



Public Perceptions of Dangerous Dogs and Dog Risk

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1. Executive Summary

Introduction

Dog bites and fatalities from dog attacks have been increasing since the introduction in 1991 of legislation designed to protect the public (Parkinson 2019). The Dangerous Dogs Act 1991 was created following a media storm and public outcry over news reports of dog attacks (Molloy, 2011). Section 1 of the legislation made it an offence to own, breed, sell or exchange dogs identified as a pit bull terrier, Japanese Tosa, Dogo Argentino and Fila Brasileiro. Some of the outcomes of breed specific legislation are that dogs who have done nothing wrong other than look a certain way are seized, kennelled away from their families for prolonged periods of time, euthanised or subject to harsh restrictions, and owners face possible criminal charges. Critics of the legislation argue that the Dangerous Dogs Act has failed and there is no evidence that links breed to dangerousness. Despite legislation being in place that is supposed to protect the public, reported numbers of dog bites and fatalities continue to grow and public health costs directly attributable to dog attacks are rising.

This report presents a background literature survey and the results of research undertaken to gain insights into public perceptions of dangerous dogs and dog risk in the UK. The project used a public questionnaire distributed primarily via closed social media groups and analysed the responses from 1,535 UK participants. Most of the questionnaire respondents (88.6%) were current dog owners. Of these, around a quarter were first-time dog owners and one fifth of all respondents had experience of bull breeds. A clear majority (87.1%) of respondents said that dogs liked them and that they were 'good with dogs'. Of particular interest to the team were questions of where the public get their information about dog behaviour and dog risk, what is understood as 'dangerous' dog behaviour, people's understanding of canine body language, and situational awareness of bite risk. The aim of this research is to contribute to finding an alternative strategy to breed specific legislation which protects the public and dogs.

Dangerous Dogs

Most respondents demonstrated an awareness of current UK dangerous dogs legislation by correctly identifying key aspects of the Dangerous Dogs Act 1991. Around one third of participants (33.5%) believe that it should be illegal to own certain breeds of dog. The majority (80.7%) of respondents rated their ability to recognise a dangerous dog breed as average (49%), good (24.5%) or excellent (7.2%). However, when asked to identify banned dog types from a selection of images which included two legitimate images and four decoys, this confidence level diminished and the majority of respondents struggled to correctly identify those types classified by legislation as dangerous dogs.

Where people get their information

Just over half of the respondents (52.2%) who had a dog had attended dog training/socialisation classes or used the services of a dog trainer or dog behaviourist. 65% of respondents said that they watched television programmes about dog training and dog behaviour and around one third follow the advice of celebrity dog trainers on television. However, the most popular dog behaviour programmes included a variety of training methods including those based on widely discredited alpha

or dominance theories. Nonetheless, television programmes about dog behaviour were considered the best source of information about the risks posed by dangerous dogs by nearly half (47.9%) of all respondents.

Nearly half (48.7%) of the respondents watched programmes about dogs other than those focused on dog training and dog behaviour. Books and online training programmes were the least popular avenue for information with only a minority (18.8%) follow the advice of any dog training books and an even smaller number (12.4%) of respondents follow online dog training programmes. Respondents in our sample were generally sceptical of information about the risk posed by dangerous dogs that comes from newspaper articles, television news, local authorities, or social media. In these cases, a majority of respondents (60.4% for newspaper articles, 57.4% for television news, 55.1% for the local authority and 60.7% for social media) disagreed that these outlets/institutions provide useful information. Around one fifth of respondents thought that family or friends were useful sources of information.

Although only 12% of respondents thought that newspaper articles provide useful information about dangerous dogs, an overwhelming majority (97.1%) said they had read or seen a news story about a dog attacking or biting a child or adult. The breeds most commonly remembered as 'the attacker' were the Staffordshire Bull Terrier, followed by Pit Bulls. Rottweilers, unspecified bull breeds and German Shepherds also ranked highly. Only 9.4% of those that said they had read or seen a news story about a dog attack said that they couldn't remember what breed of dog was involved. This suggests that breed is a memorable factor in media reporting.

Perceptions of dog bite risk

Opinions were considerably varied with regards to what characteristics should classify a dog as dangerous. The most popular classification by far was 'aggressive/aggressive behaviour' (39.5%). Bite history (19.9%) and dogs out of control (17.8%) were also commonly identified as a characteristic of a dangerous dog. A small minority (0.6%) of people said that they 'didn't know' or were unsure about what characteristics should classify a dog as dangerous, suggesting that although there may be diverging opinions, the vast majority (99.4%) felt comfortable enough to identify certain characteristics as dangerous.

Almost one third of respondents (31%) thought that a dog's breed was more likely to make them dangerous while just over half disagreed (51.9%). Less than 15% of respondents thought that size made a dog dangerous and even smaller numbers said age (12.6%) or sex (6.5%) were characteristics of a dangerous dog. More respondents thought that bite history (78%), health (63.6%) and genetics (50.2%) were considered likely to make a dog dangerous. People were less decisive with regards to neuter status with 47.4% of respondents disagreeing that a dog's neuter status makes them more likely to be dangerous and 21.3% agreeing.

When presented with a series of risk prone scenarios respondents were confident that their dogs were unlikely to injure a person compared with dogs in general. The vast majority (>80%) of respondents consistently stated that their dog was unlikely to engage in a way that was likely to cause injury. Although dogs in general were, overall, considered more likely to injure someone, with two exceptions

(sitting next to a dog on a sofa and approaching a dog chewing a treat) there was no consensus about the likelihood of risk of injury across all scenarios.

Respondents were asked whether they thought a series of statements about dog bite risk were true or false. In general, a majority of respondents chose the correct answer (9 out of 12 times), indicating a fairly high level of situational awareness. However, awareness of situational risk and children was surprisingly low and a significant number of respondents (44.4%) incorrectly believe that dogs will moderate their behaviours and avoid biting children (22.6% said don't know). By ranking a series of statements designed to measure individuals' general risk-taking tendency it was revealed that in general the sample was more risk averse, which helps to understand the responses to the situational awareness questions.

Understanding dog behaviour and educating about risk

Respondents had strong opinions when it comes to educating children about whether and how they thought children should be taught to interact with dogs. The vast majority (95.5%) of respondents agreed that children should be taught how to interact with dogs. As to where children should get this information, most (93.8%) thought that parents should teach children and 69.1% of the sample thought that children should be taught how to interact with dogs at school.

With regards to understanding dog behaviour, most respondents (79.6%) agreed that dogs respond to the behaviour of people and dogs instinctively. An overwhelming majority (95.8%) of respondents agreed that training, teaching, or socialising dogs can change their behaviour. Only 1% of respondents disagreed. On the whole respondents did not agree that what a dog does is a reflection of their character, with 47% disagreeing compared with 22.4% who agreed. Similarly, most respondents (45.1%) did not agree that dogs understand what they are doing (for example when they bite or initiate play), compared with 28.8% who thought that dogs do know what they are doing.

There was rarely a majority agreement about the precise interpretation of canine body language depicted in a series of images but there was a notable clustering of responses that identified the emotional state as either positive or negative. While a majority of respondents were able to correctly identify obvious signs (bared teeth, play bow) there was much less certainty around more subtle signalling (ears back, tense jaw). Despite this, respondents consistently said they were confident in their ability to interpret canine body language. Responses to the behaviours were varied and included 22.8% who would cuddle or stroke a dog exhibiting threat aversion signalling (rolled on back) and 18.8% who said they would verbally reprimand a dog with bared teeth.

Recommendations arising from this project:

- A significant portion of the public believe there is a link between breed and bite risk. Breed specific legislation is not protecting the public from dog bites and fatalities and the continued focus on breed as an indicator of risk in legislation and in media contributes to confusing public messaging that equates bite risk with only certain types or breeds of dog. Focus must be shifted from breed to education about dog bite risk and an increased awareness of canine body language.
- The public believe there should be more information about dog risk. Dog awareness should be considered in the context of rising public health costs as a result of increased dog bites, a clear indicator of the failure of current legislation, and appropriate campaigns developed to communicate at scale.
- Owner error accounts for a substantial number of dog bite injuries. It is not enough to only raise awareness of dog body language alone. Awareness raising and education should include how to recognise signals of stress or discomfort in dogs, information about common high-risk situations in which injuries take place, and how to respond appropriately in situations where dogs are stressed, in discomfort, or communicating threat aversion signals.
- Awareness education for primary school children is supported by the majority of the public. Although there is majority support for parents to teach children about dog risk it is unlikely that consistent messaging will be delivered within homes without major investment in awareness campaigns for adults. There is significant support for schools to deliver education programmes for children. Education programmes for children should be repeated during primary education.
- Television programmes about dogs generally provide an excellent route by which to communicate and raise awareness about dog risk and body language. Celebrity trainers and celebrities associated with popular dog programmes could be used effectively for public messaging and campaigns with the caveat that the messaging is consistent and aligned with positive training methods.
- A localised approach could be supported by councils through the organisation of in-person and online community dog training classes for unwaged and low-income dog owners, and the provision of information about local commercial dog training classes and Animal Behaviour and Training Council accredited behaviourists.
- There is a perceived lack of useful public information about dog risk on social media. Infographics, comics, cartoons, and memes could be used effectively for public education and awareness raising about dog body language and are easily shared across social media.

2. Background

Existing research into dangerous dogs and breed specific legislation (BSL) falls into three thematic areas: evaluations of current BSL and its successes and failures, studies designed to ascertain the reasons why dogs exhibit dangerous behaviour, and public perceptions of dangerous dogs.

The successes and failures current BSL

A great deal of literature exists on the efficacy of current BSL, with most agreeing that it fails to achieve its legislative goals.¹ Key to this area of investigation is the notion of breed specificity. Numerous studies show the fundamental problems with basing legislation on breed. For example, Morrill et al (2022) sequenced the DNA of 2,155 dogs and found that breed only accounts for 9% of variation in behaviour. In their psychometric study of dog behaviour, Fadel et al (2016) found that ‘differences WITHIN breeds exceed the differences BETWEEN breeds.’ Duffy et al (2008) note that while:

propensity toward aggressive behaviour is at least partially rooted in genetics, (...) substantial within-breed variation suggests that other factors (developmental, environmental) play a major part in determining whether aggressive behaviour is expressed in the phenotype.

In relation to BSL, Zapata et al’s (2022) genetic study of pit-bull behaviour found that pit-bull type breeds are not unique or behaviourally-defined by any single variant.

The aforementioned Morrill et al (2022) study found that where DNA does have a significant influence, it is in determining the physical traits (coat length, eye colour, size, etc.) of dog breeds. Even then, they found that when presented with images of dogs with a similar amount of American Pit Bull DNA, success rates for visual identification range between 1% and 60%. Bleasdale-Hill and Dickinson (2016: 72) have also highlighted the difficulty of identifying dogs by type. They conclude that:

if the type of dog can only be determined following a battery of scientific tests, can an owner realistically be expected to readily identify the type of dog that they are taking responsibility for?

Voith et al (2009: 260) note that in the US, the assignment of breed identification to mixed-breed dogs is complex and that:

dog trainers, groomers, animal control officers, veterinary medical personnel, and victims or witnesses of dog bites are often asked to assign a breed, or predominant breed, to a dog. When dog-bite statistics are compiled, the identity of the dog could have been assigned by anyone.

¹ See Allcock and Campbell, 2021; Bleasdale and Dickinson, 2016; Clarke et al, 2016; Collier, 2006; Creedon and Ó’Súilleabháin, 2017; Duncan-Sutherland et al, 2022; Fadel et al, 2016; Forster, 2021; Goteiner, 2021; Hussain, 2006; Klaassen et al, 1996; Lodge and Hood, 2006; Lodge, 2001; Mora et al, 2018; Nurse et al, 2021; PetrescuMag et al, 2021; Ó’Súilleabháin, 2015; Ott et al, 2008; Schalke et al, 2008; Schiavone, 2015; Thompson et al, 2019; Tulloch, 2021; Voith et al, 2009.

Olson et al (2015) found that visual identification of pit bull-type dogs by shelter staff in the US was unreliable, with 'visual breed identifications [matching] DNA breed signatures for only 27% of dogs.' However, the assignment of a dog's breed is a 'required field for the creation of new dog records,' even if shelter staff are uncertain of the breed assignment (Olson et al, 2015: 201). As noted by the American Veterinary Medical Association (AVMA, 2012), people may be predisposed to assume that a vicious dog is of a 'dangerous' breed.

Hoffman et al (2014: 334) found that UK based 'shelter staff or volunteers who have a role in assigning breed names to dogs' varied widely in both how they assigned a dog's breed and the breed that they assigned. A study by Clarke et al (2016) designed 'to explore the effect of type classification on perception and expectation of a dog's behaviour,' found that respondents were 'over 5 times more likely to misascribe by image alone the Staffordshire Bull Terrier as a dangerous breed.' As noted by Collier (2006: 18), 'even experts cannot always tell whether a dog is a pit bull'; a point also made by Voith who remarks that 'even those trained and experienced in breed identification are unreliable identifiers of breed' (Voith, 2009 cited in DEFRA, 2011: 15). The Hoffman et al (2014: 334) study revealed that UK shelter workers refer to the police for help when they are unsure if a dog entering their shelter falls under the Dangerous Dogs Act 1991. In 2009 DEFRA provided UK police forces with guidance on banned breeds, with a single page dedicated to identification. A dog must have a 'substantial number of characteristics' listed in the guidance to be 'be considered 'more' [pit bull type] than any other type of dog' (DEFRA, 2009: 14). The 2009 guidance does not provide any photographs because 'these animals can look very different yet have a substantial number of characteristics present and be considered a [pit bull type]' (DEFRA, 2009: 14). Despite this, the guidance does use an image of a dog on its cover. The 2009 guidance adapts a series of characteristics and measurements from the American Dog Breeders Association's *Pit Bull Gazette*, vol 1, issue 3 1977 in which the conformation of an American Pit Bull Terrier is described. However, the *Pit Bull Gazette* (1977) identifies five key qualities of a pit bull, only one of which – wrestling ability - is linked to conformation. Indeed, the *Pit Bull Gazette* makes a point that what a dog looks like has very little to do with their bite ability and states: 'Good biters seem to be where you find them regardless of the shapes of their heads' (*Pit Bull Gazette*, 1977).

One of the aims of BSL is to prohibit the ownership of certain dog types and to encourage responsible ownership. However, as mentioned previously, there are problems with perceptions of so-called 'dangerous' breeds. Despite BSL restricting pit-bull types, controlled studies do not identify pit-bull type dogs as being disproportionately dangerous (AVMA, 2012; Zapata et al, 2022). As noted by Klaassen et al (1996), 'dangerous breeds' contribute to 'only a small proportion' of dog bite injuries. Studies such as Ott et al (2008) conclude that 'a scientific basis for breed specific lists does not exist.' Schalke et al (2008) go even further to suggest that there is 'no indication of dangerousness in specific breeds.' Focussing on BSL in Australia, Collier (2006: 21) notes that existing data clearly shows:

that some crossbreeds and a small number of breeds are responsible for a large proportion of attacks, but the inclusion of individual breeds varies as they wax and wane in popularity, and crossbreeds lead the list of attacks.

Ultimately, as highlighted by Voith et al (2009):

the assignment of breed identification to mixed-breed dogs is complex, and public health and private policies that depend on identification of dog breeds must take these issues into account.

Creedon and Ó'Súilleabháin (2017) find that there is no evidence to show any differences between legislated and non-legislated dog bite characteristics. They conclude that the differences were in bites being reported, perceived triggers for biting, and bite locations, suggesting 'distinctly differing perceptions relating to risk' between legislated and non-legislated dog breeds. In a similar vein, Gobbo et al (2021) found that many dog bites that were reported as being 'unprovoked' tended to happen 'mainly during fast movements around the dog or while being in close proximity to the dog without seeking contact' (Gobbo et al 2021: 16). Tulloch et al (2021) examined dog bite data from NHS England between 1998–2018 and concluded that much more work is needed 'to define what is driving the increase in dog bites in England.' They found that the issue of dog bites is multifactorial and cannot be attributed to specific breeds. Anderson et al (2022) examined twenty years of dog bite reports in the United States and found significant inconsistencies in the way that pit-bull type breeds were identified. These inconsistencies tended to group several breeds into one category, thus increasing the risk of over-representing pit-bull types in the bite risk data. Clarke et al (2016: 467) emphasise 'the need for more research on personal perception of supposedly dangerous dog breeds to better understand and explain this phenomena.'

Why are dogs 'dangerous'?

Numerous studies have attempted to understand why dogs exhibit 'dangerous' behaviours. The issue of how to determine why dogs bite is raised by Overall and Love (2001):

If we want to know why dogs bite and minimize morbidity and mortality, the following goals must be met. First, the prevalence of dog breeds and ages, sex, and reproductive status within these breeds must be known for the population of bites to be investigated [...] Second, canine and human behaviours that limit or increase exposure need to be defined and quantified. [...] Third, it is important to know which dogs bite and whom they bite [...] Fourth, situations in which bites occur need to be thoroughly, rigorously, and consistently reviewed and documented by healthcare personnel, using validated assessment tools.

One of the key arguments put forward is the role of owner behaviour and responsibility. This is the approach taken by Blackshaw (1991) who stresses the role of dog owners in mitigating behavioural problems in canines which have severe consequences for humans. Tulloch et al (2021) note that many of the factors that lead to dog bites can be ascribed to the actions of the dog's owner, such as the owner failing to understand dog behaviour and failing to provide sufficient space and exercise. German et al (2017) explore links between obesity and behavioural disorders in dogs and concluded that:

Overweight status in dogs (as reported by their owners) was associated with a number of undesirable behaviours including food stealing, food guarding and aggression both to other dogs and strangers.

In their study on preventing dog bites, Reese and Vertalka (2020) found that dog bites appear to be 'most likely to result from neighbourhood dogs that have gotten loose or are otherwise running free' rather than from feral dogs. Furthermore:

police reports indicate that 42% of the victims had harassed the dog or provoked the bite. Coupled with the fact that loose owned dogs were those most likely to bite, it appears that both victim and owner error largely contribute to bite risk.

In their study on potentially preventable factors in dog bite-related fatalities in the US, Patronek et al (2013) identify several 'coincident, preventable factors' and noted then 'breed was not one of these.' One of these preventable factors is 'abuse or neglect of dogs by owners.'

Dogs who are prohibited by BSL or labelled as 'dangerous' are sometimes used as 'status dogs.' In his study on status dogs and gangs, Harding (2010: 30) discusses 'the motivation of the dogs' owners, the relationship between the ownership of 'status dogs' and urban street gangs, and the social impact of these dogs.' Harding (2010: 30) describes how status dogs are trained to fight other dogs through a variety of 'cruel training techniques' designed to increase aggressivity, and to 'build muscle, strength, and endurance.' One such technique is the use of another dog as 'bait' in order to teach a status dog to attack and kill their opponent. Maher et al (2017) also consider 'the harms caused to dogs through their owner's behaviour and their being labelled as 'status' or 'dangerous' by their owners, the government and mainstream society.' According to Maher et al (2017):

status dogs are routinely abused by owners, breeders and government agencies. The form this abuse takes can be legal and illegal, with legislation and its enforcement being a key driver in the creation of the phenomenon as well as the dogs' suffering. Consequently, to explain the phenomenon it is crucial to explore both motivations for ownership and related abuses and the impact of societal reactions to these dogs.

Furthermore, Maher et al (2017) suggest that 'societal reactions (from the media, government and public), arguably, have generated more problems than they have solved.'

As mentioned in the previous section, what must be kept in mind are the problems with how dog aggression and problem behaviours are reported. Fatjo et al (2007) observed that problems with the available data can in part be explained by 'owners [showing] a lower tolerance for aggression' and that some veterinary practitioners 'may also be more willing to refer behavior cases to specialists.' Bräm et al (2008) question the validity of 'provocation tests' designed to evaluate the behaviour and safety of dogs, noting that, 'the inconsistency of the results from different tests suggests test bias at the very least and questions the validity of these tests.'

One of the key motivations for understanding why a dog might exhibit aggressive behaviour is to help prevent such behaviour. Several authors argue that effective preventative measures must come from an understanding of the contexts that surround dog bites. In a study on how to treat children with dog bite injuries, Jakeman et al (2020: 4) suggest:

dog bites should be regarded as predictable and preventable unintentional injuries, rather than accidents. Preventions can happen via education, supervision, environmental modification and reducing bite impact and future incidents.

Cornelissen and Hopster (2010: 297) suggest that the circumstances of dog bite incidents must be ‘the starting point for developing a suitable strategy’:

Prevention strategies need to be effective in non-public as well as in public arenas and should address both dog owners and people who do not own a dog. They also require education about ways to deal with dogs, dog behaviour and ‘dog language’, and be directed both at children and adults, and always emphasise that even unintentional bites can inflict damage.

Similarly, Hussain (2006: 2887) proposes non-breed-based supplemental legislation in which:

local legislatures must evaluate the practical effect of the law by analysing objective factors that include statistical evidence, enforcement costs and available resources, and other relevant considerations. Legislation designed to reduce the number of bites and serious attacks must balance the need to protect society from dangerous dogs with the rights of responsible dog owners by emphasizing the need for and importance of responsible ownership.

In relation to Hussain’s point about the available statistical evidence, several authors suggest that one of the keys to reducing dog bite risk is the establishment of a consistent and reliable classification scheme for reporting dog related injuries. Anderson et al (2022: 6) argue that such a system would ‘improve our accuracy at risk assessment and prognosis’ in relation to dog bite risk. Mora et al (2018) emphasise ‘the need for developing a study protocol and national reporting system on dog bites and dog attacks, which should include a medical-legal context.’ Ann Schiavone (2015: 1) calls for all jurisdictions to undo BSL ‘in recognition of the fact that there are more rational methods available for addressing the public health hazard posed by individual aggressive dogs.’ Westgarth and Watkins (2015) suggest that ‘a new approach to dog-bite prevention may now be required, drawing on other injury prevention strategies including awareness-raising and minimizing the damage caused by a bite when it happens.’

