separation related behaviour. Fellowship of Animal Behaviour Clinicians. 2022. <https://fabclinicians.org/webinars/#CEVA140922> (accessed 21 August 2023)

Denenberg S. Small animal veterinary psychiatry. CAB International. 2021

Hargrave C. Producing emotionally robust puppies. Part 1. Genetic and early environmental considerations. *Companion animal.* 2018;23(3):161–167. <https://doi.org/10.12968/coan.2018.23.3.161>

Holland KE, Owczarczak-Garstecka SC, Anderson KL et al. "More attention than usual": a thematic analysis of dog ownership experiences in the UK during the first COVID-19 lockdown. *Animals (Basel).* 2021;11(1):240. <https://doi.org/10.3390/ani11010240>

Horwitz D, Neilson J. Canine and feline behaviour: Blackwell's Five-Minute Veterinary Consult: Clinical Companion. Iowa: Blackwell; 2007.

Lenkei R, Faragó T, Bakos V, Pongrácz P. Separation-related behavior of dogs shows association with their reactions to everyday situations that may elicit frustration or fear. *Sci Rep.* 2021;11(1):19207. <https://doi.org/10.1038/s41598-021-98526-3>

Manteca X, Amat M, Camps T, Garcia-Morata C. Separation anxiety – new thinking for an old problem. Presented at the BVBA Study Day, Keep Calm and Carry-On: Combating Stress, Fear and Anxiety. Birmingham. 6 April 2016.

McMillan FD. The psychobiology of social pain: evidence for a neurocognitive overlap with physical pain and welfare implications for social animals with special attention to the domestic dog (*Canis familiaris*). *Physiol Behav.* 2016;167:154–171. <https://doi.org/10.1016/j.physbeh.2016.09.013>

Mendl M, Brooks J, Basse C et al. Dogs showing separation-related behaviour exhibit a 'pessimistic' cognitive bias. *Curr Biol.* 2010;20(19):R839–R840. <https://doi.org/10.1016/j.cub.2010.08.030>

Mills DS, Mills CB. A survey of the behaviour of UK household dogs. Presented at the 4th International Veterinary Behaviour Meeting. Australia. 2003.

Mills D, Braem Dube M, Zulch H. Stress and pheromone therapy in small animal Clinical Behaviour. West Sussex: Wiley-Blackwell; 2013.

Palestrini C, Minero M, Cannas S et al. Video analysis of dogs with separation related behaviors. *Appl Anim Behav Sci* 2010;124(1–2):61–7. <https://doi.org/10.1016/j.applanim.2010.01.014>

PDSA. PAW Report 2022. Pet Behaviour - PDSA. 2022. <https://www.pdsa.org.uk/what-we-do/pdsa-animal-wellbeing-report/paw-report-2022> (accessed 21 August 2023)

Storengen LM, Lingaas F. Noise sensitivity in 17 dog breeds: prevalence, breed risk and correlation with fear in other situations. *Appl Anim Behav Sci* 2015;171:15260. <https://doi.org/10.1016/j.applanim.2015.08.020>