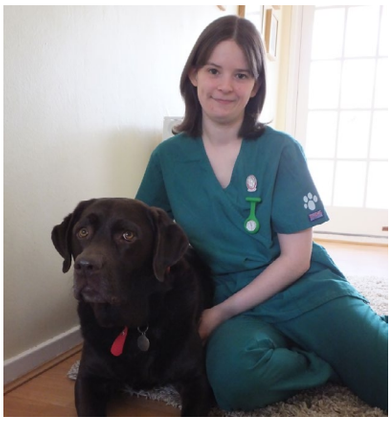

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Owners' abilities to recognise and comprehend signs or displays of aggression in their canine companions outwith the home environment

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ABSTRACT: Due to welfare and safety factors, canine aggression is at the forefront of a vast volume of behavioural assessments. Conditions resulting in behaviour problems normally result from a form of stimuli, including internal (psychological) or external (handling errors). The study's main aims were establishing owner's level of awareness when their dog displays aggressive behaviours towards veterinary staff and discovering whether/why owners can be reluctant to disclose information to veterinary staff regarding incidences of frequent aggression in their canines. The results highlighted the importance of owner education with regards to the occurrence of canine aggression in stressful environments.

Introduction

Hedges (2014) discusses the fact that most forms of aggressive displays are intended to avoid any need for real harm by giving a warning. True aggression is the act of physical biting or attack. Canine body language can be notoriously challenging to interpret; therefore, careful judgement by veterinary surgeons and veterinary nurses alike is essential. Ryan (2010), of the Association of Pet Behaviour Councillors, describes in detail common canine aggressive traits or misbehaviours. Connections between rough play and aggressive behaviour displays are considered and whether a connection exists between parents of puppies displaying aggression and puppies themselves showing traits. Appleby, Bradshaw and Casey (2002) conducted a study which suggested there is a connection between the early environment and experience of young puppies and whether they develop into aggressive adults. During the study it was established that lack of urban environment experience between 3 and 6 months of age was significantly associated with aggressive behaviour in adulthood.

Albuqurque, Guo, Otta and Mills (2015) recognised that within canine interpretation of other canine body language, the process involves not only facial expressions but a complex understanding of social cues and emotional expression. This allows canines to somewhat anticipate the actions of others in their presence. However, when dogs attempt to relay the same communication to humans, it can be misinterpreted, leading to frustration and therefore aggression. This is why Shepherd (2012) designed the "Ladder of Aggression", which depicts body language gestures which dogs will display during responding to increased feelings of threat or stress (see **Figure 1**). The "Ladder of Aggression" describes body language from

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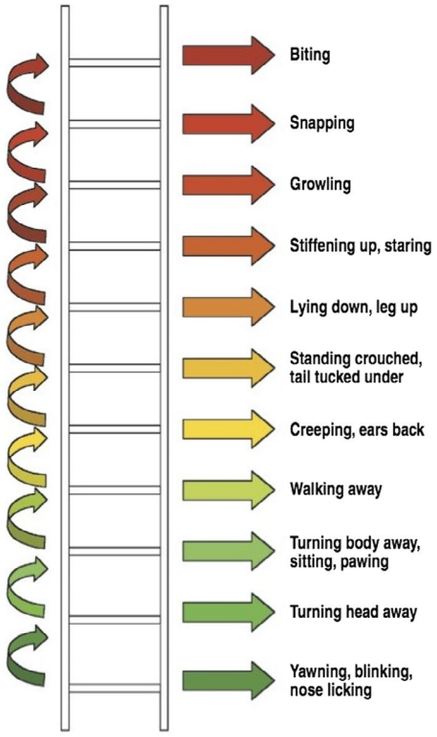

Figure 1. Kendall Shepherds "ladder of aggression"

subtle yawning and nose-licking to escalated and obvious snapping and biting. It is emphasised that snapping and biting are considered "last resorts" where the more subtle signs have not been noticed or acknowledged; therefore, the feeling of threat continues to escalate for the dog involved.

It is widely recognised that there are various stigmas attached to dogs of certain breeds. Under the Dangerous Dogs Act 1991, in the United Kingdom it is against the law to own dogs which come under the breeds of Japanese Tosa, Dogo Argentino, Pit Bull Terrier and Fila Braziliero (Legislation.gov.uk, 2015). These breeds are judged by appearance; therefore, dogs bearing similarities to these breeds can become scrutinised. The British Veterinary Association (2014) recognises that it is more important to deal with aggressive dogs as individuals, as opposed to singling out particular breeds.

