

The behaviour, effects and treatment associated with separation-related disorders in dogs

Discusses typical behaviours, such as destructiveness, excessive vocalisation and inappropriate elimination, exhibited by dogs with separation-related disorders and the effects of behaviour-modification techniques and pharmacotherapy treatments.

By Leah Murray

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Introduction

Given the hectic life many of us lead, it is no surprise that separation-related disorders (SRDs) are a common behavioural issue among companion dogs. The typical undesirable behaviours associated with SRD include destructiveness, excessive vocalisation and inappropriate elimination (Palestrini *et al.*, 2010). These behaviours, which occur only during an owner's absence (Bradshaw *et al.*, 2002), are the cause of frequent complaints from owners with SRD pets, and the reason many of these animals are surrendered to animal shelters (Diesel *et al.*, 2010). Given the significance of SRD behaviour in home and clinic environments, recent studies have aimed to further investigate the behaviour and welfare effects associated with SRD, and ways in which these can be efficiently reduced through treatment.

Discussion

For dog owners, the first indication of an SRD is to arrive home to find their front door scratched to pieces, puddles on the floor and angry letters from nearby neighbours. What has transpired in their absence is left to pure speculation. A study by Konok *et al.* (2011) aimed to visually compare activity levels in dogs with SRD (n=29) and without (n=15). Using video footage they showed that, in the absence of their owner, dogs with SRD tend to show typical behaviours, characterised by whining, tail-wagging, scratching at doors and rearing on walls. Previous research has established that dogs without SRD spend most of their time lying down and resting during the owner's absence, only showing increased activity immediately prior to the owner arriving home and their reunion (Rehn & Keeling, 2011). In comparison, Konok *et al.* (2011) found that dogs with SRD were consistently found to exhibit behaviours indicative of stress, with the dog showing standing, walking or running activity throughout the separation.

Konok *et al.* (2011) demonstrated that upon being reunited with its owner, an SRD dog continues to be active, preferring to run around as opposed to making physical contact or remaining close to its owner. This again contrasts with the behaviour of a non-SRD dog, which tends to initiate more contact with its owner, especially after extended periods of separation (i.e., 2-4 hours) (Rehn & Keeling, 2011). Despite this, it is important to note that other studies, such as Parthasarathy & Crowell-Davis (2006) have suggested that there is no direct correlation between dogs maintaining proximity to their owners after reunion, regardless of whether they do or do not exhibit SRD. Hence, it is suggested that proximity should not be used as a sole indicator to categorise an SRD animal.

Due to indications of distress displayed by SRD dogs and the associated undesirable behaviours, a major focus of recent research has been to explore treatment avenues, including pharmacotherapy and behaviour-modification techniques. One such pharmacological treatment is the administration of low doses of clonidine prior to an SRD dog's separation from its owner. Clonidine is an alpha-2 agonist that blocks the release of nor-adrenalin from central nervous system neurons, thereby reducing the acute stress response that is imposed on an SRD dog (Ogata & Dodman, 2011). This acts to diminish the occurrence of unwanted behaviour in the dog during separation from its owner, which may be especially useful in a clinical setting. Ogata & Dodman's (2011) results also showed that the use of clonidine was more effective than other PRN treatments, such as alprazolam and propranolol, in controlling the negative reactions in seven out of the 10 dogs that they tested with SRD and/or with a noise phobia. However, they suggested that further research still needs to be conducted to assess the pharmacokinetics and pharmacodynamics of clonidine.

Systematic desensitisation (SD) is a behaviour-modification technique that involves gradually accustoming an SRD dog to the absence of its owner (Butler *et al.*, 2011). This method aims to address the underlying motivation for the behaviour, rather than simply reducing the associated symptoms as pharmaceuticals do. It also provides an ongoing, low-cost alternative with fewer side effects. By commencing with short five-minute separation periods and increasing the intervals of owner absence, the dog becomes desensitised to periods of time alone without becoming distressed. Should any undesirable behaviour occur, the owner simply reverts back to the longest period of absence that the dog was able to cope with. Butler *et al.*'s (2011) study regarding the efficacy of SD indicated that for all eight dogs used, the treatment was efficient in reducing the frequency of SRD symptoms, including destructive behaviour and vocalisation. They also determined that the increases in separation did not necessarily have to be gradual in order to be effective, as treatment was still deemed successful even with varying lengths of separation (Butler *et al.*, 2011). In addition, follow-up assessments of the participants three months after the study ended indicated that six out of the eight SRD dogs used demonstrated little or no problem behaviours. Therefore, not only does this behaviour-modification technique allow owners to take intervention into their own hands, but it also allows for some inconsistency in application without being detrimental to its success. However, it may be important to note that Butler *et al.*'s (2011) findings were based on a small sample size (n=8).

Conclusions

Separation-related disorders are a prevalent issue in modern society and an understanding of the indicative behaviours and potential treatment options is essential to ensure the welfare of SRD dogs. Behaviour-modification techniques, such as SD, provide effective and easy methods that owners themselves can implement at home. However, given that these methods are not effective with every dog, the use of pharmaceuticals may provide an alternative means of reducing problem behaviours, especially if SRD behaviour is placing an animal's well-being or future at risk. An understanding of the optimal application of these treatment techniques can help to prevent behaviour issues becoming a problem for owners and keep shelter numbers from increasing. This knowledge also allows veterinary staff to make a hospitalised animal's stay as stress-free as possible. Ultimately, not only do the owners (and their neighbours) benefit, but so do the SRD dogs.

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