A number of authors suggest that the key to effective prevention of dog-related injuries lies in education. Reese and Vertalka (2020) emphasise the need for ‘humane’ education ‘to effectively manage possible behavioral problems’ in dogs. In their study on children that are victims of dog bites, Kahn et al (2003) show that ‘education could be the preventive measure with the highest priority.’ Lakestani and Donaldson (2015) investigated the effect of educational interventions on preschool children, noting that ‘results indicate that preschool children can be taught how to correctly interpret dogs’ behaviours. This implies that incorporating such training into prevention programmes may contribute to reducing dog bite incidents. Rosado et al (2009) agree that ‘age-specific educational programmes should be carried out with the aim of promoting responsible ownership and safe interactions with dogs’ and that ‘public health professionals should encourage the owners of biting dogs to visit a behaviour specialist.’ The authors also note the importance of raising awareness in low populated areas as well as major cities (Rosado et al, 2009). Goteiner (2021) also recommends education as a measure to prevent dog bites in children, citing the Pet Education Project as one real world example. According to Blackshaw (1991), through ‘careful treatment and management’ and with ‘the cooperation of the owner to obedience train and restrain their animals,’ problem behaviours in dogs can be eradicated.

Though understanding dog behaviour is crucial to preventing aggressive behaviour in dogs, clear solutions are still hard to define. As noted by Oxley et al (2017) 'contexts in which dog bites occur vary wildly and thus a number of different prevention measures are required, including addressing repeat biters.' Jessica Greenbaum (2010) suggests that:

through the process of training, dogs learn proper behaviour and their role in the family. In addition, while guardians may expect to be schooled in skills, they also learn how to treat dogs physically and symbolically through the guidance of dog trainers.

Owczarczak-Garstecka et al (2019) look at occupational dog bites, concluding that:

Most of the counter-measures and risk controls discussed by the organisation rely on modifying individual behaviour, which limits effectiveness of prevention. Future bite prevention should instead focus on modifying the home and work environments, dogs encountered, and equipment used at work. Campaigns should also address social norms around dog ownership and safety.

In relation to education, Coleman et al (2008) conducted a study designed to assess the efficacy of the Responsible Pet Ownership Program taught to Australian primary school students, finding that although the program did foster knowledge of responsible pet ownership there was 'little evidence' of retention of knowledge shortly (between 2 and 4 months) after instruction. Similarly, Duncan-Sutherland et al (2022: 294) found that several studies demonstrated that children's knowledge of dog safety improved after completing an education program, but these studies 'did not investigate the impact of these programmes on either injuries or incidents involving dog aggression.' Coleman suggests that follow-up instruction would be necessary to address the issues with information retention after 4 months and both Coleman and Duncan-Sutherland recommend further investigation to establish a link between dog safety programmes and dog bite risks in children.

Some authors offer solutions that focus on punitive measures taken against dog owners. The AMVA (2012: 3) suggest the active enforcement of dog control ordinances, such as issuing tickets for animal control violations, will reduce the number of dog bites. As an example of such animal control measures, Goteiner (2021) and Duncan-Sutherland et al (2022) suggest that 'leash laws' would be effective in reducing aggressive behaviour in dogs. Goteiner (2021) also suggests mandatory spaying and neutering, and the implementation of dog licences as a means of reducing the frequency of dog bites. In a similar vein, Nurse et al (2021) recommend that all dog owners should be legally required to demonstrate a minimum standard of dog knowledge and be placed on a searchable register. Nurse et al (2021) also observe regional variations and inconsistencies with the current enforcement of laws that relate to aggressive behaviour in dogs. The authors suggest that a more stringent and uniform enforcement of the law would also lead to a decrease in dog bites.

Both educational and punitive measures rely on certain assumptions regarding the responsibility of the dog owner. Westgarth et al (2019) problematise these assumptions by using 'conversations about owning and walking dogs in order to elucidate beliefs and views about responsibility in dog ownership.' Westgarth et al (2019) suggest that:

what appears to be factual descriptions of responsible dog ownership practices that should be easy to follow are, in reality, a complex interplay of beliefs grounded in issues of ethical practice; perceived best interests of the dog; and the nature of the social relationship with the dog.

In short, 'simply telling owners to be responsible will not work because they already believe that they are responsible dog owners.'

Perceptions of dangerous dogs

The way in which dog attacks are covered in the media do not reflect realities of dog bite risk. One of the reasons for this is that 'breed identification often is based upon newspaper accounts' and is 'seldom verified or consistent' (Collier, 2006: 18). Hussain (2006: 2848) argues that all breeds have the propensity to inflict injury and death and that it is due to the 'extensive media coverage of serious pit bull attacks' that public fear of such dogs exists more than others. Furthermore, Hussain (2006: 2848) suggests that BSL is itself a 'response to public outcry and extensive media coverage of pit bull attacks.' In their comparative analysis of policies on dangerous dogs across Western European countries, Lodge and Hood (2002: 1) show that:

small scale events – like one dog bite – can produce circumstances that confront policy-makers with a type of 'forced choice', given a particular set of political conditions.

In 1994, Anthony Podberscek investigated the relationship between changing attitudes and legislation and 'how often and in what manner' the print media reported on dog attacks. Podberscek found that 'real or even perceived increases in unacceptable behaviour by dogs could cause them, or at least the offending breeds of dog, to lose public acceptance and affection.' According to Podberscek (1994: 239):

With the dog attack hysteria, the press appear to have done two things. First, it acted as an agenda setter, not so much telling people what to think but what to think about. Second, in conjunction with public outrage, it acted as a medium through which calls for changes to dog laws could be made.

Schiavone (2015: 63), meanwhile, suggests that 'unjust laws' are a result of an 'irrational fear response' given how rare dog bite injuries are compared to the size of the dog population.

In an analysis of media coverage of dog bites prior to the introduction of UK breed specific legislation Molloy (2011a; 2011b) argues that news accounts played a central role in creating a moral panic about dangerous dogs. Parkinson (2019: 3) proposes that the moral panic:

focused primarily and erroneously on pit bulls and their owners. It magnified the dangers of pit bulls and their owners to the public. In doing so, the public attention shifted away from statistical or scientifically informed measures of dog risk. One consequence of this situation has been a lack of public understanding about the risks posed by dogs generally.

Molloy (2011b: 95) contends that:

certain types of dogs and dog owners were linked to concerns about threats to national identity and debates about masculinity, violence, and drug culture specific to Britain in the latter part of the twentieth century. In this sense, understanding dogs as risks is an aspect of the broader symbolic exploitation of non-human animals where they are used as metaphors for other social anxieties.

Molloy (2011b) also notes that news media often used stock images of dogs to illustrate an article about a dog bite. Parkinson (2019: 3) argues that 'the conventions of media reporting and of illustrating guidance and information materials do have an impact on the public understanding of what constitutes a dangerous dog. This contributes to both misidentification and to the public misunderstanding of 'dog risk'.'

Gazzano et al (2013: 2) investigated 'whether average adult dogs have a different appeal to people in comparison to puppies and dogs belonging to a breed that is generally regarded as dangerous.' The findings of this study revealed that 'people prefer puppies, feeling and behaving in a more positive way toward them,' but 'have more negative feelings and behaviors when meeting' pit bulls (Gazzano et al, 2013: 7). In a study by Webster and Farnworth (2018), the general public were asked to identify pit bull terrier types from other similar dog breeds and found that public understanding of dangerous dogs is poor. The authors (2018: 12) suggests that:

a widespread lack of education regarding banned types and their visual characteristics and raises concerns that the public may apply negative connotations associated with the [pit bull terrier] onto breeds similar in appearance but not restricted by law.

Wells et al (2012) examined 'whether priming cues embedded in media-style presentations shaped people's perceptions of specific dog breeds.' They found that 'people's perceptions of specific dog breeds can be shaped by exposure to priming information, with negative information being a more powerful tool for shaping negative perceptions than positive information.' Priming was found to affect perceptions of dog breeds, rather than perceptions of individual dogs (Wells et al, 2012: 375).

In their work on pit bulls, Hoffman et al (2014) showed pictures of twenty dogs to shelter workers in the US and UK and asked respondents a series of questions, including 'what breed each dog was, how they determined each dog's breed, whether each dog was a pit bull, and what they expected the fate of each dog to be.' The study (Hoffman et al, 2014: 322) found a large variation between UK and US participants:

UK participants frequently labelled dogs commonly considered by U.S. participants to be pit bulls as Staffordshire bull terriers. UK participants were more likely to say their shelters would euthanize dogs deemed to be pit bulls. Most participants noted using dogs' physical features to determine breed, and 41% affected by BSL indicated they would knowingly mislabel a dog of a restricted breed, presumably to increase the dog's adoption chances.

The aforementioned Olson et al (2015) study found similar results. Visual identification of pit bull-type dogs by shelter staff in the US matched 'DNA breed signatures for only 27% of dogs.' However, the

assignment of a dog's breed is a 'required field for the creation of new dog records,' even if shelter staff are uncertain of the breed assignment (Olson et al, 2015: 201).

Owczarczak-Garstecka et al (2018) conducted a study that analysed YouTube videos to examine viewer perception of dog bite risk and the attribution of blame for dog bites. The authors found that six themes emerged from their study:

1) Commentators thought that dogs are inherently good-natured but wild animals and emphasized how dogs try to avoid biting people; 2) all recognized breeds of dogs were stereotyped and breed stereotypes were used to shift the blame away from the dog and onto a bite victim, unless the dog identified in a video was a pit bull type. The dog was often blamed in such case; 3) It was argued that a breed limits the extent to which a dog can be trained and controlled; 4) Owners/handlers were often blamed for bites due to their inability to control the dog, and commentators identified the need for appropriate training and socialization in order to control dogs and reduce bite risk; 5) Bite victims were also blamed for the bites when their behaviour was perceived as provoking a dog, although children's behaviour was identified as causing a risk, parents of children bitten in the videos were blamed for bites instead due to their approach to child supervision; 6) Bites in a range of contexts, such as play or when viewers thought that the victim's behaviour provoked a dog, were seen as well-deserved and normal.

Oxley et al (2019), meanwhile, conducted a study to ascertain the perceptions of bite victims on 'what they deemed to be a dog bite, including the influence of factors related to the severity of the incident, and the dog's behaviour and supposed intention.' The results of this study found that a variety of factors affected whether or not an incident was considered a dog bite. The authors (2019: 11-12) explain that:

Whilst relatively strong consensus was evident with increasing injury severity, including at least clear bruising or skin puncture, definitions were more contentious where no injury occurred or injuries were mild. There was disagreement amongst respondents as to whether dog bite statements that occurred without intention or during play, were bites.

Furthermore, the study found that dog owners were less likely to agree that an incident would be classed as a dog bite 'if contact with the skin was made but no bruising or skin puncture occurred' and were more likely to agree that biting during play was not a 'real' dog bite (Oxley et al, 2019: 12). As the authors note, this is likely due to an owner's familiarity with this type of behaviour. The study also found that owners were more lenient when it came to their own dog (Oxley et al, 2019).

Conclusion

The issues with BSL, then, are complex and multifarious. One of the major issues with BSL relates to the lack of scientific evidence to support the idea that a dog's breed determines their behaviour. Recent studies that investigated the genetic basis for dog behaviour found that only 9% of variation between breeds could be attributed to genetics. With regards to dog breeds considered to be dangerous by BSL, these genetic studies found that 'pit bull type' dogs are not unique or behaviourally defined by any single genetic variant. If genetics only accounts for 9% of behavioural variation between dog breeds,

and there is no unique genetic variant for BSL regulated dogs, then what makes dogs dangerous? As this review shows, one of the main factors that increases the risk that a dog will bite is how a dog is treated by their owner. Neglect, abuse, mistreatment, and a general lack of understanding about a dog's needs all raise the likelihood that a dog, regardless of their breed, will exhibit dangerous behaviours. The influence of these factors is not accounted for in BSL.

One of the most glaring complexities in the BSL debate is the unreliability of dog bite reporting. Not only are there regional variations in how dog bites are reported, but there are individual variations depending on such things as a dog owner's tolerance for aggression, veterinarians' willingness to refer dogs to specialists, and police officers' willingness to enforce laws that relate to aggressive behaviour in dogs. In relation to breed, part of the unreliability of dog bite data is the question of who is identifying the breed of dog involved in an incident. When dog owners, shelter workers, and other professionals are asked to identify dog breeds based on physical attributes, the success rate can be as low as 1%, but averages around 25%. Despite this, media coverage of dog bites tends to emphasise breed. The issue with media coverage is two pronged. Firstly, how media outlets are able to identify a dog's breed should be called into question, and secondly, the influence of such media reporting on how people identify dog breeds should also be examined. Recent studies cited here suggest that preconceptions of dog breeds influence how individuals assess whether or not an individual dog is dangerous. Media outlets emphasising breed in their reports on dog bites may contribute to an already widespread problem with dog breed identification. Another issue is that the context in which a dog bite occurs is often overlooked. While many dog bite reports are described as unprovoked, the person reporting may not be aware of the situational risk or understand canine body language.

Several approaches have been put forward to solve the problems associated with dangerous dogs and the problems with dog breed identification. One approach is the role of more effective and evidence-based legislation. Part of this is the implementation of such things as dog licences, publicly accessible registers, leash laws, and proficiency tests. This would move legislative focus away from breed and emphasise the responsibility of the dog's owner. Another popular recommendation is education. Many authors recommend educational interventions as early as pre-school aged children, while others recommend that adult dog owners visit dog training specialists to improve their understanding of dog behaviours and needs. The current report contributes to the conversation about perceptions of dangerous dogs and offer some potential solutions to the problems described in this review.

3. Questionnaire

Method

Data for this project was collected using a self-completed online questionnaire designed and circulated via Jisc Online Surveys. The survey was initiated in February 2021 and remained open for four weeks. Respondents were initially selected using convenience and snowball sampling. A link to the survey was distributed amongst closed social media groups known to the researchers and respondents were asked to share it via their networks.

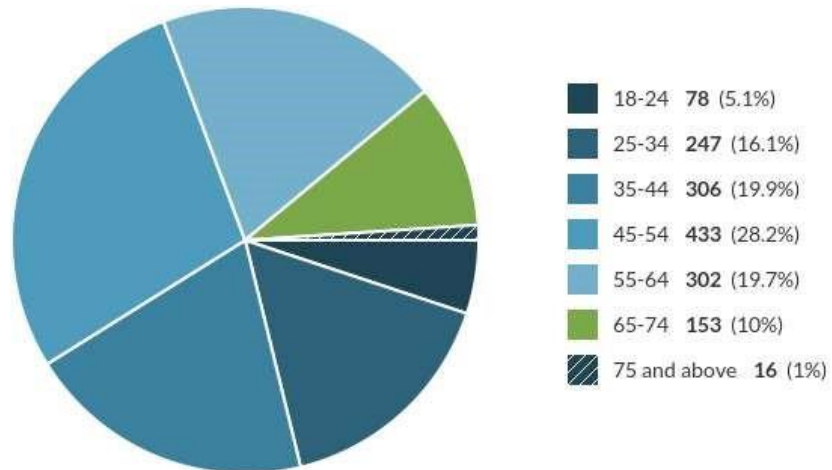
The questionnaire was conducted in accordance with the Edge Hill University Research Ethics Policy and Code of Practice for the Conduct of Research. Respondents were not obligated to participate in the survey. Written informed consent was obtained prior to completion of the questionnaire. The questionnaire (see Appendix 1) included 6 demographic questions and 23 substantive questions, with an additional optional 8 substantive questions after an opt out option. The survey targeted adult respondents, defined as 18 or older.

The survey responses were checked for informed consent and geographical location. Responses were excluded if respondents were located outside the UK. Jisc Online Surveys was used to summarise the survey responses and to create charts for the quantitative data. Analysis was undertaken by filtering using multiple criteria and cross tabulation. Filtered data was exported to Excel and categorised for thematic coding. The substantive questions were divided into sections intended to gauge knowledge and experience of dogs and dog behaviour, identify where people get their information about dangerous dogs, and further probe these conceptions using images of dog behaviour and breed identification.

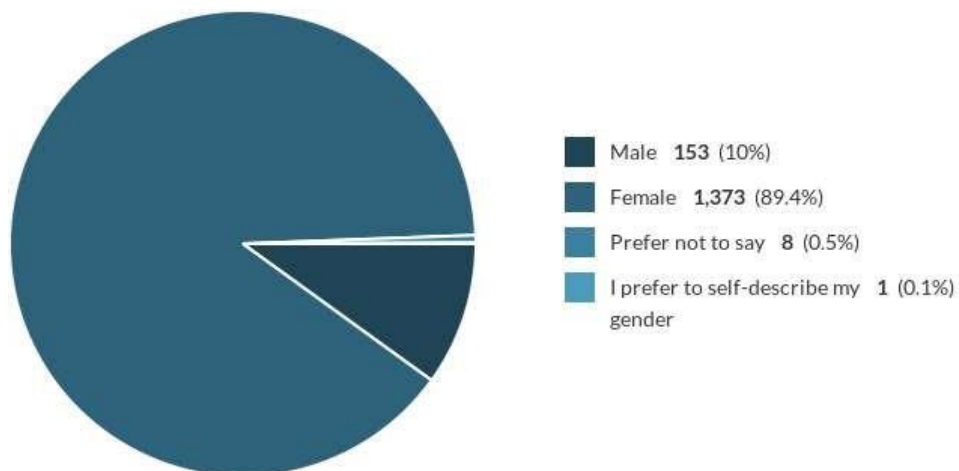
Results

Demographics and the nature of the sample

Q7: In which age range are you?



Q8: Which best describes your gender?

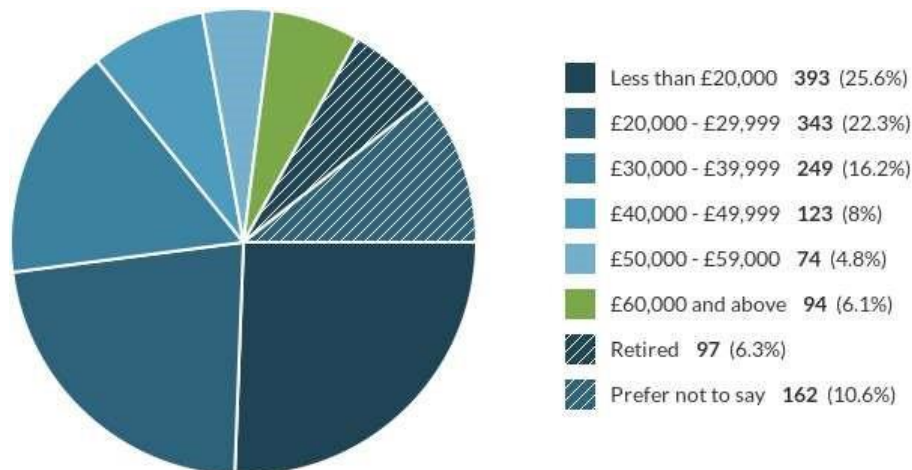


Q9: What is your ethnic group?



There were 1,547 total responses to the questionnaire, 1,535 of which were from inside the UK. Around two thirds (67.8%) of respondents were between 25 and 64. The greatest number of respondents were in the 45-54 age group. Female respondents accounted for the majority (89.4%) of the questionnaire responses. As Q9 clearly shows, the sample was overwhelmingly white with 95.4% of respondents coming from a white background. Ethnic group is an important demographic variable to explore in relation to knowledge and understanding of dog risk and dog bite risk but would require a targeted methodology to construct an appropriate sample for analysis. We strongly recommend this for future research.

Q11: Which annual income band applies to you?

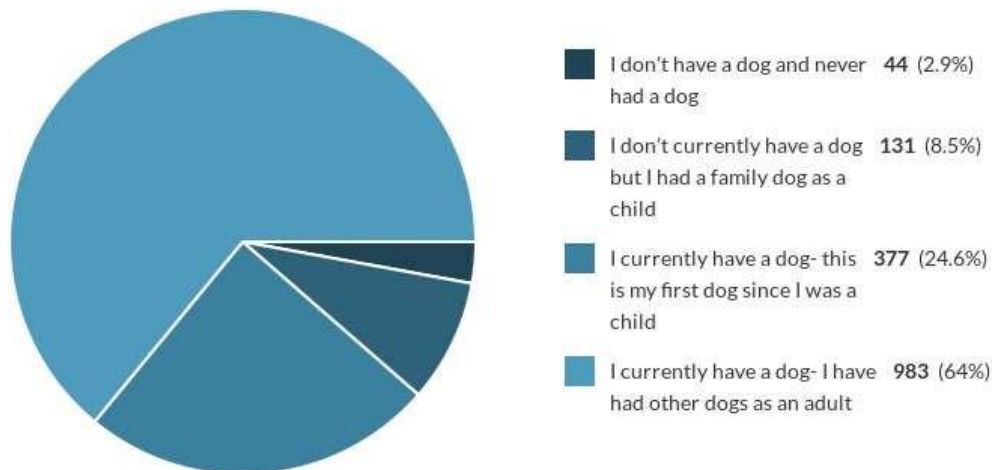


The median annual income in the UK, according to the most recent Annual Survey of Hours and Earnings, is £31,461 (ONS 2020). Although it is not possible to calculate an accurate median for our sample due to the use of wage band categories, 47.9% of the sample earned under £30k per annum.

