

SAFETY WITH CANINE BEHAVIOUR AND HANDLING

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FEAR BITING AND AGGRESSION IN DOGS

Dogs are popular pets in western societies and have shared their lives with humans for more than 12 000 years and pet ownership has contributed to the quality of life of the human.¹ Dog bites however have been a recognized problem with serious health implications, both physical and emotional and immeasurable hidden costs to communities¹. As physiotherapists working with dogs, it is important to understand the problem of fear biting and aggression in order to work with animals and maintain personal safety.

Statistics

Overall and Love² reported the demographics, epidemiology, injury and risks of dog bites and described the following. In the United States, insurance claims in the early 1990s total over 1 billion dollars for dog bite related injuries, 18/1000 people per year are bitten and 3/1000 seek medical attention for these injuries. Statistics show that 35% of American households own a dog and of those bit, 3/5 of the victims were bit by the family dog or one known to them. 85% of the dog bites occurred in the dog's own home. 60 – 75% of all dog bites are to those under 20 years of age and most are children between 5 and 9 years old. Interestingly, more males are bitten than females regardless of age group. Of adults, 62% were bit by the family dog and 75% of the children were bitten by a neighbor or friend's dog. The majority of the injuries to the adults involved the extremities, while children suffered more head, neck and torso injuries.

A similar report on epidemiology of dog bites in Belgium by conducted by De Keuster, Lamoureux and Kahn³. They reported similar statistics and additionally found that most bites at home were triggered by an interaction with the human in 56/65 cases and in public only 11/34 were brought about by direct interaction. They reported that most bites were attributable to human misunderstanding. Only 50% of the bites in the general population were reported to authorities.

Demographics of Aggressive Behaviour

A study was conducted at a specialist behavioural clinic in Brisbane, Australia by JK Blackshaw that looked into the types of aggression cases that were presented for treatment.⁴ Of 223 cases, the classes of aggression could be divided into the following categories; dominance (31.6%), territorial (29%), predatory (12.3%), intermale (12.3%), sibling rivalry (7.9%), fear biting (6%) and idiopathic rage (0.9%). All of which can have an impact on veterinary or animal physiotherapy practice.

The sex and neuter status of aggressive behaviour varies between the general population and those brought in for behavioural treatment. Of dogs brought in for behavioural therapy, the majority of the dogs were intact males, followed by castrated males, then intact females and lastly spayed females.^{2,4} Another study found aggression primarily in intact males, followed by spayed females, then castrated males and lastly intact females. A study conducted by surveying a general dog-owning population found that of client-owned dogs which had bitten a person living in the same household, most were spayed females, followed by neutered males, then

intact males and lastly intact females.⁵ When evaluated just for aggressive behaviour (which looked at growling, snapping, as well as biting), the demographics altered yet again, showing that neutered males were the worst culprits, followed by spayed females, then intact males and lastly intact females.⁶

Breed disposition towards aggression and biting is a disputed topic. While some biting dogs receive considerable attention in the media (i.e. Pit Bulls or Rottweilers), other dogs (such as Labrador Retrievers) do not. One study of biting dogs in the general population found that mixed breeds, followed by Labrador Retrievers and Springer Spaniels were the top bite offenders respectively.⁵ Other studies of animals that obtained behavioural treatment were more likely to be mixed breeds, German Shepherds, Doberman Pinschers, Cocker Spaniels, English Springer Spaniels, Lhasa Apsos, Toy Poodles, and Pit Bull or American Staffordshire Terriers just to name a few.^{2, 4, 7, 8} Most of the studies were diligent to point out that one should not generalize breeds as having a greater or lesser chance of biting. It must be realized that the relative risk of biting depends upon the overall population of dogs in any given area which can wax and wane over time with the changing popularity of different breeds.

Displays of Aggressive Behaviour

Dominance Aggression: This is a variable behaviour problem and dogs with dominance aggression may or may not exhibit one or more components of several species-specific dominant postures. Typical postures include ‘standing-over’, direct eye contact stare, tail and ears erect or a tense, rigid posture accompanied by growling, baring teeth, snapping or biting. It is more likely for these postures to be directed toward family members.⁸ Other behaviours associated with asserting dominance were mounting, blocking and an increase in likelihood to house-mark or soil indoors.⁹ Some dominant aggressive dogs do not exhibit the afore mentioned signs and postures, but rather resist being placed in submissive postures or situations.⁸ Doing so can elicit an attack. There can be a great subtlety in the stimuli which elicit the dominance aggression. Owners will report having only patted the dog on the head, groomed it, put on or took off the leash, bent over the dog, picked it up, pushed it off the bed, disturbed it while sleeping, restrained, disciplined or stepped over the dog as examples that led to a dominance display or aggression.^{5, 8, 10}

Territorial Aggression: In some literature, this is also termed possession or protective aggression. This can be normal canine behaviour as dogs naturally tend to protect a particular area. Protective aggression can involve the contexts of protecting the home, yard, or owner and family. Possessive aggression can occur when the dog is in possession of some object and someone approaches and / or attempts to take it away. Behaviours can include growling, baring teeth, snapping or biting.⁸ In protective aggression, the dog may posture with erect ears and tail, visual attending and approach. The dog may bark, growl, lunge or bite.⁸