The media has a large influence on modern society. It is partially due to this that breeds such as Staffordshire Bull Terriers, Bull Mastiffs and Rottweilers are currently treated with increased caution and nervousness by members of the public. In 2014, there was a significant increase in the occurrence of dog attacks on humans and other dogs alike. In February 2014, *The Guardian* (2014a) newspaper publicised the unfortunate death of a six-month-old baby by an Alaskan Malamute. December 2014 saw *The Guardian* (2014b) once again discussing the death of a young 11-month-old at the jaws of a Pit Bull Terrier. These are but only a few of the attacks which made the media's attention. It is worth observing that not all attacks were carried out by dogs of one particular breed.

It became apparent that canine aggression has a large variety of views and opinions surrounding the topic in general; however, no direct connection has been established to the veterinary environment or to general dog owners' points of view. Taking this into consideration, the aims of the study were as follows:

- To establish the level of awareness owners have when their dog displays aggressive behaviours/traits towards veterinary staff.
- To discover whether/why owners are sometimes reluctant to disclose information to veterinary staff regarding incidences of frequent/isolated aggression in their canines.
- To determine the importance of owner education with regards to the occurrence of canine aggression in stressful environments.

Literature review

A study conducted by Hsu and Sun (2010) aimed to discuss various factors associated with canine aggression responses. These factors ranged from stranger-directed aggression, to social fear, to pain sensitivity. Recruited owners were given a questionnaire using a Likert response scale. The results of the questionnaire showed no exact causal factor for canine aggression. However, Hsu and Sun (2010) did imply, as a combination of these and previous results, the implication of proper ownership managing canine aggression as a possibility. Arata, Takeuchi and Mori (2014) also conducted a study; however, it was based on one particular causal factor, "reactivity to stimuli" such as thunder, children, and unfamiliar situations, to name but a few.

Duffy, Hsu and Serpell (2008) conducted a study which focused on the breed differences within incidences of canine aggression. In total, 11 breeds from the breed clubs selected responded and a further 33 were identified through the open online questionnaire. Emphasis is given to the fact that findings of this study should be utilised cautiously as it is inappropriate to presume aggressive traits in a dog based solely on breed. Overall findings gave rise to large differences in breeds with connection to prevalence and severity of aggressive traits to various stimuli.

The study which was considered most relevant to the proposed topic of study is one conducted by Lakestani, Donaldson and Waran (2014). In contrast to the previous articles examined, this study was conducted qualitatively; therefore, experiences and emotions are analysed as opposed to numerical values (Holloway & Wheeler, 2010). Data collection for this study was conducted through videos being played to individuals (children) and groups (adults). The clips showed dogs displaying various behaviours which had been previously identified by registered behaviourists. Results concluded that the ability of recognition of dog behaviour increases as children grow up. Fear reactions in canines are considered to be the most difficult of the behaviours to interpret, an idea which is also considered by Hedges (2014).

Methodology

Prior to undertaking the study, ethical approval was sought and gained by Edinburgh Napier University Ethical Approval Committee on 9 December 2014. A qualitative research approach was selected as being most relevant to this study. A semi-structured interviewing technique was used to interview participants who were selected based on an inclusion and exclusion criteria set by the researcher. This study was conducted with participants all attending a specified veterinary practice in Ayr. A sample size of 10 canine owners were selected using the criteria in order to allow for a wider range of opinions. Once informed consent was obtained by each individual, a semi-structured interview consisting of 13 questions was conducted and recorded (see **Box 1**). Each recording was transcribed verbatim by individuals assisting the researcher. Transcriptions were then analysed using open coding techniques to identify themes.