Dog ownership and information sources

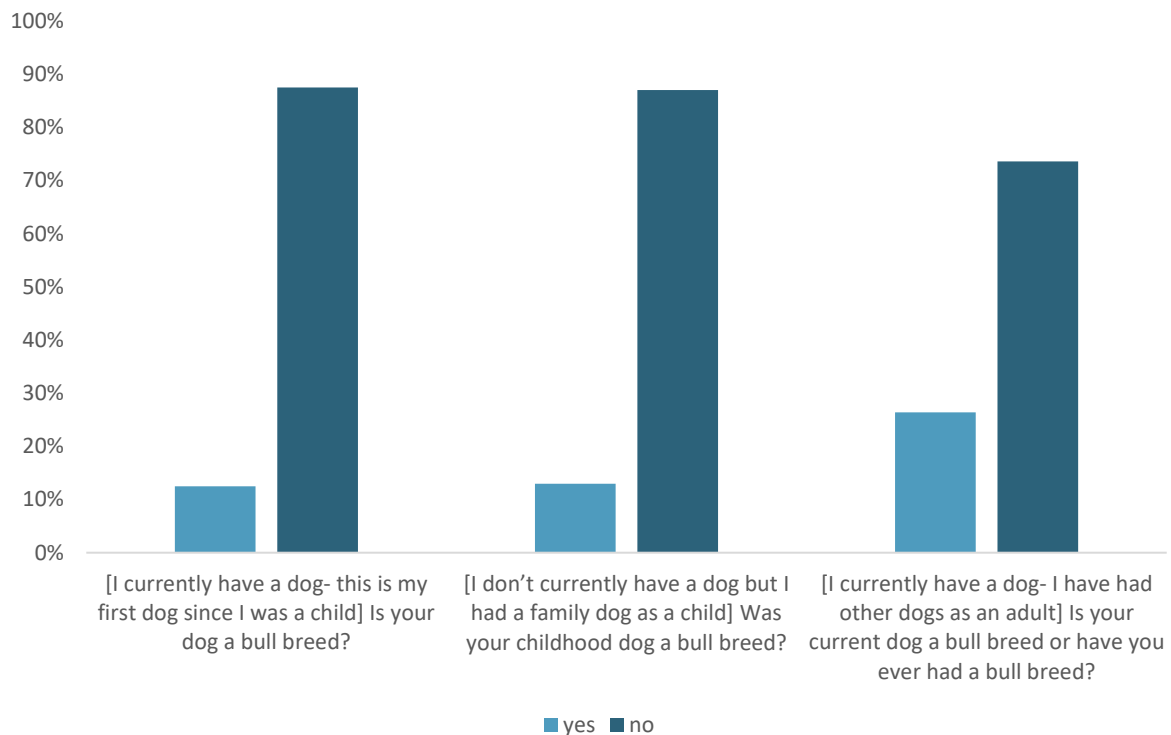
This section included 8 substantive questions with sub questions designed to ascertain the respondents' experience with dogs.

Q12: Are you a dog owner or have you ever owned a dog?



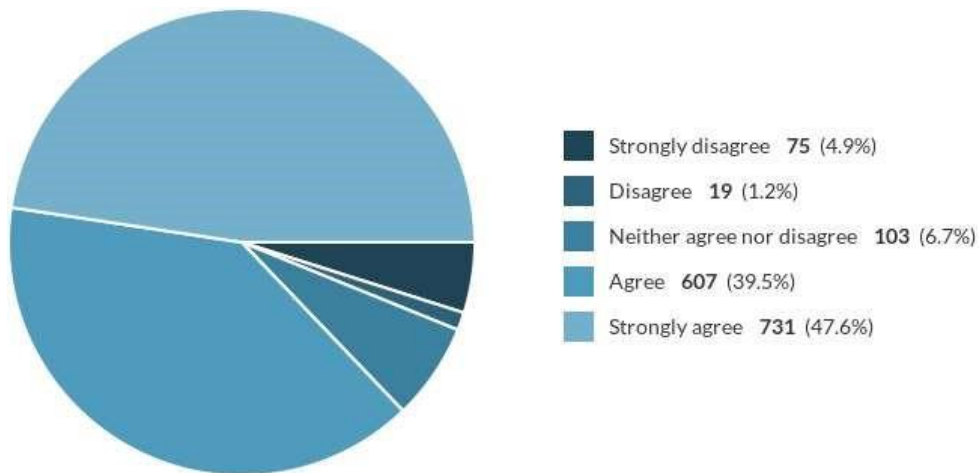
Given that this survey was mainly distributed via dog-related Facebook groups and pages, it is to be expected that the vast majority (97.1%) either currently owned a dog or had a dog as a child. Nearly a quarter of respondents (24.6%) were first time dog owners. A majority (64%) currently had a dog and had other dogs as an adult.

Q12a-12d: Experience of bull breeds



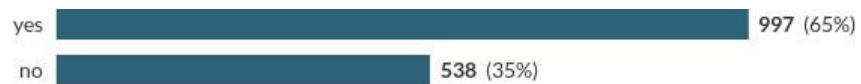
Understanding whether respondents were dog owners was important since dog ownership implies a certain level of experience with dog behaviour. Sub questions were asked to ascertain whether the respondents had experience of owning a bull breed. Owing to the fact that bull breeds are those most commonly implicated in 'dangerous dog' narratives, additional insight into how many of the respondents had first-hand experience of bull breeds was an important consideration in our analysis. The majority of respondents did not have first-hand experience of bull breeds (87%). However, experienced dog owners were more than twice as likely to have or have had a bull breed (26.4%) than first time dog owners (12.5%).

Q13: I am good with dogs and dogs like me

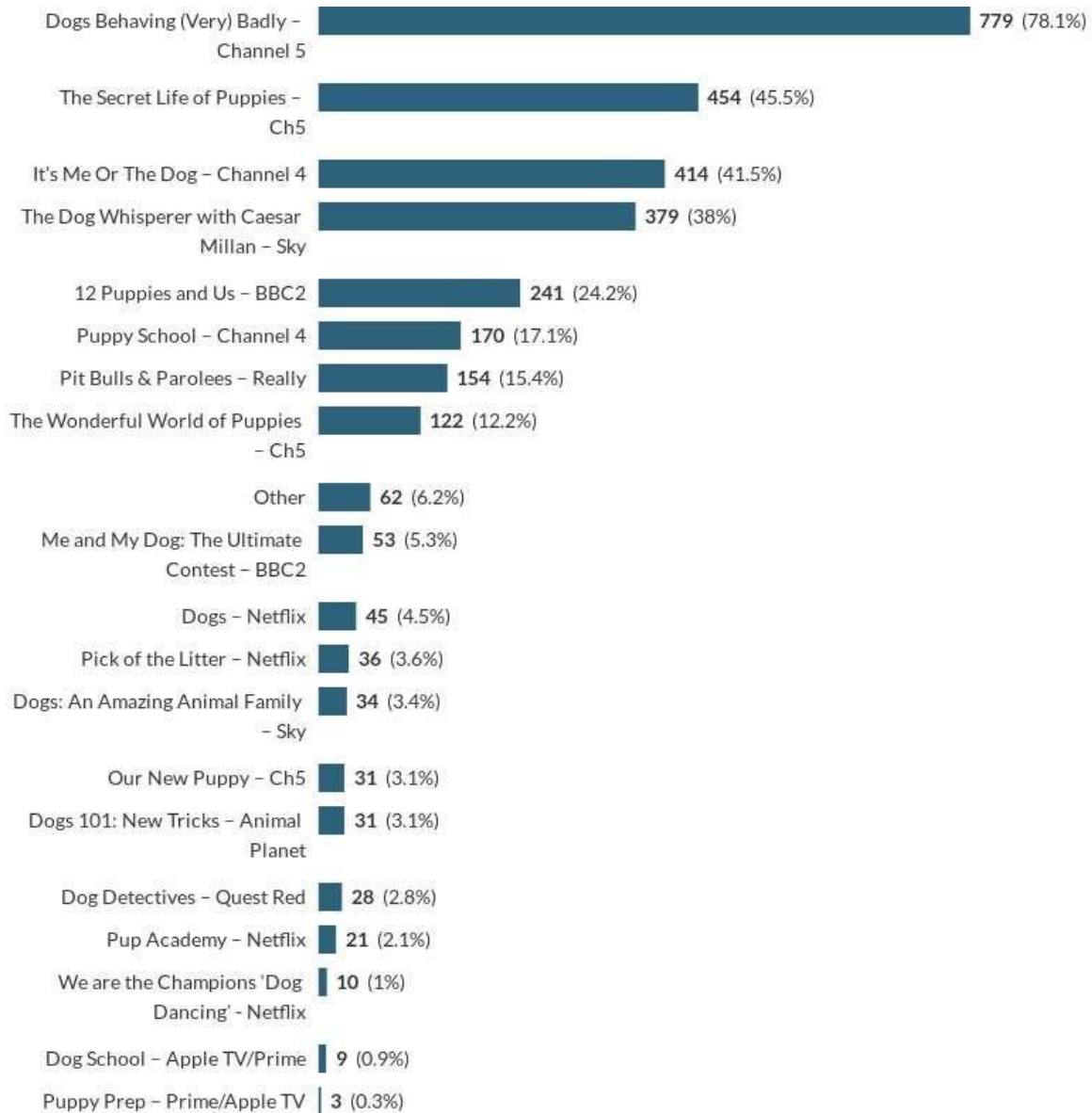


As well as identifying dog ownership, we wanted to ascertain respondents' attitudes towards dogs in general and to evaluate – in the broadest sense – their relationship with dogs. The vast majority of respondents (87.1%) either strongly agreed or agreed that they liked dogs and that dogs liked them. This has significant implications for our analysis since it means that the majority of our respondents had a generally positive attitude towards dogs. In order to begin the process of unpicking the cultural context that underpins the respondents' perceptions of dangerous dogs, the next few questions were designed to ascertain from where they get their information on the subject.

Q14: Do you watch television programmes about dog training or dog behaviour?



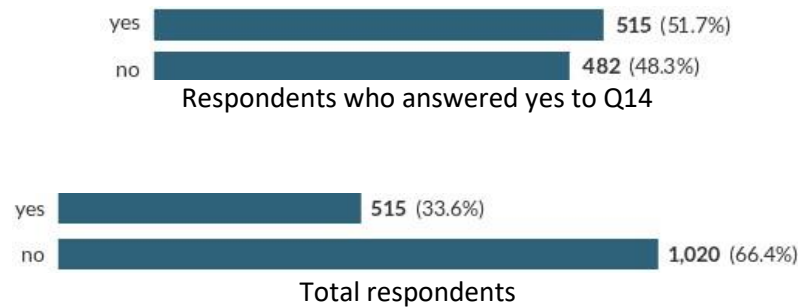
Q14a: If yes, which programmes do you watch regularly?



As Q14 shows, 65% of respondents said that they watched television programmes about dog training and dog behaviour. Of those who said that they do watch such programmes, 78.1% of respondents said that they watch *Dogs Behaving (Very) Badly* (Channel 5). The second most popular programme was *The Secret Life of Puppies* (Channel 5) with 45.5%, followed closely by *It's Me or The Dog* (Channel 4) (41.5%), and *The Dog Whisperer with Cesar Millan* (Sky) (38%). It is important to note that these responses reflect the availability of programmes that were being regularly broadcast in February and March 2021. It is also important to make clear the popularity of these television shows amongst the total number of respondents. Out of the 1,535 respondents, 51.7 % watch *Dogs Behaving (Very) Badly* (Channel 5), 29.6% watch *The Secret Life of Puppies* (Channel 5), 27% watch *It's Me or The Dog* (Channel 4), and

24.7% watch *The Dog Whisperer with Cesar Millan* (Sky). As the data from Q14 and Q14a shows, there were more respondents who said that they do not watch television programmes about dog training or dog behaviour than there were respondents who watched the second most popular show *The Secret Life of Puppies* (Channel 5).

Q15: Do you follow the advice of any dog trainers or dog behaviourists on television?

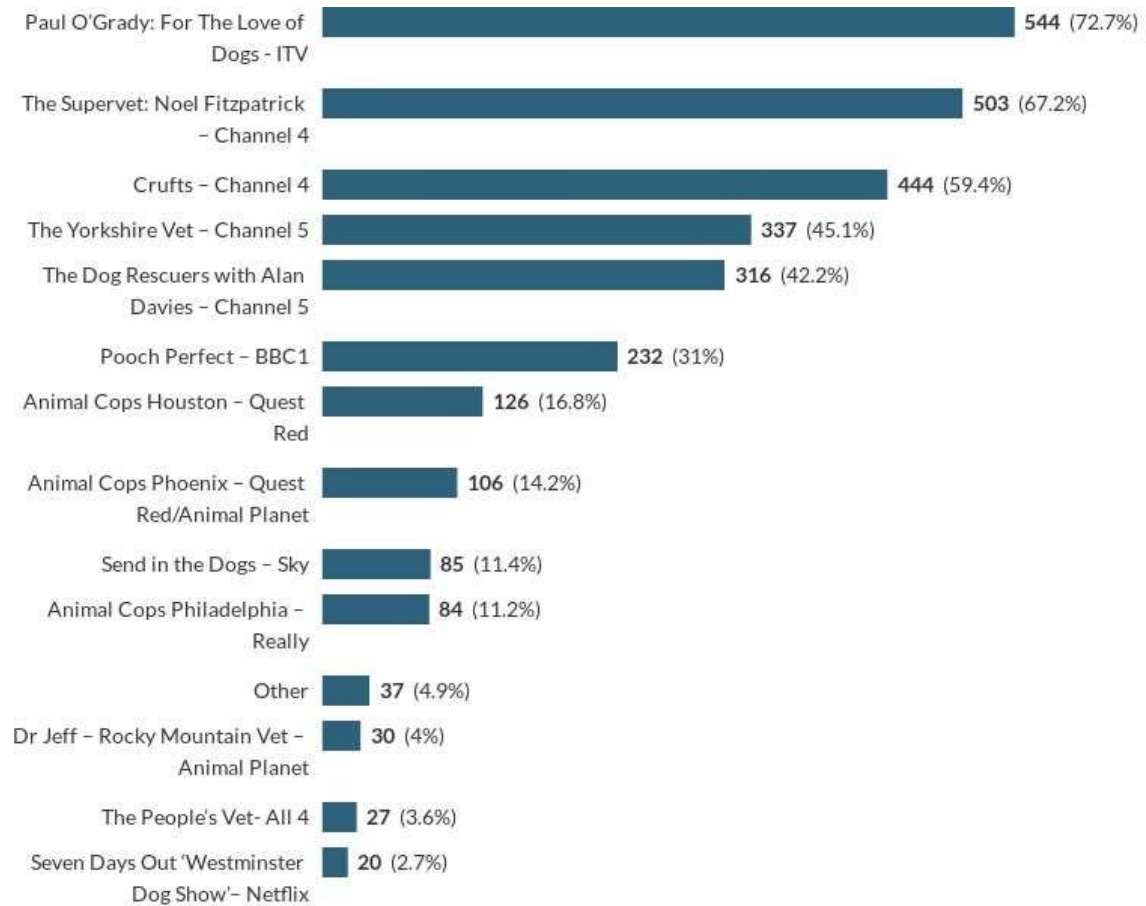


To probe further into their level of engagement with such programming, respondents were asked whether they followed the advice of any dog trainers or dog behaviourists on television. Of the 997 respondents who said that they watch television programmes about dog training or dog behaviour, 515 (51.7%) said that they do follow the advice of the programmes that they watch. Of the 515 who stated that they did follow advice from behaviourists on television, more than half (53.2%) said they followed the advice of Graeme Hall on *Dogs Behaving (Very) Badly*. The second most popular was Cesar Milan (Dog Whisperer) with 23.5%. The last statistically significant choice was Victoria Stilwell (*It's Me or the Dog*) with 16.1% (all other trainers identified accounted for <1% each). Again, these figures should be put into the context of the total number of respondents. Of the 1,535 total respondents, around two-thirds (66.4%) do not follow the advice of television programmes when it comes to dog training.

Q16: Do you watch any other television programmes about dogs?



Q16a: If yes, which programmes?

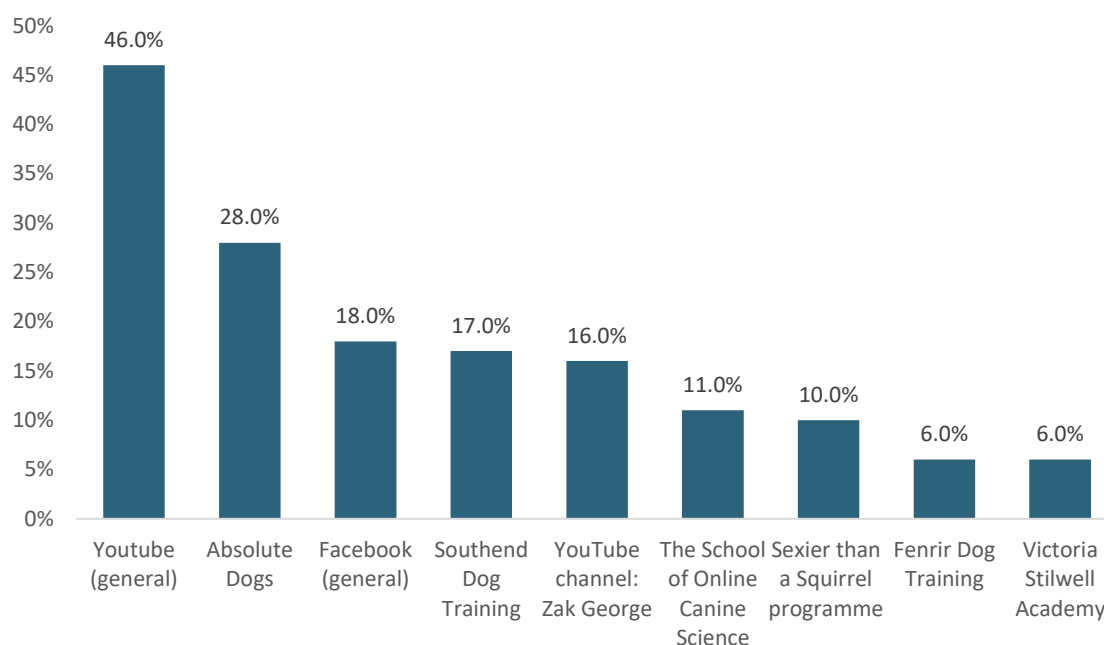


We asked respondents if they watched any other programmes about dogs. Nearly half (48.7%) of the participants responding that they do, with the most popular show (72.2%) being *Paul O'Grady: For The Love of Dogs* (ITV). *The Supervet: Noel Fitzpatrick* (Channel 4) was the second most popular with another majority (67.2%), followed by *Crufts* (Channel 4) with 59.4%.

Q17: Do you follow any online dog training programmes?



Q17a: If yes, which online dog training programmes do you follow?

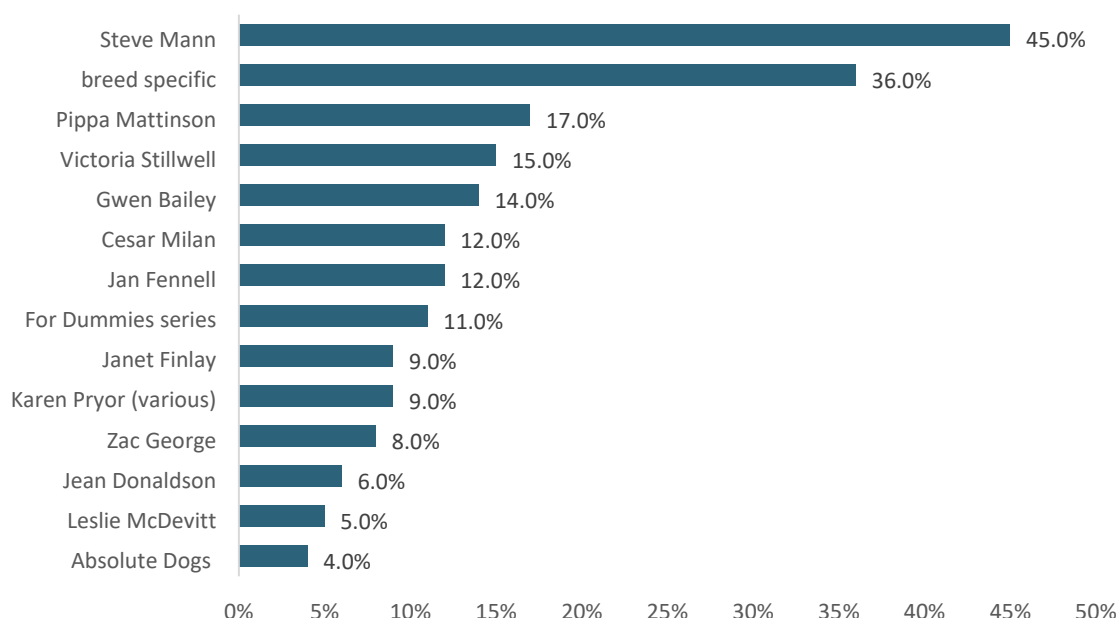


To further supplement how and where respondents get their information about dog behaviour, respondents were asked whether they follow any online dog training programmes. The majority of respondents (87.6%) stated that they do not. Of the 12.4% of respondents that said that they do follow online dog training programmes, there were 8 programmes that proved most popular (for a full list of results see Appendix 2). As Q17a shows, the most popular platform for online dog training programmes is YouTube, with the most popular YouTube channel belonging to Zak George. Absolute Dogs, which has a presence on social media (Facebook, YouTube, Instagram, Twitter), as well as a dedicated website, was the most popular programme specifically identified.

Q18: Do you follow the advice of any dog training books?

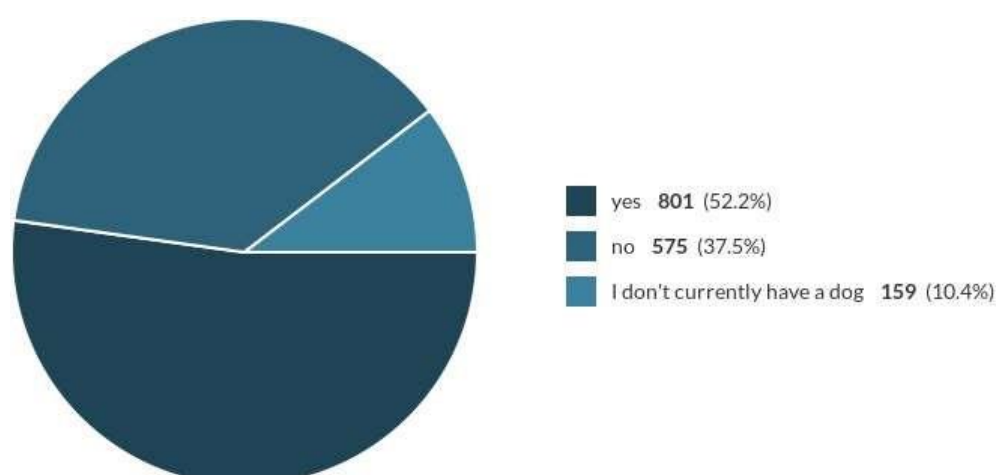


Q18a: If yes, which books?



Asked whether they follow the advice of any dog training books, most respondents (81.2%) said that they did not. Of the minority (18.8%) that said that they do follow the advice of any dog training books, the most popular author was Steve Mann, followed by breed specific dog training books. Other notably popular authors are listed in Q18a (for a full list see Appendix 3).

Q19: If you currently have a dog, have you ever attended dog training/socialisation classes or used the services of a dog trainer or dog behaviourist for this dog?