Predatory Aggression: This condition involves intense visual scanning and attention to an area where “prey” are anticipated by the dog. Stalking or chasing may ensue if moving stimuli is sighted. This behaviour may be directed towards other animals or smaller dogs or even towards children or adults. Barking, nipping and/or biting are often part of the behaviour.⁸

Inter-Male Aggression: This condition is a behaviour related to testosterone secretion.⁴ It may include barking, growling, and biting while assuming dominance postures, fear postures or possession, but is directed towards other dogs rather than people (generally).⁸

Sibling Rivalry: This is generally a competitive aggression but is directed towards children who visit a childless home that contains a very bonded dog. It may also occur with the arrival of a new baby.⁴

Fear Biting: Fear-elicited aggression occurs when a dog is in a situation from which it cannot escape.⁴ It is accompanied by postures of defensiveness, fear or submission such as ears back, tail down or tucked between the legs and approach/withdrawal behaviour.⁹ The dog may bark with initial stimuli (ie sounds outside of the home or sight of a stranger, children, animals or unusual-looking person). Growling or biting usually only occurs when the dog is approached.⁹

Idiopathic Rage: Is an uncommon, non-determined causation of aggression.⁴

Pain-Elicited Aggression: Described by Borchelt (1983) as being the growling, baring of teeth, napping or biting only when the animal experiences pain. This may come about when being groomed, medicated, or injured.⁹

Punishment-Elicited Aggression: Described by Borchelt (1983) as aggression when punished (yelled at or hit), or presented with stimuli which predict punishment (voice or approach). The dog may growl, bare teeth, snap or bite. The experience of pain during the punishment may not be experienced for this to occur.⁹

Triggers of Aggressive Behaviour

Vas et al (2005) studied the ways that a stranger approached unfamiliar dogs in order to record the dogs' reactions to different human behaviour cues. The types of approaches are described in Table 1.

Table 1: Friendly and threatening approaches towards an unfamiliar canine

FRIENDLY STRANGER APPROACH	THREATENING STRANGER APPROACH
Started 5meters away – calling the dog by name	Started 5 meters away – motionless and silent
Approached when the dog looked at the strangers face. Moving at normal walking speed	Approached when the dog was looking. Moved slow and haltingly (1 step every 4 seconds)
Kept eye contact	Stared directly into the eyes of the dog
Stopped at signs of aggression or fear (ie passive/active avoidance, attack or vocalization)	Posture was slightly bent over / stooped
Petted the animal if no behavioural problem	No verbalization

The study found that more than half of the dogs that were approached threateningly scored as passive / active avoiding or threatening with only a few scoring as friendly or passive. Of the dogs approached in a friendly manner, almost all of the dogs scored as friendly or passive.¹¹

Characteristics of Aggressive or Fear Biting Dogs

The behaviour of dogs when entering a veterinary clinic setting can help the practitioner to determine whether the dog is at risk to bite. Stanford (1981) described four categories of dogs as they entered a veterinary clinic and their subsequent behaviour¹²:

- Group A were identified by their reluctance to enter the clinic and were dragged in or carried in by the owner. They maintained a submissive posture. On average they weighed 12 kg, most urinated during the examination and were motionless except when trying to jump off the exam table. Most did not vocalize. These dogs were not aggressive.
- Group B were generally willing to enter the clinic, smelled their surrounding, eagerly greeted people. They had a consistent tendency to urinate on chair legs, door facings, walls or individuals legs. They tended to weigh 18.9kg and when given an injection a comparatively small number yelped or whimpered.
- Group C were identified as fear-biting dogs. They were inconsistent as to how they entered (willing or unwilling). They all urinated and vocalized during the examination. Their average weight was 6.8kg. All of these dogs made an attempt to snap or bite at the examiner when he/she attempted to pick them up or during the examination.
- Group D were active defensive and considered vicious. They made up the smallest number of animal observed. They all entered the clinic willingly but did not smell the surroundings. Their weight averaged 28.5 kg. When the animals were highly trained, they were controllable with owner commands. The uncontrollable dogs were not responsive to any commands. None of these dogs yelped or urinated while in the clinic

Application to Physiotherapy Management

Use of the above information is helpful for the animal practitioner to gain information on how to approach all dogs, especially those that are fearful or aggressive. Identification of behavioural abnormalities may help to identify dogs at risk of inflicting injury to the practitioner, staff, owners, and other clients or their dogs. The manner in which the animal is approached or interacted with can alter behaviour. Food or treats has been proven to be useful in fear-evoking situations when then the animal is exposed to the same situation a second time.¹³

Recommendations for approaching unfamiliar animals includes speaking in soothing tones, extending a hand with the palm down, let the dog smell you before petting it, pet the dog under the chin and on the chest, and avoiding a direct stare (especially if not speaking to the dog).^{11, 14, 15, 16} Another interesting study showed that ‘dog-appeasing-pheromones’ were useful in reducing stress and fear related behaviours.¹⁷ This may be something to consider in a clinic situation. As well, the animal practitioner should be constantly aware of the animals behaviour and ‘body language’ during an assessment or treatment – especially when afflicting pain or discomfort to the animal.

While physiotherapy does not endeavor to treat aggression or fearful behavioural problems, it is important to recognize them and advise the owners when to seek a behavioural specialist consultation. Recommendations for obedience and socialization classes may also be applicable.

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“Any dog breeder, owner or veterinarian who accepts displays of inappropriate aggression or who believes that such aggression is normal for their breed (or not dangerous because the dog is small) is contributing to the problem.”²

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