

A review of recent research into canine aggression behaviour

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Introduction

The presence of a dog in 40% of Australian homes (Kobelt et al., 2003) establishes the dog as an important member of the family. However, aggressive behaviour in dogs is an important public health issue as evidenced by the reported number of human injuries (Guy et al., 2001b; Kobelt et al., 2003; Kahn et al., 2003). One of the most dangerous manifestations of aggression in dogs is biting. Recent data estimate that 4.5 million people are bitten each year in the United States alone (AVMA, 2001). The profile of the typical dog bite victim appears to be a person whom is known to the dog or resides in the same household (Guy et al., 2001b), with children being over represented in this group (Kahn et al., 2003; AVMA, 2001).

Discussion

The home environment of the dog is known to be an important risk factor in the development of canine aggressive behaviour. A study by Kobelt et al. (2003) examined the relationship between behavioural problems and environmental conditions. Information on housing, exercise, training, care and behaviour is commonly collected from dog owners by way of a questionnaire. In this study, companionship was identified as the most common reason for dog ownership. Most people had owned a dog previously, however 15% of the respondents were first time owners. Dogs owned by first-time dog owners were reported to have a high incidence of behavioural problems associated with overexcitement and nervousness. Both behaviour traits have been shown to be predictors of aggressive behaviour and biting (Guy et al., 2001b). Interestingly, dogs were less likely to show problem behaviours if there were children in the household, however children are often victims of aggressive behaviour associated with biting (AVMA, 2001; Kahn et al., 2003). In previous studies, male dogs have been ranked as more dangerous by owners (Guy et al., 2001b). However, male dogs were not identified as an aggressive group in the Kobelt et al. (2003) study and de-sexing also showed no correlation with aggression.

Family dogs commonly share the home with children and statistics on dog bite victims confirm this high level of child-dog cohabitation. A prospective study conducted by Kahn et al (2003) evaluated the circumstances of dog bites in 100 children aged less than 16 years, at three university teaching hospitals. It was found that the majority of children were bitten at home while alone with the dog. Ninety four percent of the children were familiar with the dog and the majority of bites occurred due to the behaviour of the child, for example playing near or with the dog. Boys were bitten more frequently, usually when disturbing the dog whilst eating. A biting incident with no known reason generally occurred more frequently in a public place with an unfamiliar dog. Children in the youngest age groups (46%) were most frequently bitten on the face. Although no data were given on the current popularity of common breeds, German Shepherds were found to be the most common breed involved in the biting incidents (52%) in this study. This finding correlates well with previous studies which identify German Shepherds as a popular breed (Kobelt et al., 2003) which is inclined to be aggressive (Thompson, 1997; Jacobs et al., 2003).

Veterinarians were commonly consulted when the child was bitten on the face and the dog was subsequently euthanased in 100% of cases (Kahn et al., 2003). A study by Reisner et al. (1994) found that dogs weighing more than 18.2kg were 24 times more likely to be euthanased by the owner in the wake of aggressive behaviour (Reisner et al., 1994). Euthanasia of the dog was also a common response to the biting incident when the child was hospitalised or bitten multiple times in the one incident (Kahn et al., 2003). Owner/child perceptions of dog aggression are subjective and often hyper-reactive. While anecdotal information received from the owner/child can provide useful insights into the circumstances of the biting incident, careful consideration must be given to the scientific merit of this type of information when developing better pet education programs for children and their parents.

A review of the current literature to assess the pathological basis of aggressive behaviour in dogs has been described by Jacobs et al. (2003). In contrast to the research of Kobelt et al. (2003) and Kahn et al. (2003), Jacobs et al. (2003) discusses a model that examines the aetiology of aggression through a variety of measurable parameters of aggressive behaviour. Based on the premise that all aggressive behaviour should be assessed in the context of normal canine behaviour for breed, sex and environment, the authors discuss a practical classification system whereby clear and objective descriptions of behaviour patterns are established before any interpretation is carried out. This proposal clearly strives to remove the vagaries that currently exist in the literature for defining canine aggression behaviour. For instance, Jacobs et al. (2003) proposes that a single act, such as biting can be an expression of several behavioural patterns such as aggression and play. Whereas Guy et al. (2001b) devised a model that examined the interaction of factors known to be related to aggressive behaviour to determine the relationship between variables such as environment, sex and inherited traits. Therefore for functional classification of aggressive behaviour to be useful, a consensus must be reached on the descriptive classification system for the traits of aggression and their interaction to enable a standardised set of diagnostic criteria to be established. Assessment of aggression in dogs will then be possible and indicators of pathological levels of aggression more easily identified in the clinical setting.

Conclusion

Clearly, canine aggression behaviour warrants ongoing attention by the veterinary profession. The diversity of study design used in canine behaviour research makes comparison between studies difficult at times. Most encouragingly, dog owners are willing to report and discuss the misbehaviour of their dogs (Guy et al., 2001a; Guy et al., 2001b; Hiby et al., 2004; Kobelt et al., 2003) which provides not only an opportunity for further research but an avenue for specialist behavioural intervention, alternatives to euthanasia and increased benefits for the welfare of the species.

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