Over half (52.2%) of the total respondents (58.2% of those that currently have a dog) revealed that they had attended dog training/socialisation classes or used the services of a dog trainer or dog behaviourist for their current dog.

Q20: What characteristics, in your view, should classify a dog as dangerous?

Aggressive, aggressive behaviour	606	39.5%
Biting, bite/attack history	306	19.9%
Out of control, uncontrollable, disobedient	274	17.8%
Unprovoked aggression	152	9.9%
Signs of aggression (not including actual biting/attacks), barking, growling, snarling, lunging, baring teeth, snapping, heckles	141	9.2%
Situational/reactive; guarding, territorial	141	9.2%
Poor/no training, unable to train	121	7.9%
Unpredictable, untrustworthy	120	7.8%
Owners (general, unspecified)	116	7.5%
Individualised: temperament, behaviour of dogs on an individual basis	114	7.4%
Unsupervised, inappropriately supervised, not controlled by owner	112	7.3%
(Mis)treatment, poor upbringing, unsocialised	92	6%
Physical attributes; size, strength, jaw lock, ability, capacity, potential	91	5.9%
Breed/ing (inc. bad breeding)	61	4%
None/dogs are not dangerous/not the problem	57	3.7%
Any/all dog is capable of being dangerous	54	3.5%
Bred/trained to be aggressive	53	3.4%
Likelihood/propensity/known threat/risk	39	2.5%
Not on a lead/muzzle	30	1.9%
Unsociable, antisocial (including feral, pack dogs)	30	1.9%
Inexperienced owners	26	1.7%
Irresponsible owners	21	1.4%
Dogs that have been assessed as such by a behaviourist or similar and rehabilitation is not possible	17	1.1%

Don't know/unsure	9	0.6%
Those defined by law/authorities	5	0.3%
Accidental provocation by child/adult	4	0.2%
No answer	4	0.2%

Q20 asked respondents what characteristics, in their view, should classify a dog as dangerous. This was an open question, and the answers were later assigned to one of 27 categories. As the above table illustrates, the responses were significantly varied.

Answer relating to 'aggressive/aggressive behaviour' were the most popular making up 39.5% of the total. Answers relating to bite history were almost half as numerous making up 19.9% of the total. The next most popular answer related to disobedience/a dog being out of control (17.8%). It should be noted that 58.6% of the answers focussed on some form of aggression, whether this is outward aggression, unprovoked aggression, or signs of aggression. It is also interesting to note that a very small minority (0.3%) considered dogs to be dangerous according to the classifications defined by law or authorities. Also, a similarly small minority (0.6%) said that they did not know or were unsure about what characteristics should classify a dog as dangerous. This suggests that although there may be diverging opinions about the classifications themselves, the vast majority (99.4%) did feel comfortable enough to classify certain dog characteristics as dangerous.

Dangerous dogs in the media

Questions 21 and 22 were designed to assess respondents' awareness of media reporting on dangerous dogs.

Q21: Have you ever read or seen a news story about a dog attacking/biting a child or adult?



Q21a: If yes, can you remember what breed of dog was involved in the incident? If more than one story, any breeds you recall being involved?

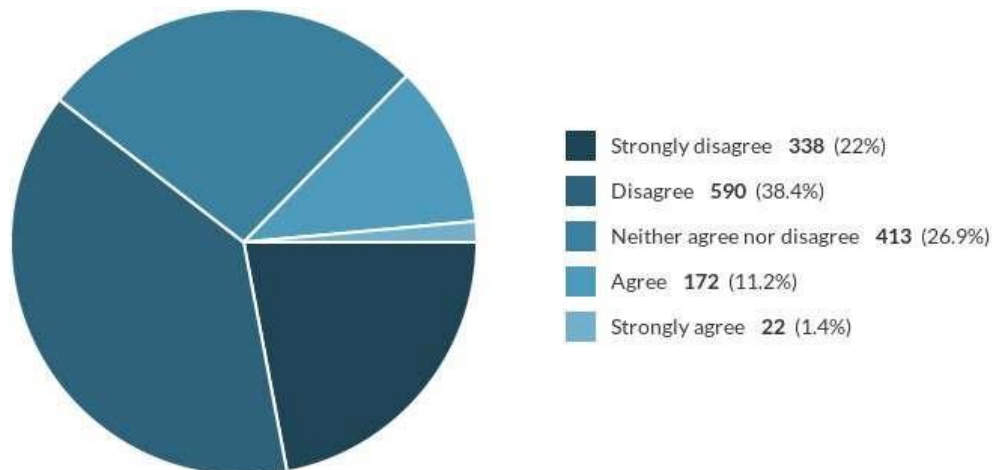
Staffordshire Bull Terrier	495
Pit bull	423
Rottweiler	205
Bull breed (unspecified)	188
German Shepherd	161

Can't remember	125
Mastiff	108
Jack Russell	98
Akita	86
Labrador	71
Bulldog	53
Husky	32
Doberman	32
Bull Terrier (unspecified)	31
Collie	27
Terrier (unspecified)	24
Don't know/unsure of the breed	15
Chihuahua	14
Malamute	13
Boxer	8
Golden Retriever	7
Cross breed (unspecified)	7
Yorkshire terrier	6
Dachshund	6
Lurcher	6
Spaniel	6
Chow	6
Dalmatian	5
West Highland Terrier	5
Mongrel	5

Greyhound	4
Cane Corso	4
Giant Schnauzer	4
Border Terrier	3
Beagle	3
Ridgeback	3
Toy breeds (unspecified)	3
Great Dane	3
Shih Tzu	2
Poodle	2
Lakeland Terrier	1
Patterdale Terrier	1
Dogo Argentino	1
Pomeranian	1
Presa Canario	1
Shar Pei	1
Cockerpoo	1

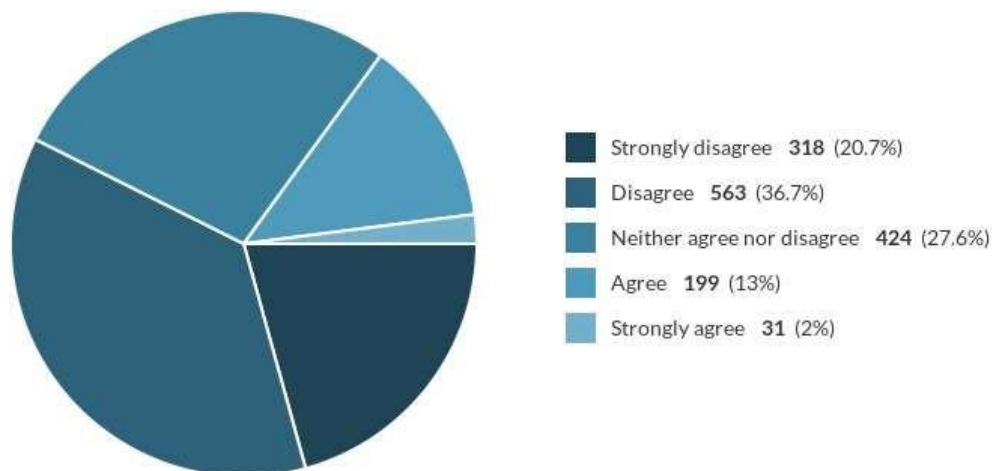
Those respondents that answered yes to Q21 were asked if they could remember which breed or breeds of dog were involved in the story or stories. The breed most commonly remembered was the Staffordshire Bull Terrier, followed by pit bulls. Rottweilers, unspecified bull breeds, and German Shepherds also ranked high. Only 9.4% of those that said they had read or seen a news story about a dog attacking/biting a child or adult said that they could not remember what breed of dog was involved. This suggests that the media reporting of breed is memorable.

Q22.1 Newspaper articles provide useful information about the risk posed by dangerous dogs



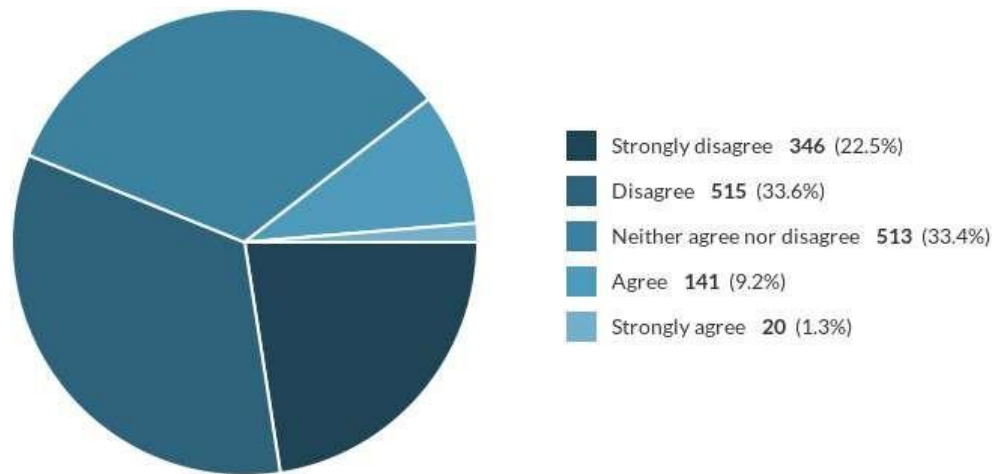
Q22.1 through to Q22.10 used a Likert scale to rate respondents' attitudes towards media reporting on dangerous dogs. The respondents were asked to rate each statement from 'Strongly Disagree' to 'Strongly Agree.' Using this rating scale, we were able to ascertain that the majority of respondents (60.4%) either disagreed or strongly disagreed that newspaper articles provide useful information about the risk posed by dangerous dogs (Q21.1). By comparison, only 12.6% of respondents said that they agreed or strongly agreed with the statement.

Q22.2: Television news provides useful information about the risk posed by dangerous dogs



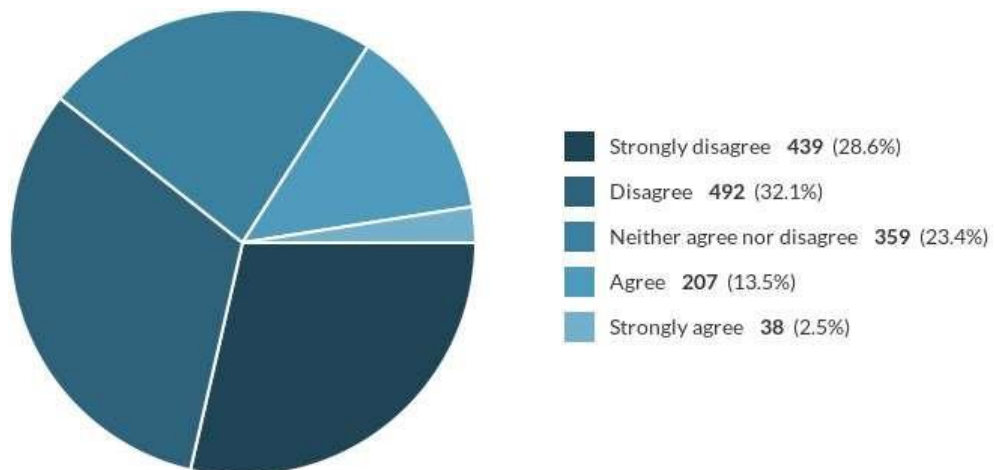
A majority (57.4%) of respondents either disagreed or strongly disagreed that television news provides useful information about the risk posed by dangerous dogs. Only 15% agreed or strongly agreed with the same statement.

Q22.3: The local authority (council) provides useful information about the risk posed by dangerous dogs



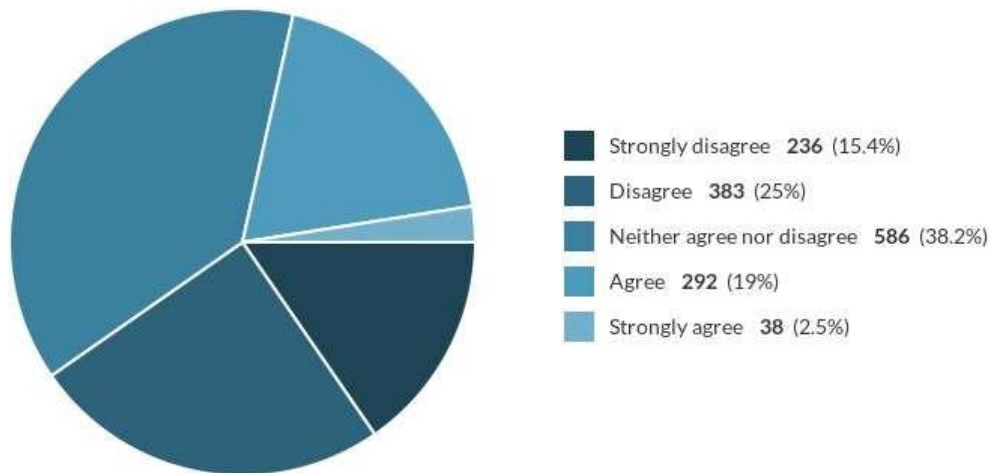
Another majority (55.1%) either disagreed or strongly disagreed that the local authority provides useful information about the risk posed by dangerous dogs, whereas only 10.5% agreed or strongly agreed with the same statement.

Q22.4: Social media provides useful information about the risk posed by dangerous dogs



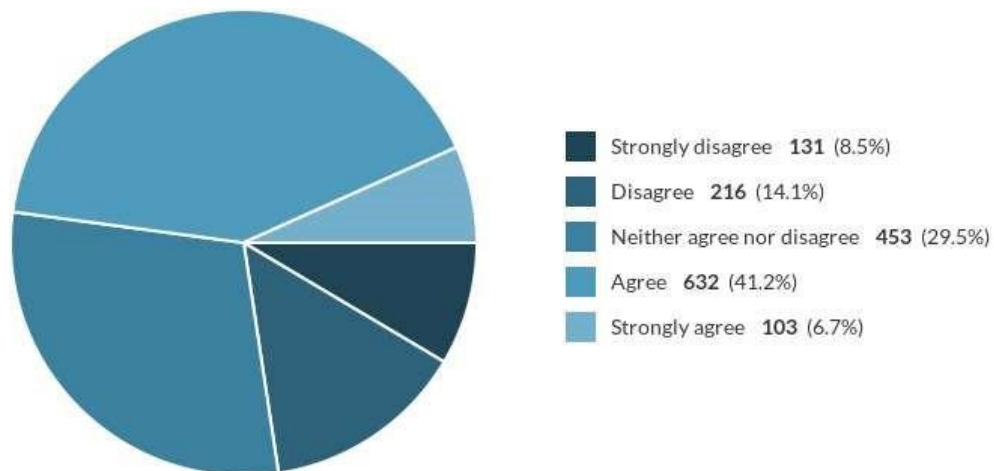
A majority (60.7%) of respondents either disagreed or strongly disagreed that social media provides useful information about the risk posed by dangerous dogs, compared with 16% that either agreed or disagreed.

Q22.5: My friends/family provide useful information about the risk posed by dangerous dogs



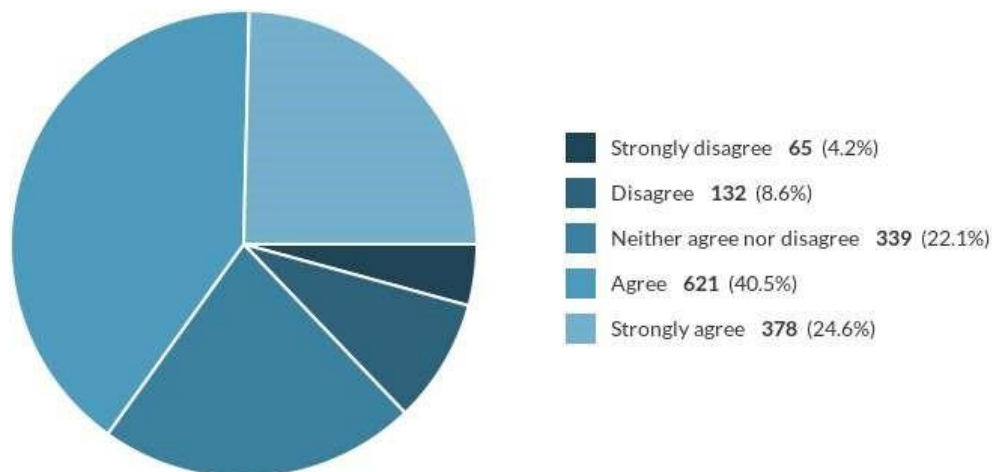
When asked whether friends or family provide useful information about the risk posed by dangerous dogs there was no clear majority. However, though twice as many respondents (40.4%) said they strongly disagreed or disagreed compared to those who agreed or strongly agreed (21.5%). The largest single answer (38.2%) was from respondents who neither agreed nor disagreed with the statement.

Q22.6: Television programmes about dog behaviour provide useful information about the risk posed by dangerous dogs



Respondents were more favourable towards television programmes about dog behaviour. Nearly half (47.9%) of respondents agreed or strongly agreed that television programmes about dog behaviour provide useful information about the risk posed by dangerous dogs. Meanwhile, only 22.6% of respondents disagreed or disagreed strongly with the same statement.

Q22.7: There needs to be more public information about the risk posed by dangerous dogs

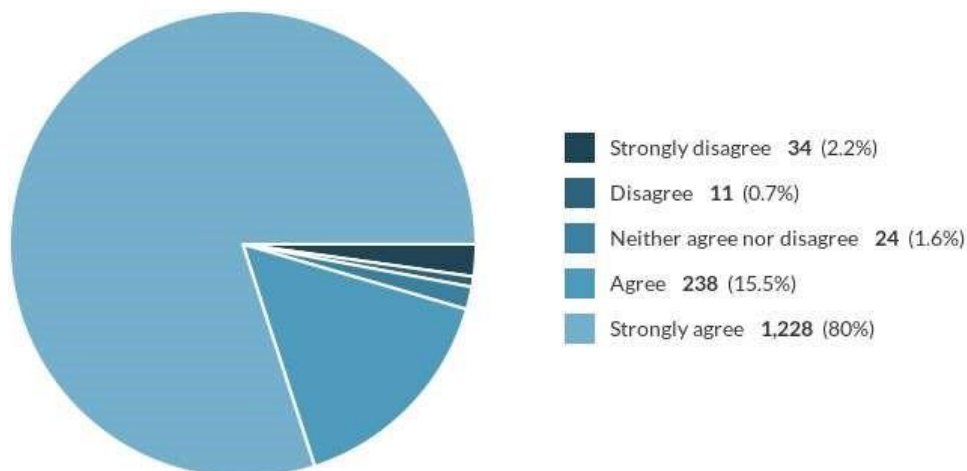


A majority (65.1%) of respondents agreed or strongly agreed that there needs to be more public information about the risk posed by dangerous dogs. Only 12.8% disagreed with this statement.

Educating children on dog behaviour

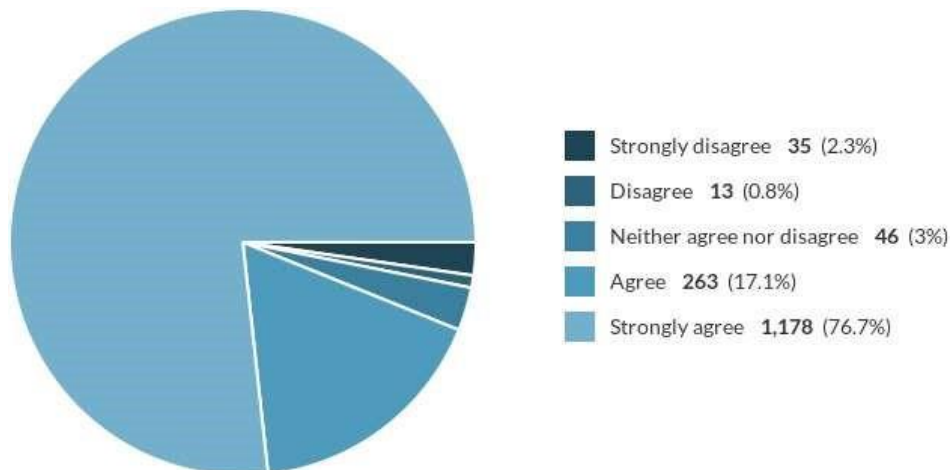
Respondents were asked three further sub questions to gather data on whether children should be taught how to interact with dogs, and how they thought this education should be carried out.

Q22.8: Children should be taught how to interact with dogs



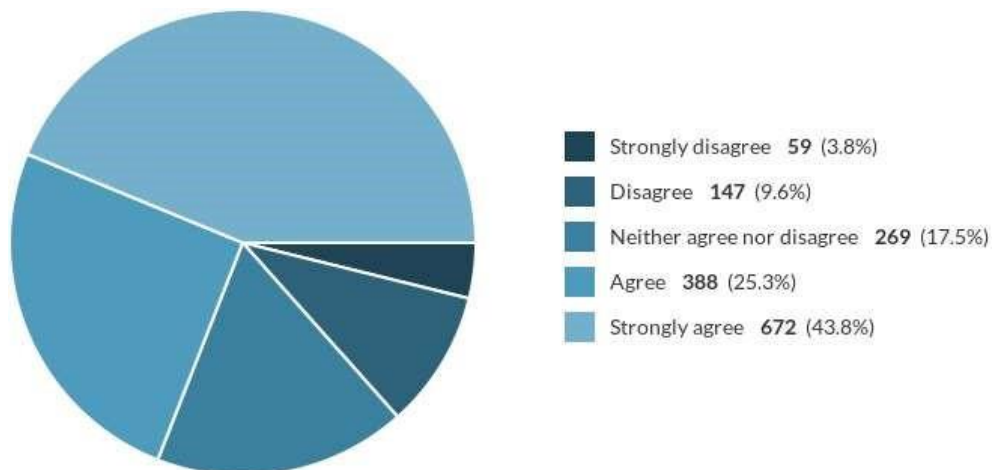
The vast majority (95.5%) of respondents agreed or strongly agreed that children should be taught how to interact with dogs, while a minority (2.9%) disagreed or strongly disagreed with the same statement.

Q22.9: Parents should teach children how to interact with dogs



A similar sized majority (93.8%) either agreed or strongly agreed that parents should teach children how to interact with dogs, while a minority (3.1%) disagreed or strongly disagreed with this statement.