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Box 1. Interview Schedule

1. Basic information: How old is your dog?
2. Basic information: What breed is he/she?
3. Basic information: Has he/she been neutered?
4. Basic information: Where did you get him/her from?
5. Can you tell me what you already know about aggression in dogs?
6. One recommended definition of canine aggression is: "A sign of threatening behaviour that may escalate to physical attack". What is your opinion of this definition? Would you change anything about it?
7. Can you describe to me what you know about the associations between breed and aggressiveness in dogs?
8. I would like to propose a situation. "You enter a veterinary practice for a general check up with your dog, after discussion your vet advises you that your dog may suffer aggressive tendencies/traits." How do you approach this situation? How would you feel?
9. Would you feel comfortable approaching your vet for more advice about this situation?
10. What does a dog that is being aggressive look like? Can you describe its body language to me?
11. Is this an accurate representation? (Pictures) And why?
12. Finally, how good do you think veterinary practices are in general at making owners aware about the occurrence of canine aggressive behaviour?
13. Is there anything else you would like to ask/add?

Results

When asked to describe current knowledge, there were a range of responses from owners. Some owners admitted to not knowing a great deal on the subject of canine aggression and had had no previous experience with an aggressive dog. Miss K stated "I don't know a lot really", whereas Mr H went on to say "Just what you read in the media …". This view was particularly interesting as it connected with the original reasoning for conducting this study and emphasises that the media does have an influence in current society. Other owners had had previous experience or had previously owned an aggressive dog themselves, meaning they had a broader knowledge than those who had not encountered aggressive canines.

Associations between breed and aggression brought up interesting views from participants. Once again, a few admitted to not knowing much; however, it was the particular associations mentioned which sparked an interest. One participant mentioned situations growing up and explained that "When I was young, German Shepherds were the dogs that were thought to be aggressive", "the current one is the Staffie". Another also stated that "it's an awful lot of assumptions about dog breed". The majority of participants stated "any dog has the potential to be aggressive" and "any dog can be aggressive just the same way any human can be aggressive".

Owners were posed with the following scenario:

"*You enter a veterinary practice for a general check up with your dog, after discussion your vet advises you that your dog may suffer aggressive tendencies/traits.*" How do you approach this situation? How would you feel?

An array of emotions became clear, with participants explaining feelings of shock, upset, anger and worried if the vet approached them about aggression in their canine companions. However, all owners described taking a proactive approach rather than giving up on the dog. One participant suggested having an attitude which conveyed "Let's do something about it".

All participants had individual views on the body language presented by an aggressive canine; again, some were speaking from experience while others were not. Most commonly, features such as the dog's stance, eye contact, teeth-baring, growling and hackles being raised were mentioned. Interestingly, one participant describes that some dogs can "be quite innocently coming up to do the play stance", where the dog adopts a bowing position with back end in the air. It was discussed that this can often be misinterpreted as a form of aggression, a valid point not previously considered by myself.

Although the majority of participants had never needed to consult the veterinarians about problems with aggression, a mutual agreement arose that, if necessary, the vet would be able to help. When asked if participants would feel comfortable asking a veterinarian for more advice, they all said YES. One participant stated "I think more people need to be aware of what an aggressive dog is." This same participant went on later to say "I think vets do have a role in that."

It appeared that the majority of owners felt veterinary practices should or could do more in educating the public on the occurrence of canine aggression. One participant went on to suggest the idea of posters drawing attention to "potential" aggression rather than actual attacks so that people are more aware but not causing fear.

Discussion

Interestingly, reflecting back on the studies analysed during the literature review, a few of the participants interviewed had owned dogs with aggression purely directed at humans. This links to the study by Casey et al. (2013) due to there being a range of contexts in which this aggression was displayed, from a home environment to out on walks, and some participants mentioned aggression in veterinary practices. However, the study by Hsu and Sun (2010) is also relevant in that participants did not identify an exact causal factor which could contribute to canine aggression. The study by Arata et al. (2014) explored reactivity to stimuli which was also considered by some participants during this study; one owner mentioned their dog's dislike for children's schoolbags, while another discussed the dog's reactions to injections or restraint in a veterinary practice.

The subject of breed had always been anticipated as a topic which could be somewhat delicate; however, participants in this study embraced the opportunity to discuss individual thoughts on the topic. Just as Duffy et al. (2008) discovered, most participants felt it was inappropriate to presume aggression in a canine simply because of the breed. While there were certainly references to specific breeds made, such as Staffordshire Bull Terriers,

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German Shepherds and Pit Bulls, none of the participants admitted to being scared of these dog breeds simply by reputation in the media. Mr H provided a well-rounded statement in saying:

> "bad press does more harm than good …"

This shows that the media clearly has some form of influence on how people feel and react towards certain dog breeds as opposed to directly telling people how these breeds should be responded to. One participant made a point which connects to Duffy et al. (2008) in that:

> "they're all tarred with the same brush …"

This means it only takes one bad publicity or experience from one dog of a certain breed for the whole breed to be judged.