Q22.10: Schools should teach children how to interact with dogs

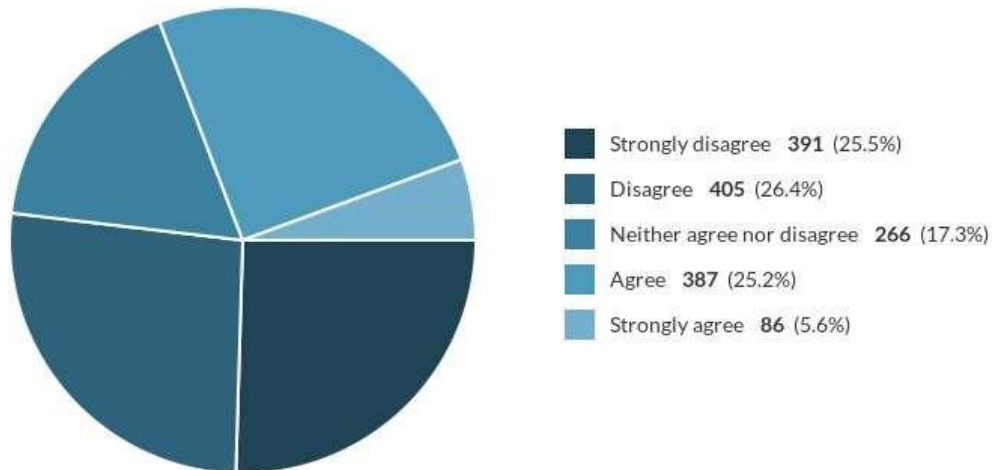


A less convincing but still confident majority (69.1%) of respondents agreed or strongly agreed that schools should teach children how to interact with dogs while 13.4% either disagreed or disagreed strongly.

Characterising dangerous dogs

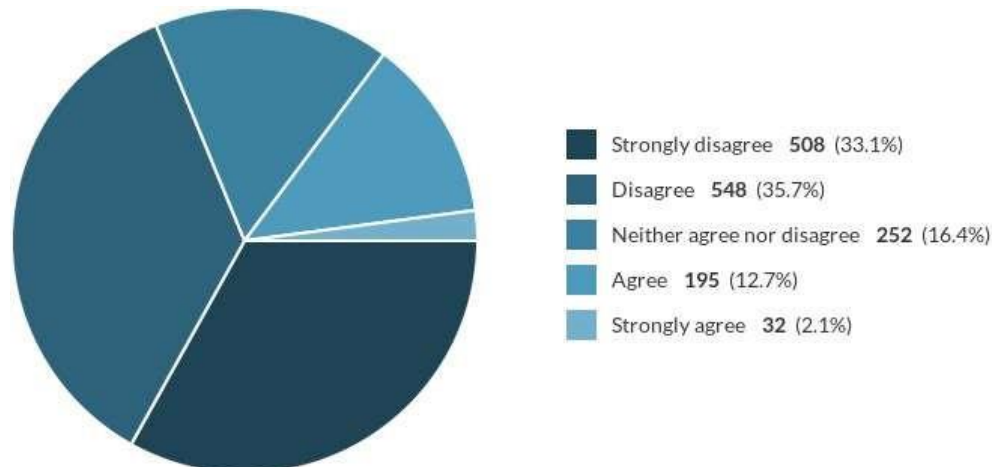
Using a Likert scale, respondents were asked to rate characteristics that they perceived as making a dog more likely to be dangerous.

Q23.1: Breed



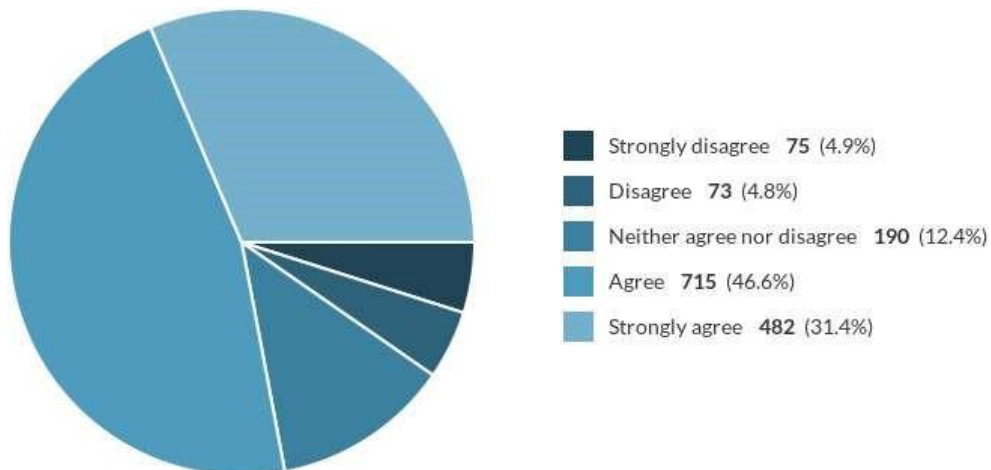
Around half (51.9%) of respondents disagreed or strongly disagreed that breed made a dog more likely to be dangerous compared with 30.8% that agreed or strongly agreed.

Q23.2: Size



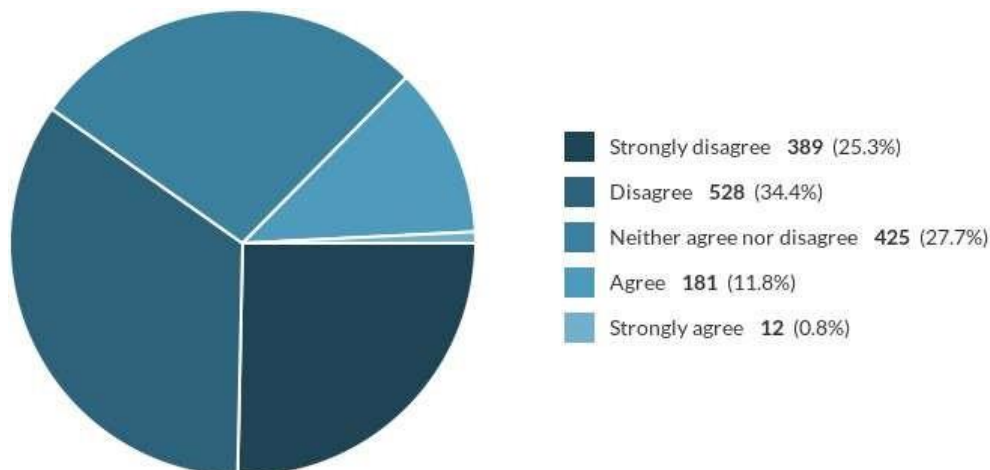
A clearer majority (68.8%) of respondents disagreed or strongly disagreed that size makes a dog more likely to be dangerous compared with 14.8% that agreed or strongly agreed.

Q23.3: Bite history



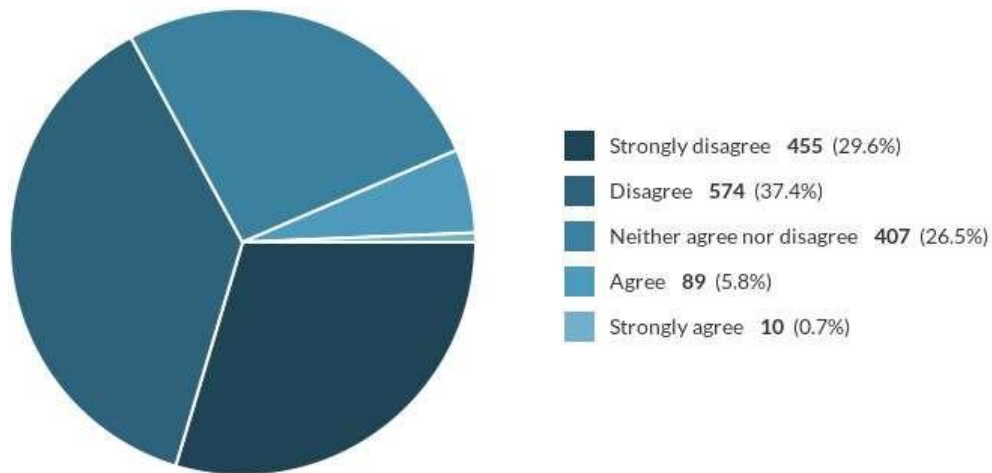
A strong majority (78%) of respondents agreed or agreed strongly that having a bite history makes a dog more likely to be dangerous, compared with only 9.7% who disagreed or disagreed strongly.

Q23.4: Age



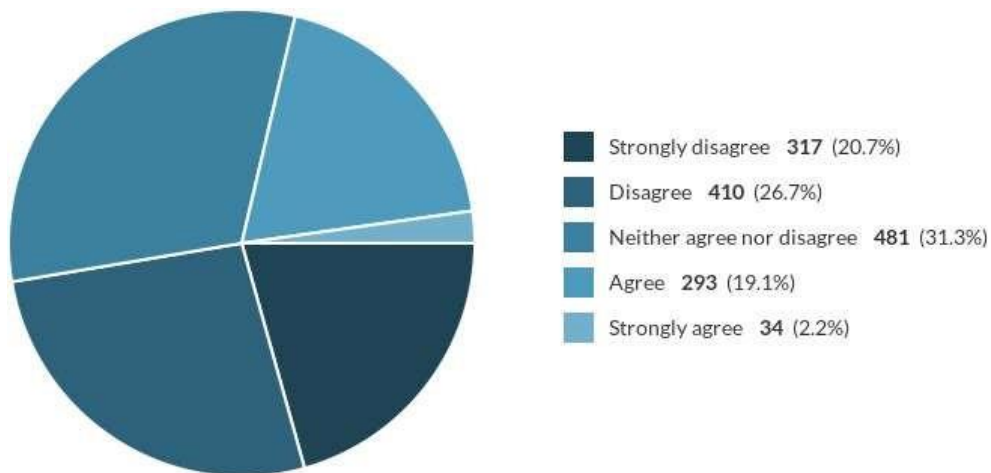
The majority (59.7%) of respondents disagreed or strongly disagreed that age makes a dog more likely to be dangerous compared with 12.6% that agreed or strongly agreed.

Q23.5: Sex



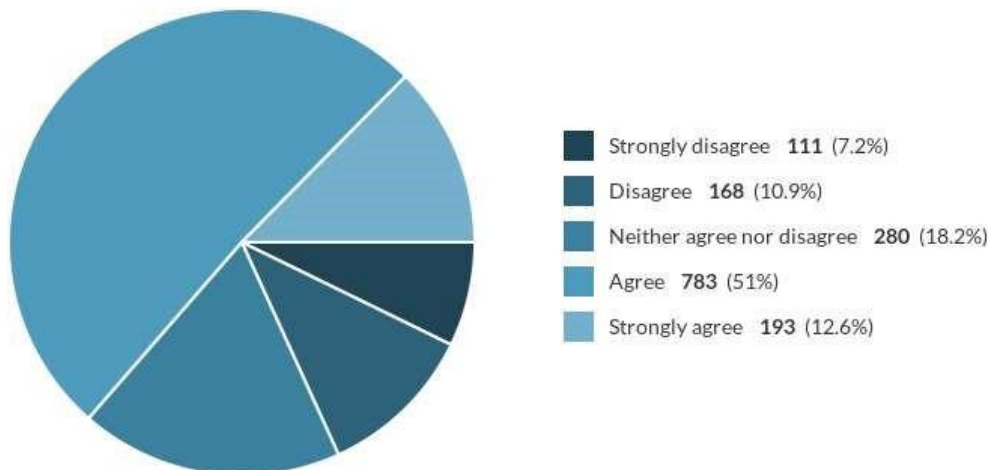
The majority (67%) of respondents disagreed or strongly disagreed that the sex of a dog makes it more likely for them to be dangerous compared with 6.5% that agreed or strongly agreed.

Q23.6: Neuter status (spay/castration)



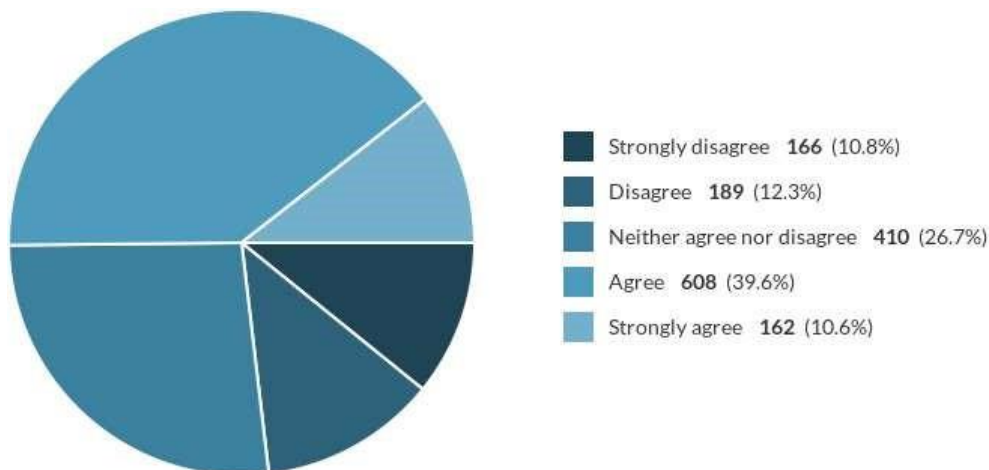
There was no clear majority with regards to neuter status, with 47.4% of respondents disagreeing or strongly disagreeing that a dog's neuter status makes it more likely to be dangerous and 21.3% agreeing or strongly agreeing. However, 31.3% of respondents neither agreed nor disagreed.

Q23.7: Health



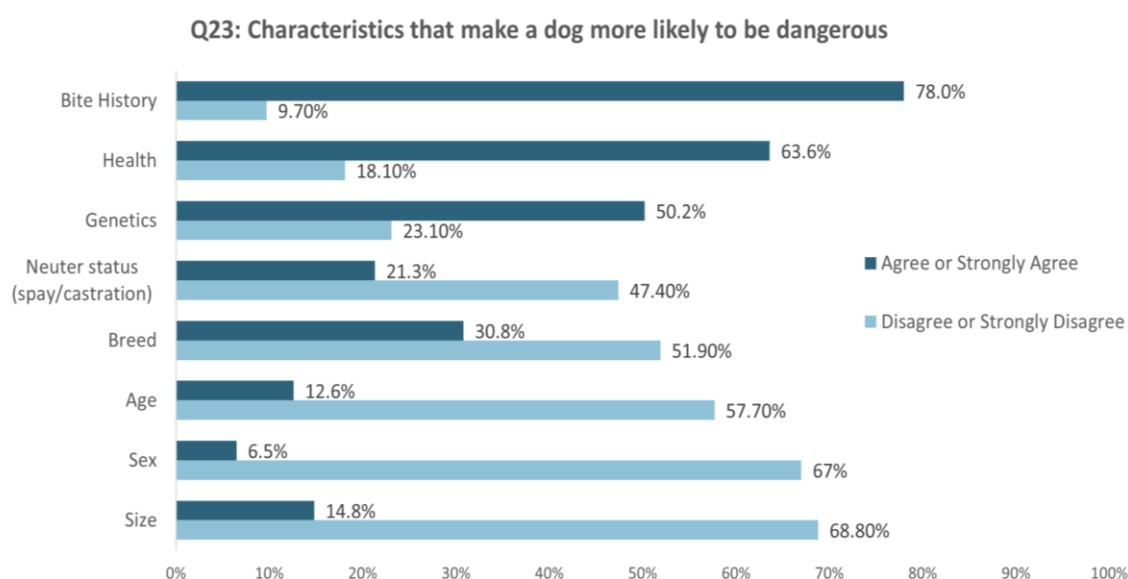
A majority (63.6%) of respondents agreed or agreed strongly that a dog's health makes them likely to be dangerous, compared with 18.1% who disagreed or disagreed strongly.

Q23.8: Genetics



Half of those surveyed (50.2%) either agreed or agreed strongly that genetics make a dog more likely to be dangerous compared with 23.1% that either disagreed or strongly disagreed.

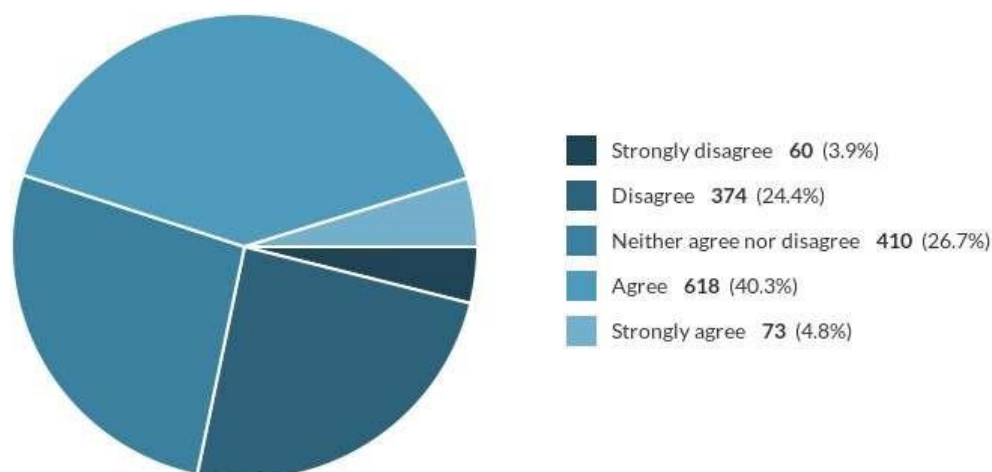
The chart below provides a summary of the respondents' views on what characteristics make a dog more likely to be dangerous. The answers from Q23.1 to Q23.8 have been collated to show the total number of respondents who agreed or strongly agreed with the statements compared with those who disagreed or strongly disagreed. It should also be noted that on average, around 25% of respondents chose the option 'neither agree nor disagree.'



Understanding dog behaviour

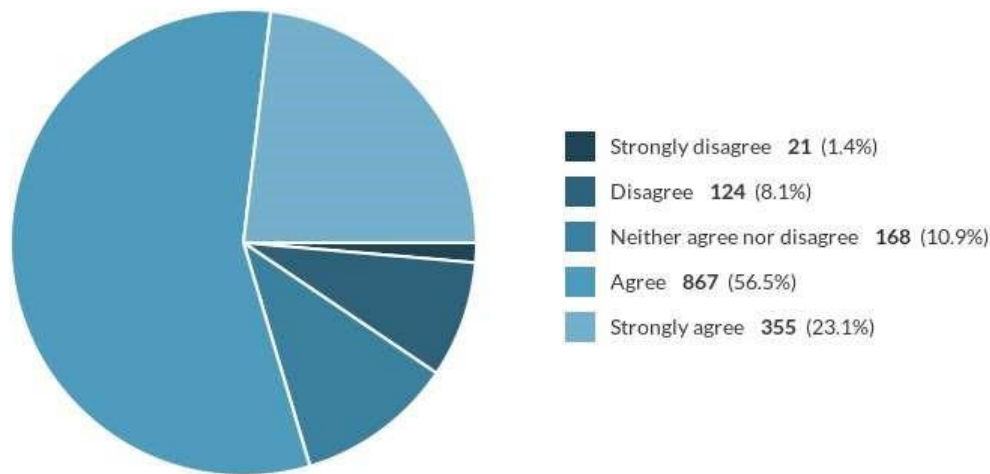
In order to identify the respondents' understanding of dog behaviour they were asked to rate 4 statements on the subject.

Q24.1: Dogs understand what they are doing, e.g. a dog knows what they are doing when they bite or initiate play



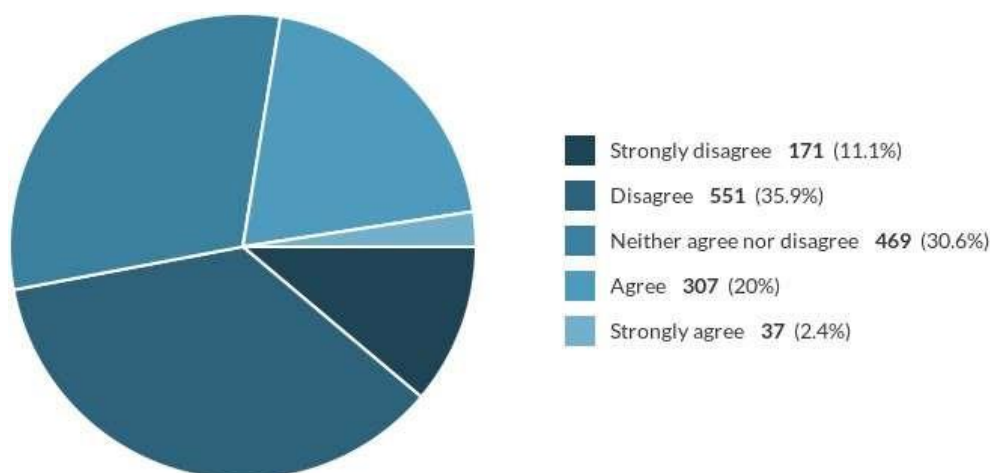
Asked whether dogs understand what they are doing (for example when they bite or initiate play), 45.1% of respondents agreed or agreed strongly that they did, while 28.8% disagreed or strongly disagreed.

Q24.2: Dogs respond to the behaviour of people and dogs instinctively, without understanding the consequences of their behaviour



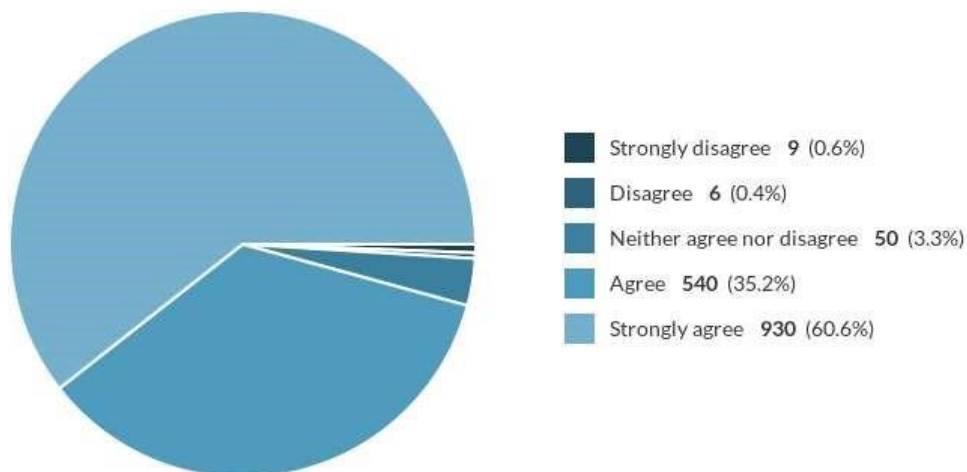
The majority of respondents (79.6%) either agreed or strongly agreed that dogs respond to the behaviour of people and dogs instinctively, without understanding the consequences of their behaviour. Only 9.5% disagreed or disagreed strongly with this statement.

Q24.3: What a dog does is a reflection of their character



Asked whether what a dog does is a reflection of their character, 47% of respondents disagreed or disagreed strongly, with 22.4% agreeing or agreeing strongly. 30.6% of respondents neither agreed nor disagreed with the statement.

Q24.4: Training, teaching, or socialising dogs can change their behaviour

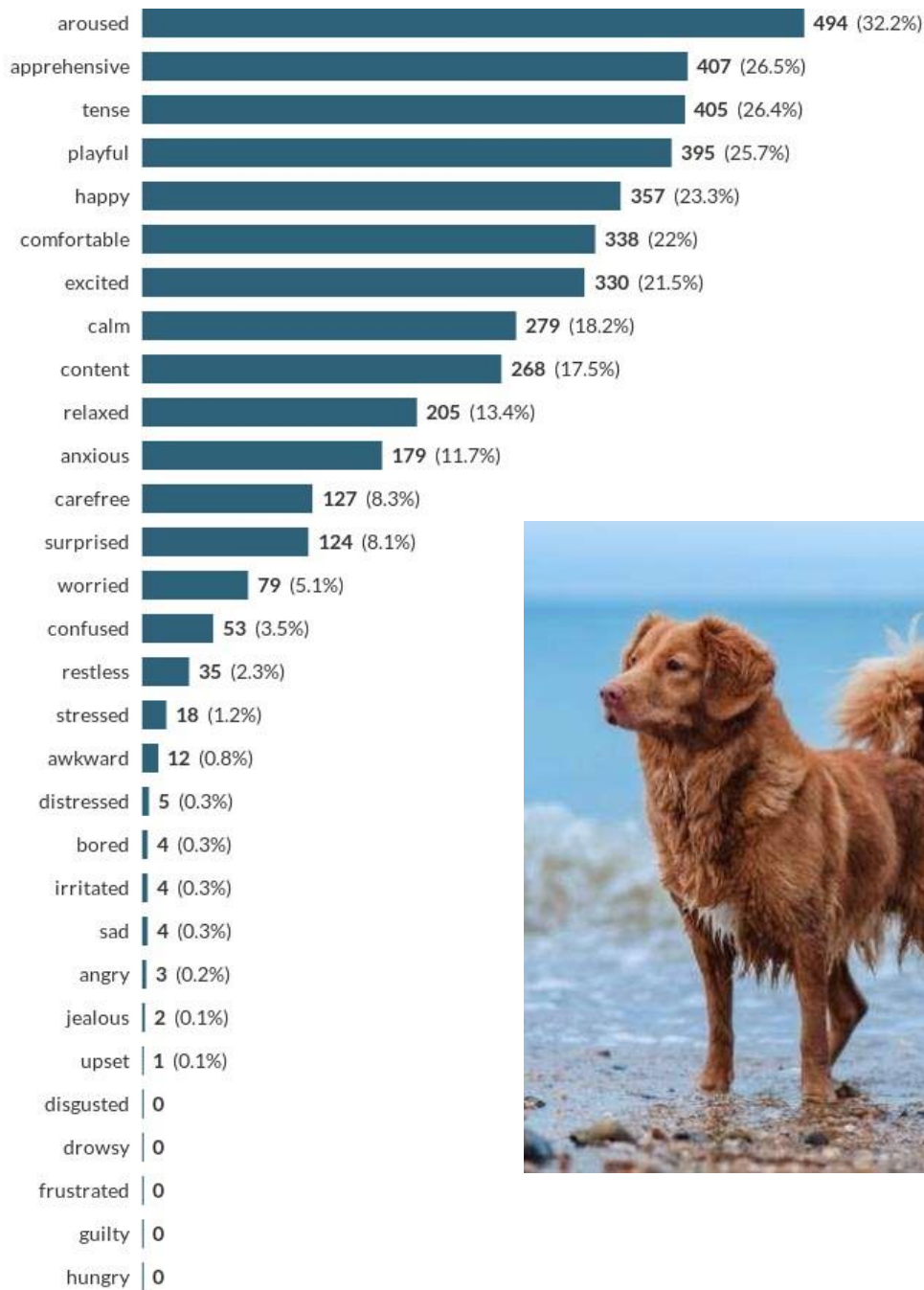


An overwhelming majority (95.8%) of respondents agreed or strongly agreed that training, teaching, or socialising dogs can change their behaviour, with 60.6% strongly agreeing. Only 1% of respondents disagreed or disagreed strongly.

Identifying canine body language

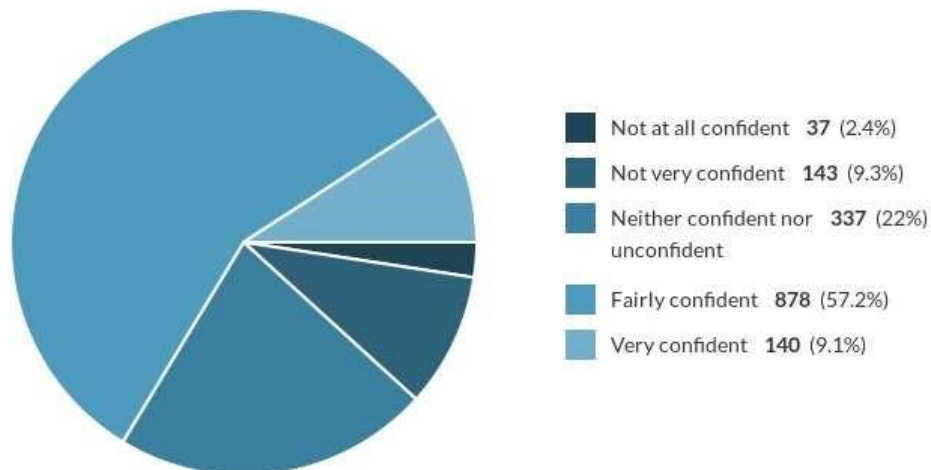
Q25 through to Q30 were designed to assess how the respondents interpreted canine body language. For each question the respondents were shown a photograph of a dog and were given a list of adjectives. With each photograph the respondents were asked to choose up to 3 words from the list that best described the emotions of the dog.

Q25: Select up to 3 adjectives that best describe the emotions of the dog in this picture:



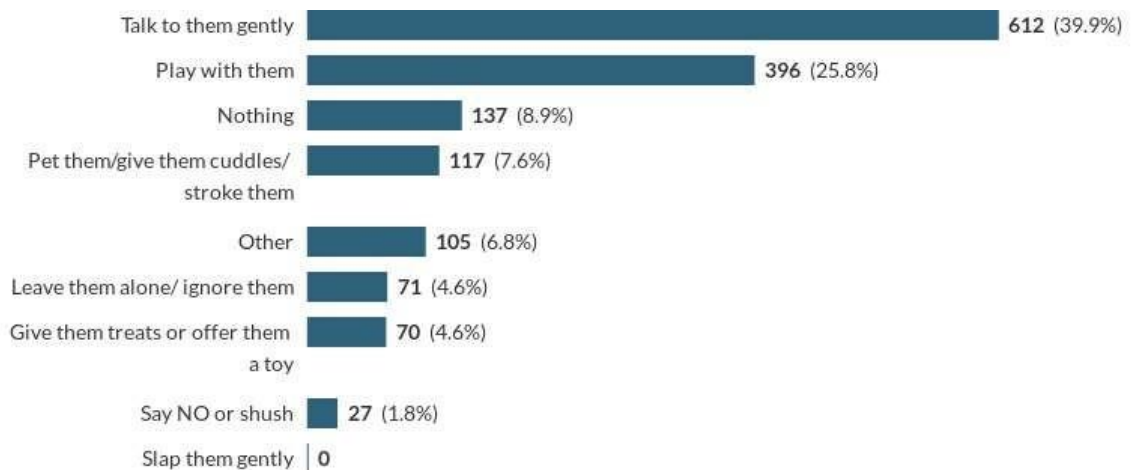
There was a significant amount of disparity in the emotions identified for the image in Q25 with 6 different words scoring >20% and another 3 scoring between 10-20%. The emotion that the largest number of respondents agreed on was 'aroused' (32.2%). The other emotions most commonly ascribed to this first image were: 'apprehensive' (26.5%), 'tense' (26.4%), 'playful' (25.7%), 'happy' (23.3%), 'comfortable' (22%) and 'excited' (21.5%). Other popular choices included 'calm' (18.2%), 'content' (17.5%), 'relaxed' (13.4%) and 'anxious' (11.7%). As is clear from these figures and from the full results in Q25, the interpretations of the emotional state of the dog were extremely varied.

Q25a: How confident are you in your answers?



Interestingly, the majority (66.3%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 11.7% who were either not very or not at all confident.

Q25b: If a dog that you know behaved in this way, what would you do?



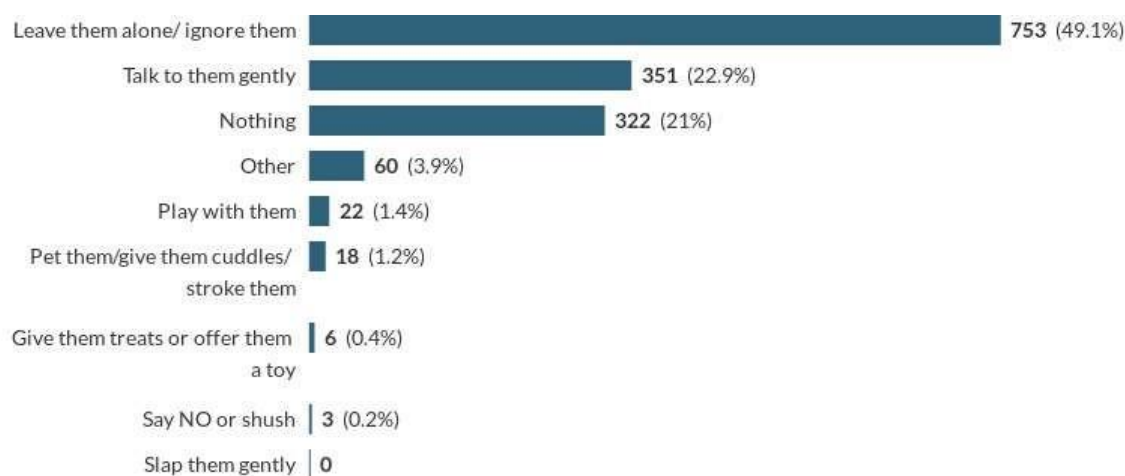
Asked what they would do if a dog that they knew behaved in this way, 39.9% of respondents said that they would 'talk to them gently,' while 25.8% of respondents said that they would 'play with them.' All other options had less than 10%. While there is no clear consensus with this question, the majority of answers involved the respondent interacting with the dog. The only option that not a single respondent chose was to 'slap them gently.'

Q25b.i: If you selected Other, please specify:

Distract	59	59%
Call/move/get on lead	30	30%
Check/depends on what they are looking at	18	18%
Monitor the dog/situation	18	18%
Praise/reassure/treat	11	11%
Need more info (unable to answer the question)	7	7%
Nothing	5	5%
Ask owner for advice	3	3%
Don't know	2	2%

Of the 105 people that chose 'other,' the majority (56%) stated that they would 'distract' the dog.

Q25c If a dog that you did not know behaved in this way, what would you do?



There was more of a consensus with respect to what they would do if a dog they did not know behaved in this way. Almost half (49.1%) of the respondents said that they would 'leave them alone or ignore them' with a further 20% saying that they would do nothing. Another statistically significant (22.9%) choice was to 'talk to them gently.'

Q25c.i: If you selected Other, please specify:

Ask owner, defer to owner	27	45%
Nothing, avoid, ignore	18	30%
Engage/pet with permission from owner	11	18.3%
Monitor/observe	10	16.6%
Not enough info in the picture to make a decision	6	10%
Allow/invite them to approach/sniff hand	6	10%
Interact/engage	4	6.6%
Play with permission from owner	3	5%
Distract, move them away	3	5%
Recommend/request they be leashed	2	3.3%

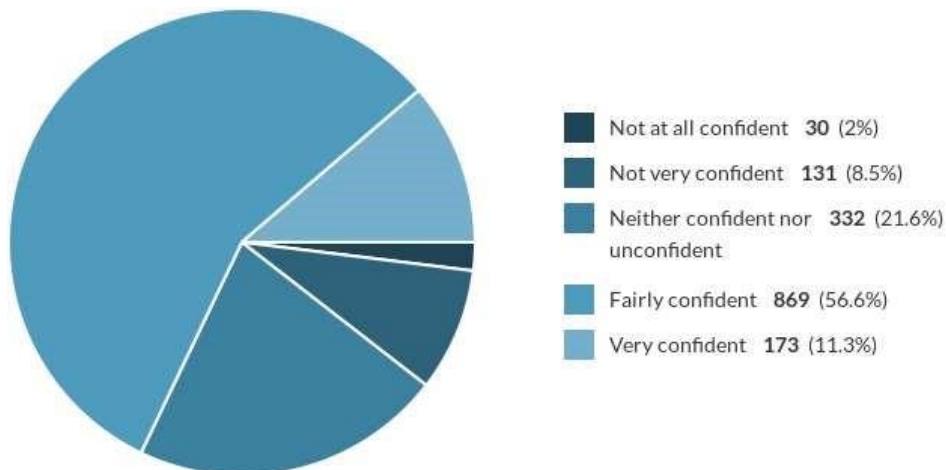
Of those who chose 'other' (3.9%) nearly half chose to 'ask/defer to owner' and around a third said that they would do nothing/ignore the dog.

Q26: Select up to 3 adjectives that best describe the emotions of the dog in this picture:



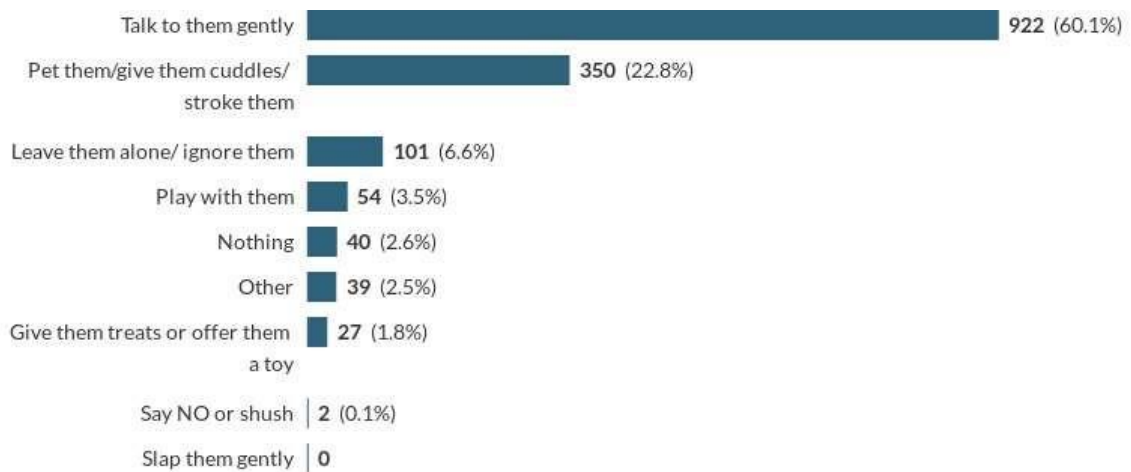
There was slightly more of an agreement in identifying the emotions of the dog in the picture shown in Q26. The majority (57.5%) of respondents agreed that the adjective that best describes the emotions of the dog was 'anxious.' Choosing a similar adjective, 41.4% of respondents said that the dog in the picture was 'apprehensive' and 39.2% said that the dog was 'worried.' Other statistically significant choices included 'stressed' (20.7%), 'tense' (18.8%), and 'distressed' (15.1%). It is worth noting that all of these are negative emotions. However, positive emotions were also identified, with 11% of respondents describing the dogs emotional state as 'playful' and 10.6% of respondents describing the dog as 'relaxed.'

Q26a: How confident are you in your answers?



Once again, the majority (67.9%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 10.5% who were either not very or not at all confident.

Q26b: If a dog that you know behaved in this way, what would you do?



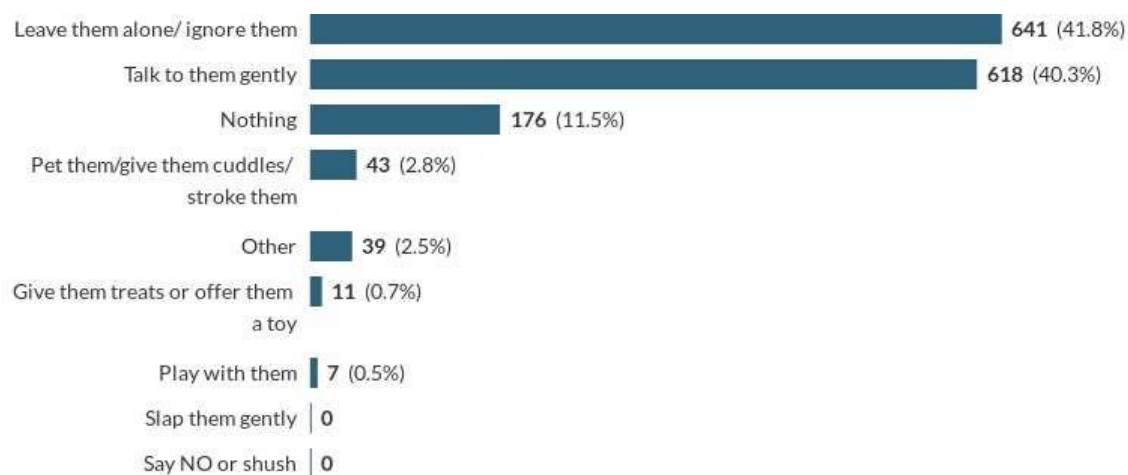
The majority of respondents (60.1%) said that they would 'talk to them gently' if a dog they knew behaved this way, and 22.8% said that they would pet/cuddle/stroke the dog.

Q26b.i: If you selected Other, please specify:

Reassure from a distance	18	46.1%
Remove them from the situation, call them away, distract them	10	25.6%
Avoid/leave alone/walk away	9	23%
Not enough info in the picture to make a decision	7	17.9%
Observe/assess	7	17.9%
Can't tell if it is playful or anxious	5	12.8%
If playful: pet/rub belly	3	7.6%
Ask/find owner	2	5.1%
Unsure	1	2.5%
If distressed, seek help from professional	1	2.5%

Of the very small number (2.5%) that chose 'other,' nearly half (46.1%) chose to 'reassure from a distance' and a quarter (25.6%) said that they would remove the dog from the situation.

Q26c: If a dog that you did not know behaved in this way, what would you do?



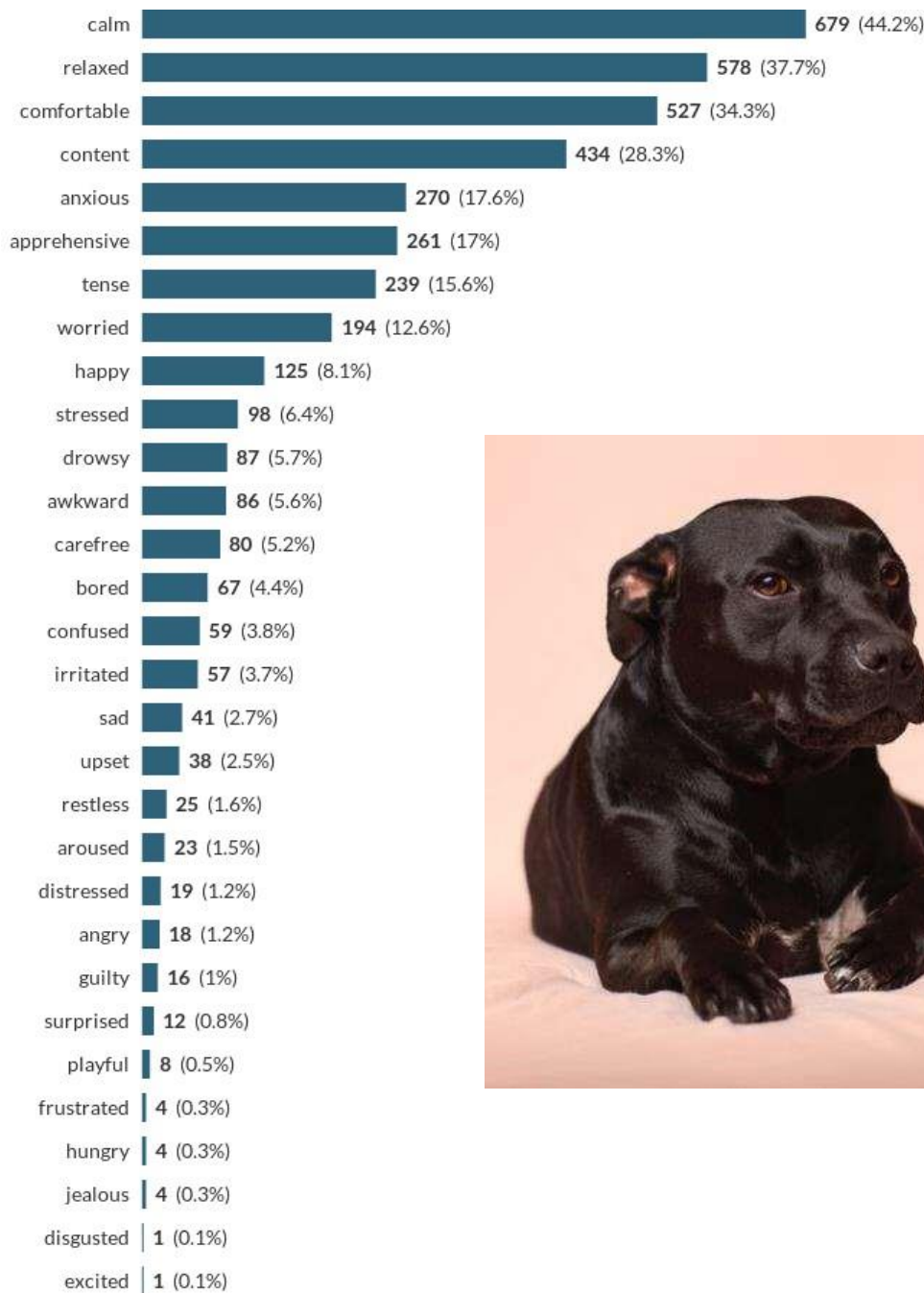
Asked what they would do if a dog that they did not know behaved in this way, 41.8% of respondents said that they would 'leave them alone/ignore them,' while 40.3% said that they would 'talk to them gently.' These responses formed a clear majority totalling 82.1%.