Connections can be made to one of the project objectives through the use of Lakestani et al. (2014) and a particular scenario in the interview process. When establishing the level of owner awareness when canines display aggressive behaviour or traits to veterinary staff, it was important to consider how much initial knowledge and understanding canine owners had into canine body language. This is similar to the approach taken by Lakestani et al. (2014); however, as opposed to using videos and a questionnaire, the researcher asked clients to describe individual perceptions of aggressive body language. Participants were then invited to observe two pictures presented by the researcher, both showing a representation of canine aggressive body language. Participants were then asked to give opinions on why these pictures were or were not an accurate representation. All participants agreed that both pictures were accurate; however, a mutual agreement also rose that one picture displayed fear aggression more than aggression with intent to attack. In the majority of cases, similar features of the body language displayed were chosen to confirm accuracy as were used to describe individual perceptions. These included: facial expression, tail position, hackles, ear position and teeth-baring (see **Figure 2**).

The second project objective took into consideration the comfort levels of owners and whether or why some owners are reluctant to disclose information to veterinary staff regarding incidences of aggression. This question was not identified in any of the other studies during the literature review; however, it does have some connection to the study conducted by Lakestani et al. (2014) in that this objective explores factors connected to why owners feel the way they do. Participants were given a hypothetical scenario and were asked to describe how they would feel and how the situation would be approached. This therefore also connects to Lakestani et al. (2014) by asking individuals about opinions or feelings.

When asked to expand on what the next step would be when approached about aggression or noticing aggression, the majority of participants stated that approaching the veterinarian or discussing the possibilities of training classes would be vital.

This particular group of participants did mention some scenarios in the home environment which could be relevant to a veterinary practice setting. Situations such as:

> "she doesn't like being touched in particular places ..."

or

> "If you tried to take something away from her she might growl …"

This potentially concerns situations of handling and restraint in a veterinary situation as well as feeding patients or removing bowls and other objects from kennels. Other than those where it had been established that they had owned or currently owned an aggressive dog, no participants admitted to alerting the veterinarian of these small incidences. However, this also leads the researcher to consider that, if prompted, how willingly owners would disclose information to veterinary professionals about whether their dogs did not like being handled in a certain way or should be wary on interaction in the kennel.