Q26c.i If you selected Other, please specify:

Ask/find owner	15	38.5%
Engage from a distance; reassure	8	20.5%
Nothing/ignore/avoid	7	17.9%
Monitor/observe	5	12.8%
Not enough info in the picture to make a decision	4	10.2%
Pet/play with permission from owner	3	7.6%
Seek aid (contact authorities/help)	3	5.1%
Pet	1	2.6%

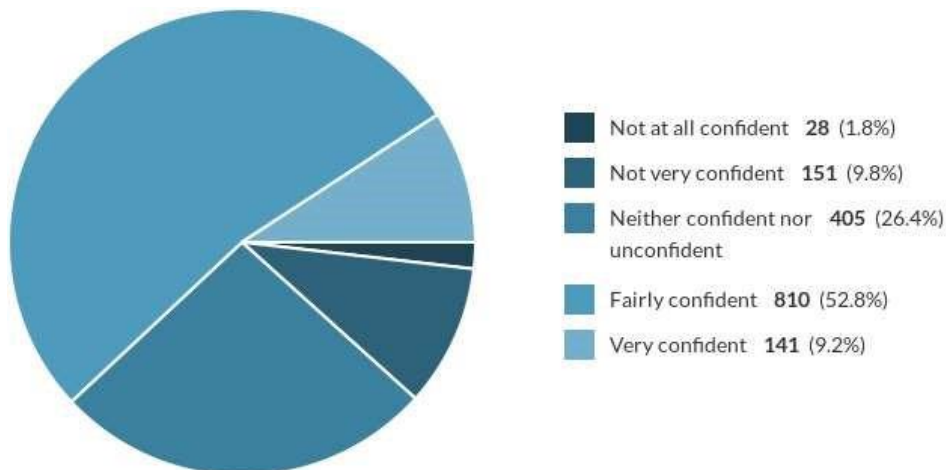
Of the very few people that chose 'other' (2.5%) the most popular choice was to 'ask/find the owner' (38.5%).

Q27: Select up to 3 adjectives that best describe the emotions of the dog in this picture:



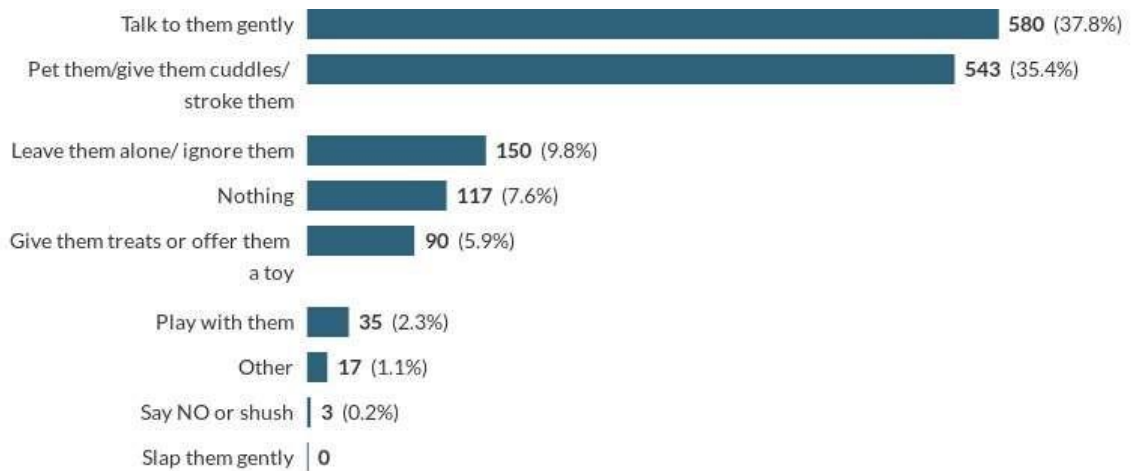
With Q27, four answers stood out as being the most popular. The most popular answer was 'calm' (44.2%), followed by 'relaxed' (37.7%), 'comfortable' (34.3%), and 'content' (28.3%). Notably, all of these are positive emotions. However, four of the other significant (>10%) choices were negative emotions, with respondents describing the dog's emotion state as 'anxious' (17.6%), 'apprehensive,' (17%), 'tense' (15.6%) and 'worried' (12.6%).

Q27a: How confident are you in your answers?



As with the previous images, the majority (62%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 11.6% who were either not very or not at all confident.

Q27b: If a dog that you know behaved in this way, what would you do?



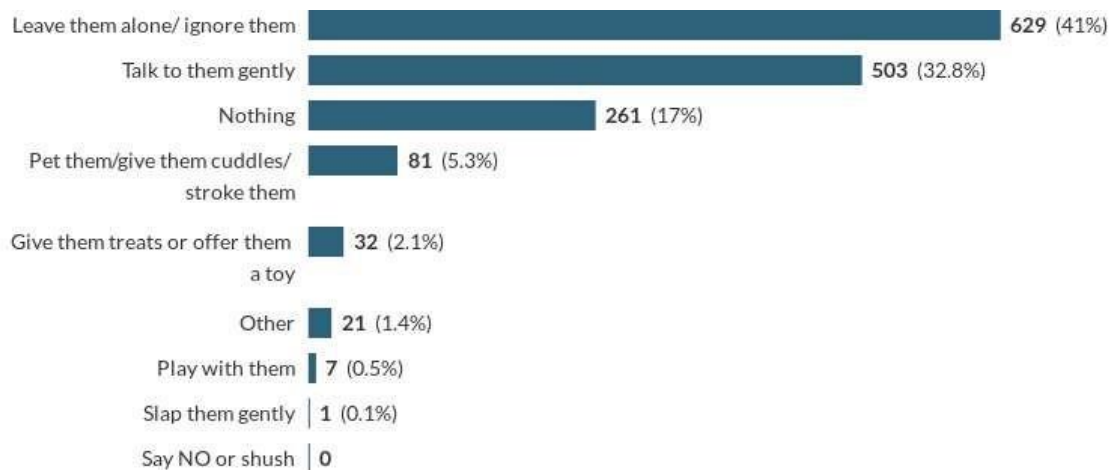
Asked what they would do if a dog that they know behaved in this way, the two statistically significant (>20%) results were: 'talk to them gently' (37.8%) or 'pet them/give them cuddles' (35.4%).

Q26b.i: If you selected Other, please specify

Not enough info in the picture to make a decision	6	35.3%
Don't Know	3	17.6%
Leave alone unless they came over to get petted	2	11.8%
Leave alone	2	11.8%
Call Over	2	11.8%
Talk to them gently	1	5.9%
Praise for being calm	1	5.9%

Of the very small number (1.1%) that chose 'other,' 35% expressed that they did not enough info in the picture to make a decision and 17% expressed that they did not know how they would do.

Q27c: If a dog that you did not know behaved in this way, what would you do?



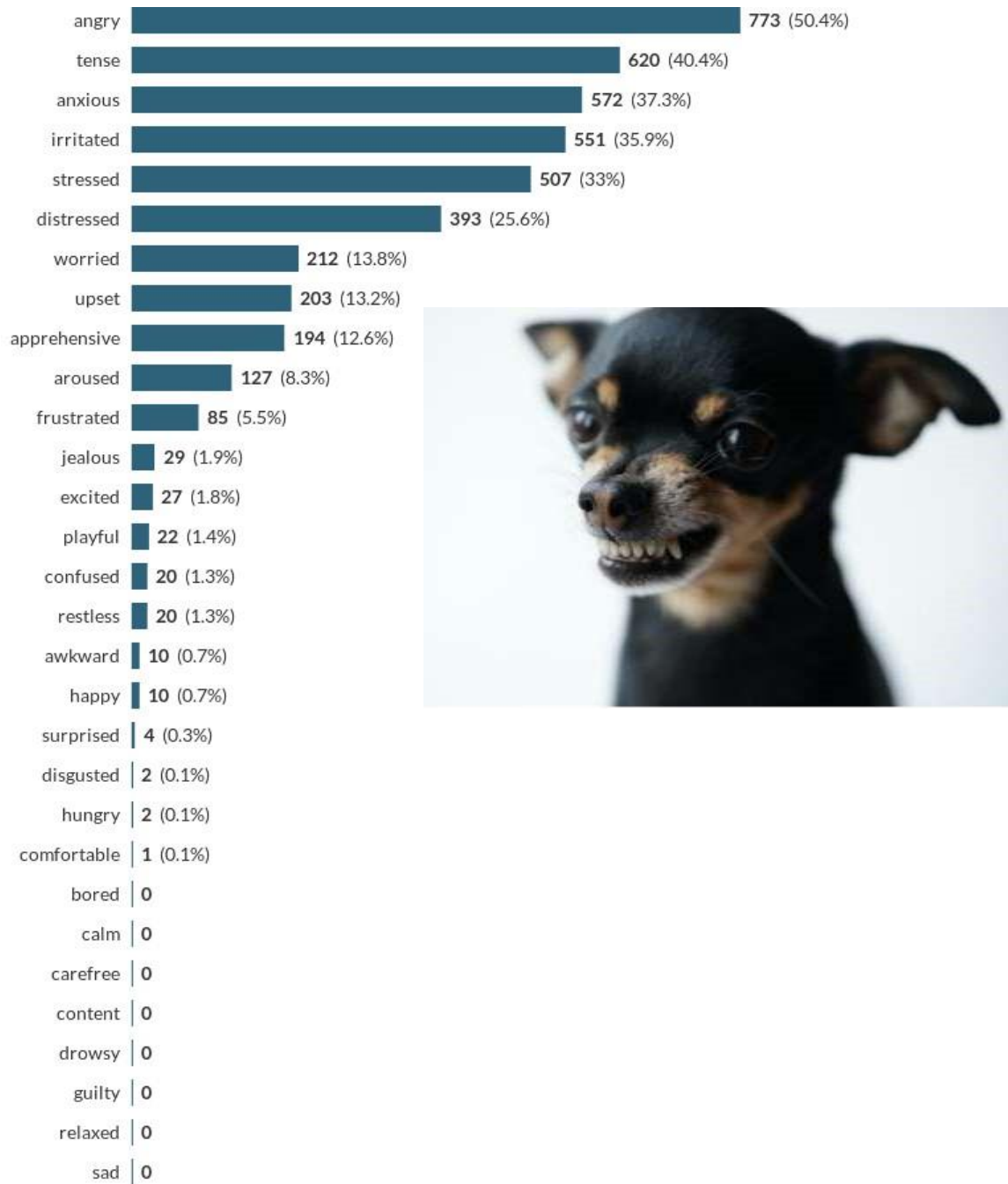
Asked what they would do if a dog that they did not know behaved in this way the significant (>10%) results were: 'leave them alone or ignore them' (41%) or 'talk to them gently' (32.8%).

Q27c.i If you selected Other, please specify

Ask/find owner	11	52.4%
Not enough info in the picture to make a decision	3	14.3%
Leave alone	3	14.3%
Unclear answer from respondent	3	14.3%

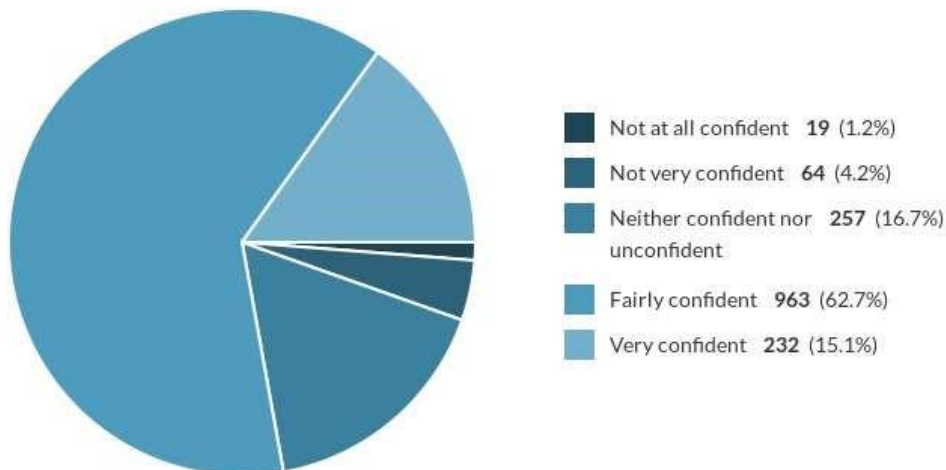
Of the people that chose 'other' (1.1%), 52.4% responded that they would ask/find the owner. 15% needed more information to make a decision, and 15% said that they would leave the dog alone.

Q28: Select up to 3 adjectives that best describe the emotions of the dog in this picture



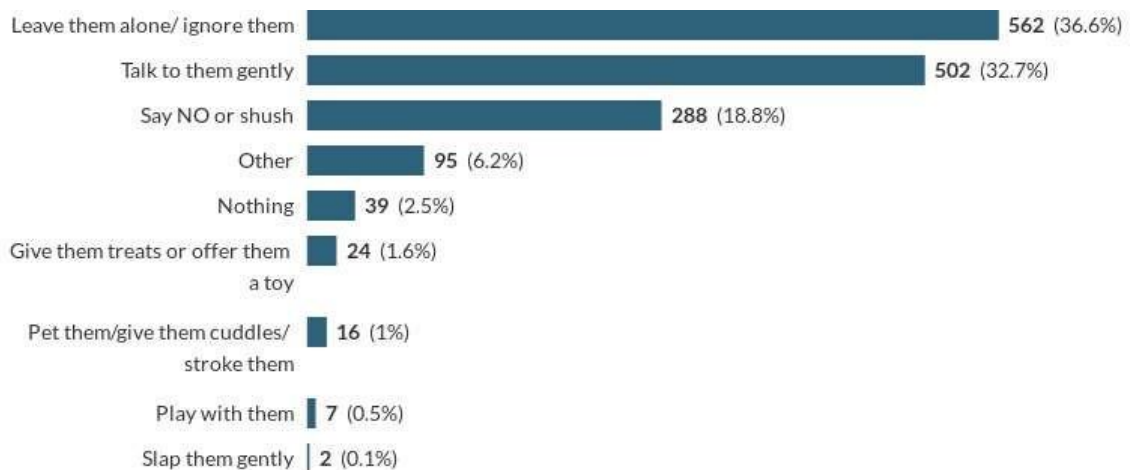
When asked to identify the emotions of the dog in Q28, half of respondents (50.4%) said that the dog was 'angry.' There were five other popular (>30%) choices: 'tense' (40.4%), 'anxious' (37.3%), 'irritated' (35.9%) and 'stressed' (33%) and 'distressed' (25.6%). Although there were different words used, respondents did recognise this as body language indicating a negative emotional state.

Q28a: How confident are you in your answers?



A majority (77.8%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 5.4% who were either not very or not at all confident.

Q28b: If a dog that you know behaved in this way, what would you do?



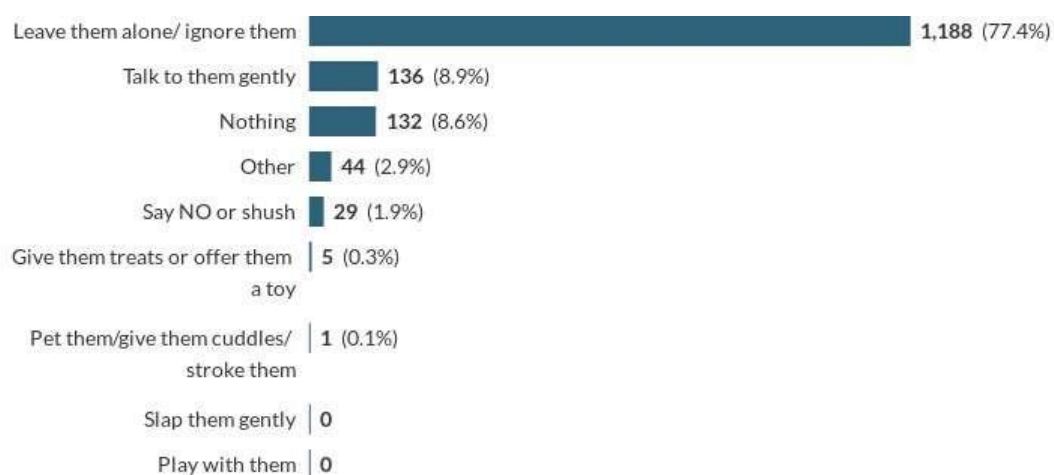
Asked what they would do if a dog that they know behaved in this way the statistically significant (>10%) results were: 'leave them alone or ignore them' (36.6%), 'talk to them gently' (32.7%) or 'say NO or shush them' (18.8%).

Q28b.i: If you selected Other, please specify

Redirect/remove from situation/remove stimulus	53	55.8%
Calm/reassure the dog	28	29.5%
Leave them alone/give them room	18	18.9%
Apply/introduce training to deal with similar situations, correct behaviour	13	13.7%
Assess the situation (identify trigger)	13	13.7%
Not enough info in the picture to make a decision	9	9.5%
Say 'no'/tell them off	6	6.3%
Monitor	2	2.1%
Ask owner to control their dog	1	1.1%
If smiling, play	1	1.1%

Of the people that chose 'other' (6.2%), 55.8% responded that they would either remove the dog from the situation or they would remove the stimulus. Other significant (>10%) answers included trying to calm the dog (29.5%), give the dog space (18.9%), correcting the dog's behaviour (13.7%), and assessing the situation to identify the trigger (13.7%).

Q28c: If a dog that you did not know behaved in this way, what would you do?



Asked what they would do if a dog that they did not know behaved in this way, the majority of respondents (77.4%) said they would 'leave them alone or ignore them.'

Q28c.i: If you selected Other, please specify

Give space/leave alone	27	61.4%
Ask/find owner to advise	6	13.6%
Ask/leave owner to control their dog	4	9.1%
Distract/diffuse	3	6.8%
Assess/monitor	3	6.8%
Reassure	2	4.5%
Laugh	1	2.3%

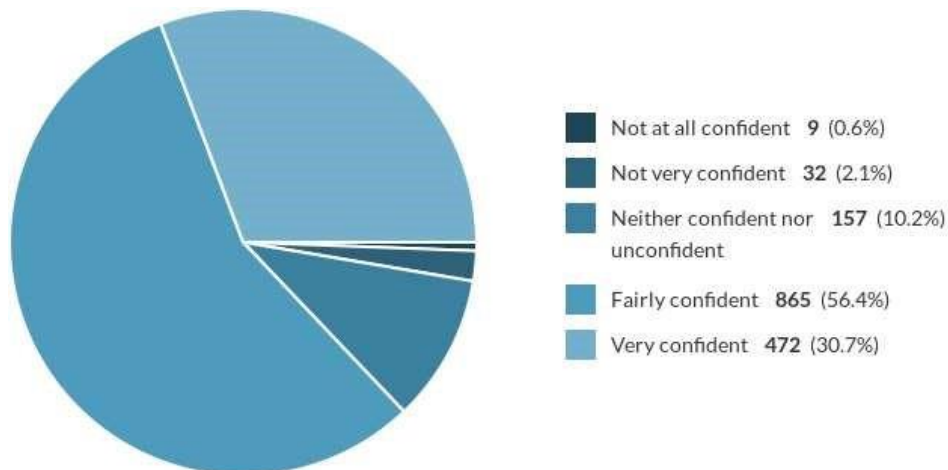
Of the very few (2.9%) respondents who selected 'other,' two thirds (61.4%) said they would leave them alone by giving them space.

Q29: Select up to 3 adjectives that best describe the emotions of the dog in this picture:



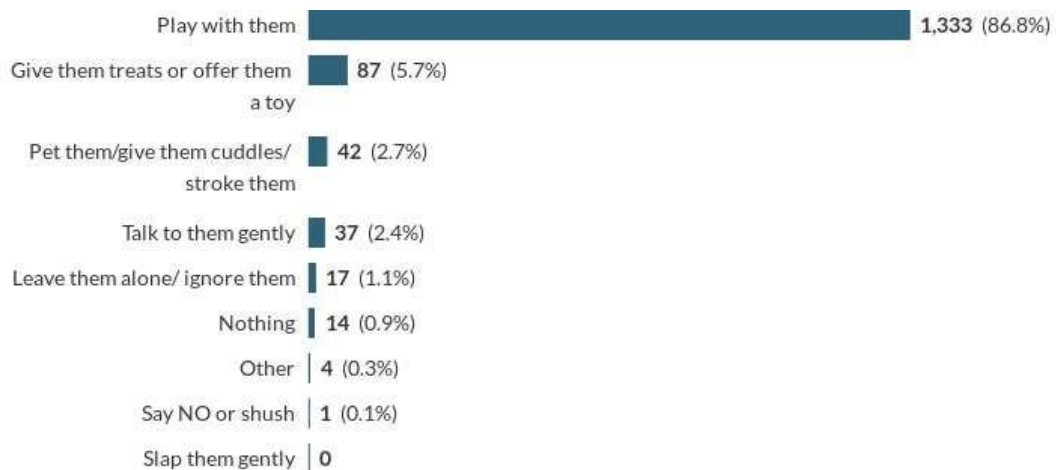
There was much more agreement with Q29 than with previous questions. The vast majority (96.5%) of respondents perceived the emotions exhibited by the dog in this picture as 'playful.' Fewer respondents said the dog was 'happy' (66.8%) and 'excited' (54.9%). All the significant (>10%) answers related to positive emotions, whereas answers relating to negative emotions were chosen by less than 1% of respondents.

Q29a: How confident are you in your answers?