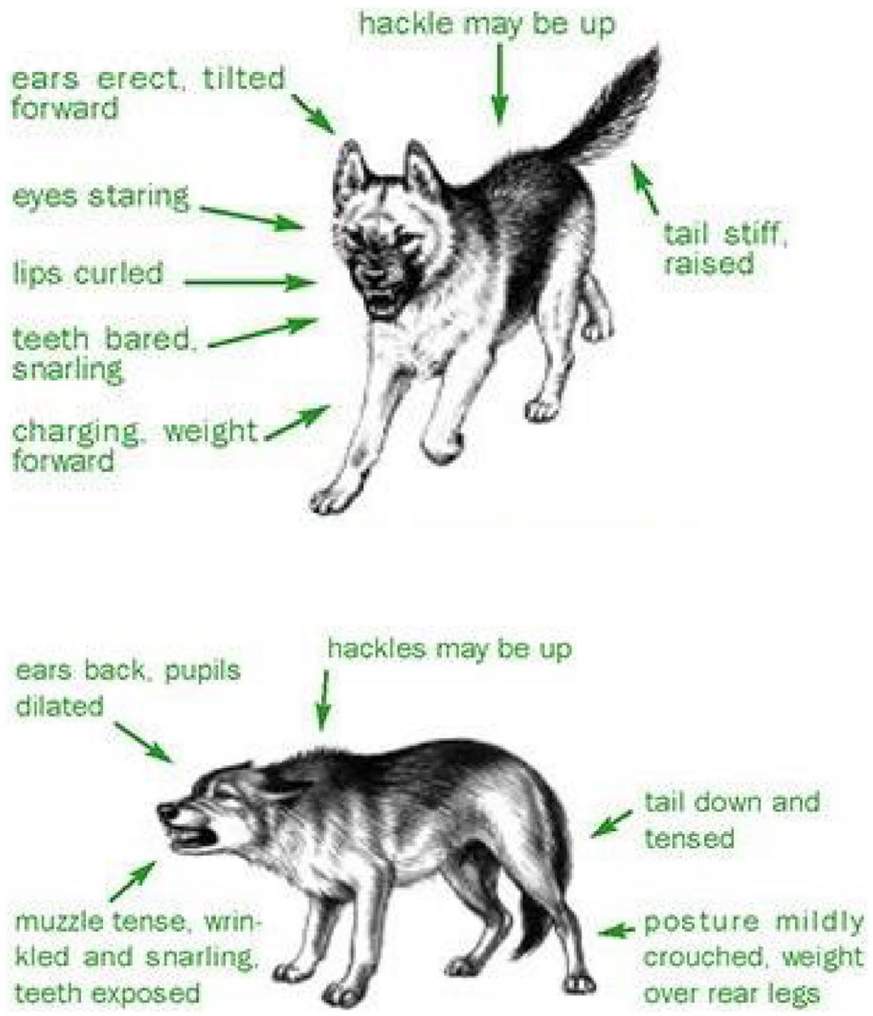

Figure 2. Participant stimuli. Aggressive canine body language

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Recommendations

The results of this study gave rise to several areas which could be further researched and implications which could be put into practice. It has been established that this group of participants displayed prior knowledge in some areas; however, this was primarily self-taught, while in other areas there appeared to be a lack of knowledge. Through mutual recognition from participants, it was identified that more could be done by veterinary practices to promote education on the topic of canine aggression. The increase in education could be conducted by veterinary nurses as well as other staff members within practice. This could be introduced into everyday nursing clinics or discussed by veterinarians when owners enter the practice with new puppies. Practices which run staff-led "Puppy Parties" could use them as a further educational opportunity for this topic. This would allow owners to ask any necessary questions to veterinary professionals without feeling individual ownership competencies are being judged. Marshall (2016) recently identified that as Veterinary Nurses, and other veterinary professionals, it is essential to provide the best care standard to protect patient welfare. Marshall (2016) then went on to establish that because a majority of welfare problems arise in connection with behaviour incidences, more should be considered from behaviour aspects within veterinary practices.

In the interests of health and safety from a veterinary nursing perspective in terms of restraint and interaction with canine patients, more information on behaviour could be obtained from clients. This could be a potential area for further study into whether, when questioned, clients are more inclined to admit noticing their dog does not like being handled a certain way or is wary of certain situations. This could be compared to observations made into how willingly clients admit these factors independently without prompt. Information such as this could have the potential to make veterinary practices in general a safer environment to work and reducing incidences of dog bites, simply by asking clients more about behaviour. Clients see more variances in a home environment than veterinary professionals see in practice and will know the temperament of the individual dog.

Conclusion

From the results it can be concluded that the participants in this study had a varying degree of general knowledge of canine aggressive behaviour. It was also established that there were varying opinions on the subject of breed; however, although some references were made, it was mutually agreed that any dog has the potential to be aggressive. Owners felt able to approach a veterinarian and ask for advice if the subject of aggression was raised in practice. Owners participating in this study had the ability to identify basic canine body language connected with canine aggressive behaviour. One very positive implication that can be taken from conducting this particular study is that all participants agreed that the veterinarians in the practice where the study was conducted were approachable; this conveys this veterinary practice in a good light.

The most significant conclusion which can be drawn from the results is the requirement for an increase in public awareness and education into canine aggression. This could be in the form of further education into basic canine body language either by educating the general public or canine owners as individuals. Veterinary practices and associated veterinary professionals could take a more proactive approach to provide public education and available support surrounding canine aggression. It is clear that the participants within this study felt free to discuss personal opinions when given the opportunity; therefore, veterinary staff could treat each case individually while also educating members of the public as a whole. One area for potential further study is the willingness of owners to admit noticing aggressive traits or tendencies in their canines when questioned by veterinary professionals.

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Note

Research Conducted at: Vets4Pets, Unit 3 Allison Street Retail Park, Next to Pets at Home, Allison Street, AYR, Scotland, KA8 8HD.

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