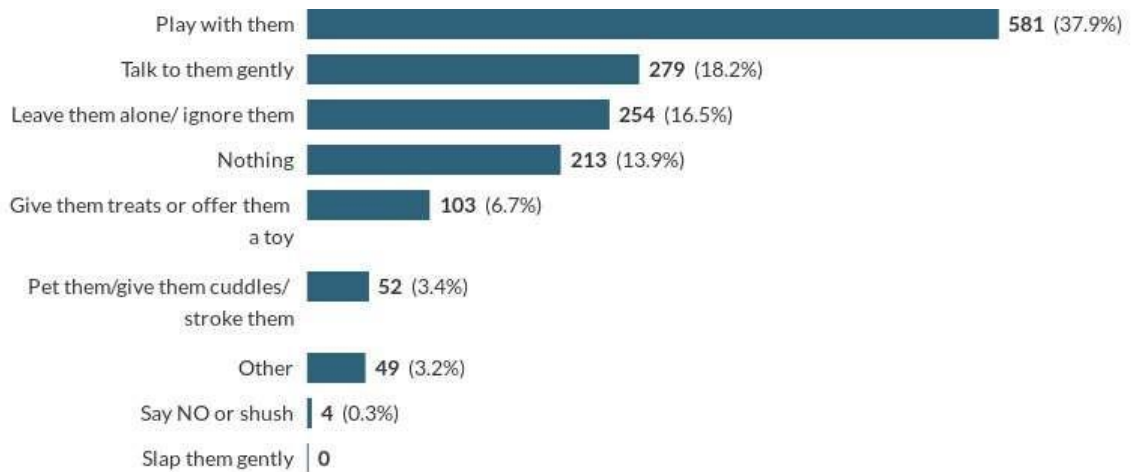
A sizable majority (87.1%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 2.7% who were either not very or not at all confident.

Q29b: If a dog that you know behaved in this way, what would you do?



Asked what they would do if a dog that they know behaved in this way the majority of respondents said they would 'play with them' (86.8%). Only 4 respondents selected Other, all of which indicated that they needed more context.

Q29c: If a dog that you did not know behaved in this way, what would you do?



Asked what they would do if a dog that they did not know behaved in this way respondents were less in sync. The most popular response was to 'play with them' (37.9%). The other significant (>10%) results were: 'talk to them gently' (32.7%), 'leave them alone or ignore them' (16.5%) or do 'nothing' (13.9%).

Q29c.i: If you selected Other, please specify:

Positive interaction (play, treat, fuss) with permission of owner	40	81.6%
If friendly, play (no owner involvement)	4	8.2%
Talk gently	3	6.1%
Not enough info in the picture to make a decision	2	4.1%
Monitor	2	4.1%
Let them approach	2	4.1%
Leave them alone	1	2%

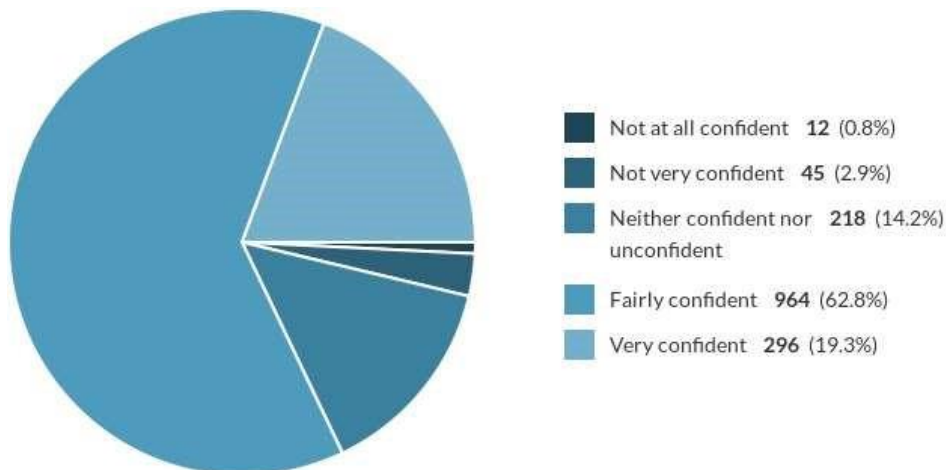
Of the people that selected 'other' (3.2%), 81.6% said that they would interact positively (i.e. play, treat, fuss) after seeking permission from the owner.

Q30: Select up to 3 adjectives that best describe the emotions of the dog in this picture:



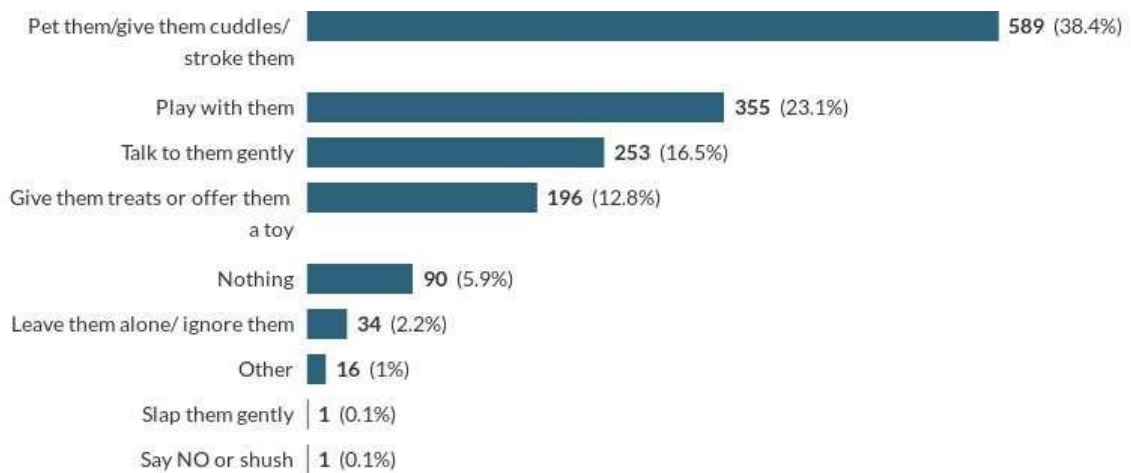
The majority (66.8%) agreed that the adjective that best describes the emotions of the dog in was 'happy.' There was a range of other significant (>10%) choices, including 'relaxed' (33.9%), 'content' (32.2%), 'comfortable' (31.1%), 'carefree' (27.7%), 'calm' (26.2%), 'excited' (18.7%) and 'playful' (18.2%). This indicates a wide variety of responses, but all of them positive emotions.

Q30a: How confident are you in your answers?



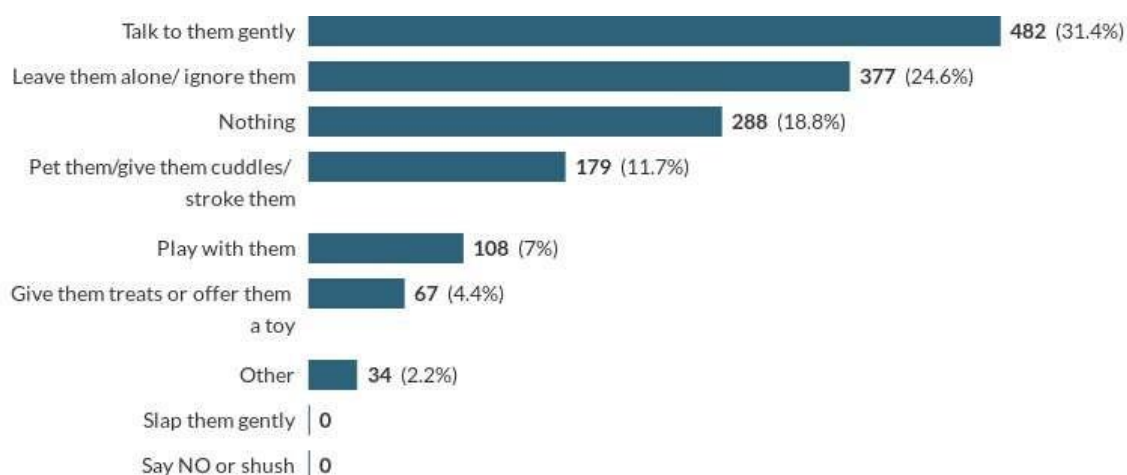
As with all the images so far, the majority (82.1%) of respondents said that they were either fairly confident or very confident in their answers, compared with only 3.7% who were either not very or not at all confident.

Q30b: If a dog that you know behaved in this way, what would you do?



Asked what they would do if a dog that they know behaved in this way the significant (>10%) results were: 'pet them/give them cuddles/stroke them' (38.4%), 'play with them' (23.1%), 'talk to them gently' (16.5%) or 'give them treats or offer them a toy' (12.8%). Only 1% of respondents selected 'other.'

Q30c: If a dog that you did not know behaved in this way, what would you do?



Asked what they would do if a dog that they did not know behaved in this way, the significant (>10%) results were: 'talk to them gently' (31.4%) 'leave them alone/ignore them' (24.6%), do 'nothing' (23.1%), or 'pet them/give them cuddles/stroke them' (11.7%).

Q30c.i: If you selected Other, please specify:

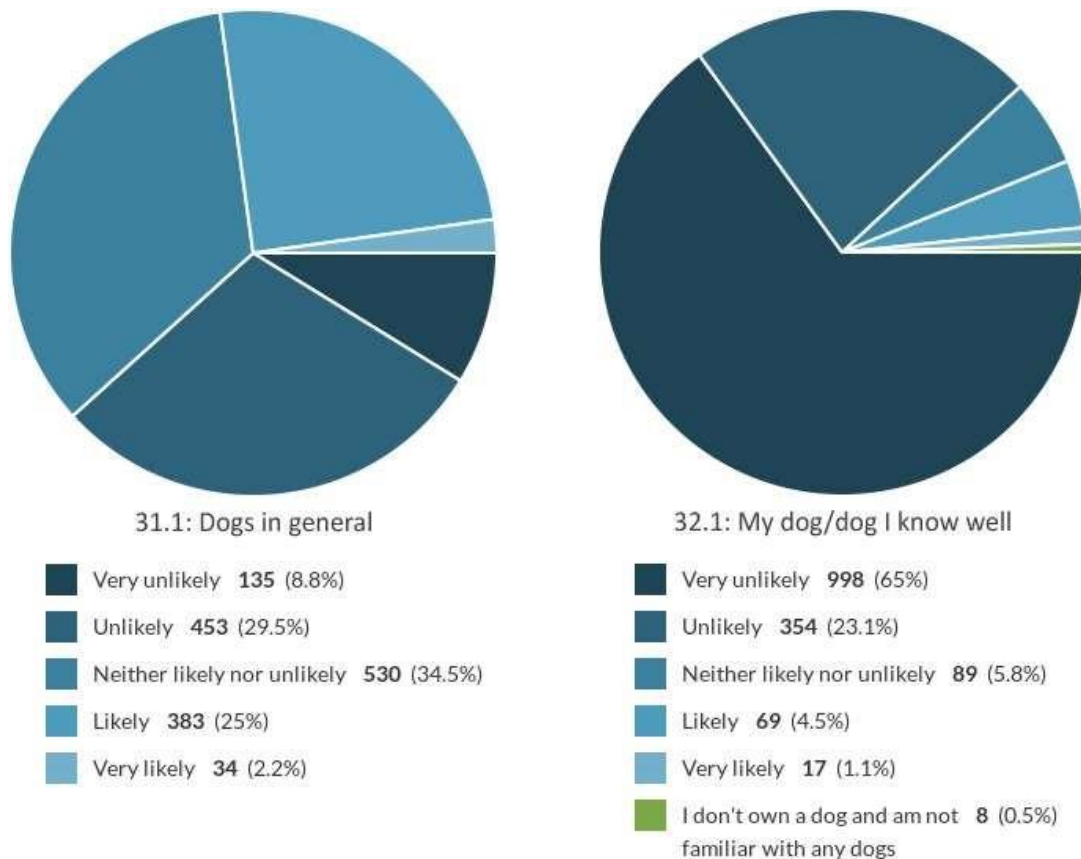
Ask owner and if allowed play	21	65.6%
Speak to/find owner	4	12.5%
Do nothing	2	6.3%
Acknowledge from a distance	2	6.3%
Encourage	1	3.1%
Monitor	1	3.1%
Play, if they approached and was friendly	1	3.1%

Of those (2.2%) that selected other, nearly two thirds (65.6%) said that they would play with the dog after seeking permission/advice from the owner.

Dog risk awareness

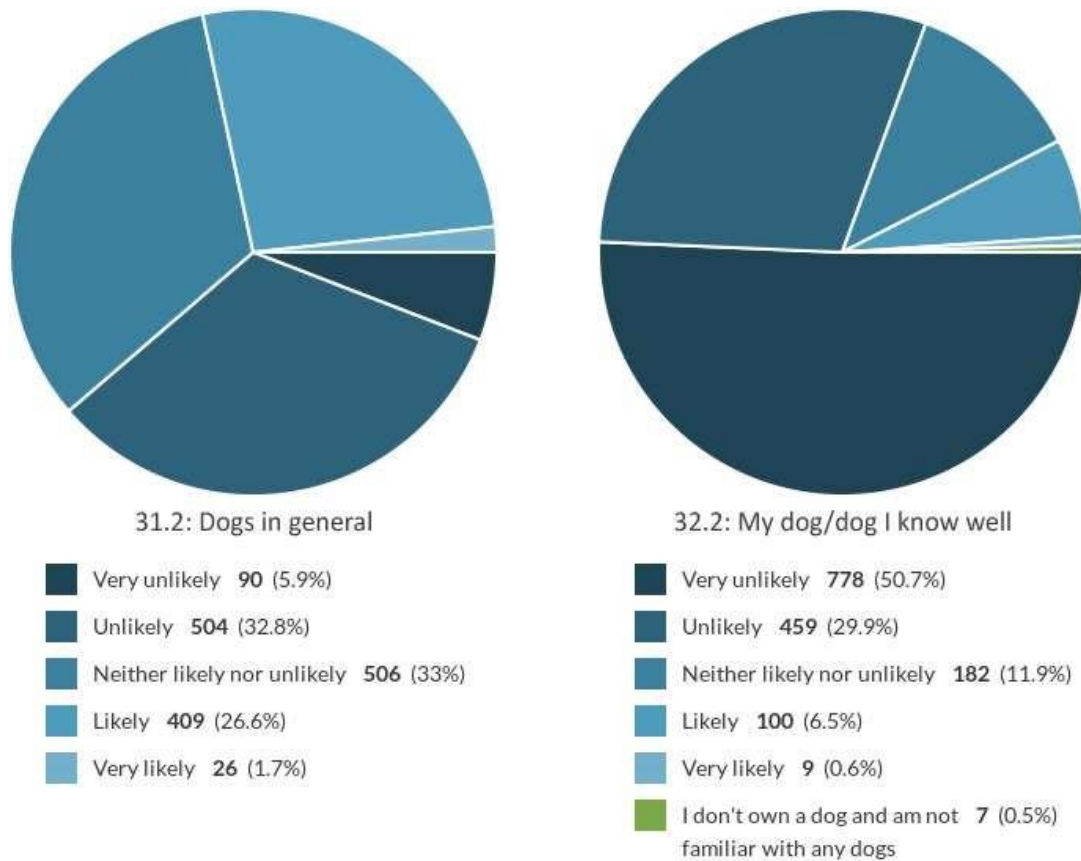
In order to gauge the respondents' awareness of situations that may increase the risk of dog behaving dangerously, respondents were asked to consider how likely dogs are to injure a person in a number of different contexts. Respondents were first asked to think about dogs in general (Q31) and then to think about their own dog or a dog with which they were very familiar (Q32).

Q31.1/Q32.1: How likely is a dog to injure someone when opening the door for a parcel delivery?



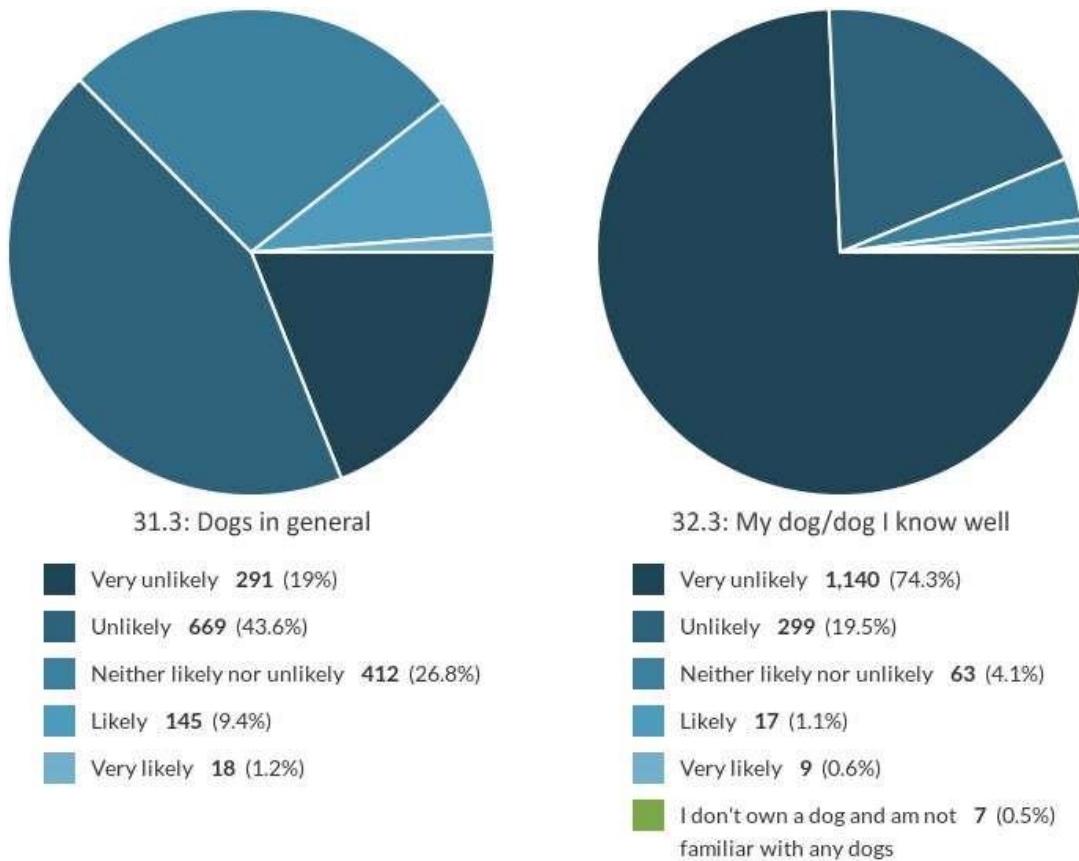
The first question asked respondents to rate the likelihood that a dog will injure someone when opening the door for a parcel delivery. In this scenario, just over a third (38.3%) of respondents said that dogs in general are either unlikely or very unlikely to injure someone, and less than a third of respondents (27.2%) thought that dogs in general are likely or very likely to injure someone. By comparison, the majority of respondents (88.1%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (5.6%) stated that it is either likely or very likely.

Q31.2/Q32.2: How likely is a dog to injure someone when playing with rugger/pull toy?



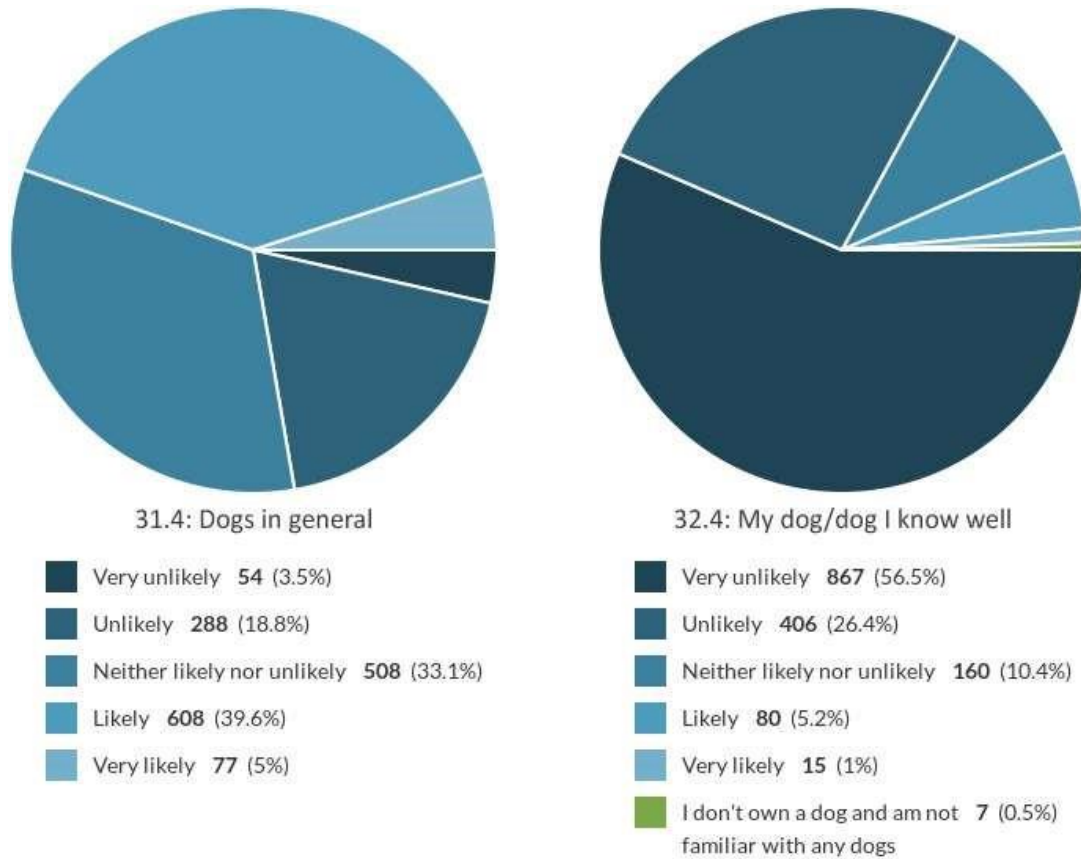
The second question asked respondents to rate the likelihood that a dog will injure someone when playing with rugger/pull toy. In this scenario, just over a third (38.7%) of respondents said that dogs in general are either unlikely or very unlikely to injure someone, and less than a third of respondents (28.3%) thought that dogs in general are likely or very likely to injure someone. By comparison, the majority of respondents (80.6%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (7.1%) stated that it is either likely or very likely.

Q31.3/Q32.3: How likely is a dog to injure someone when feeding a regular meal?



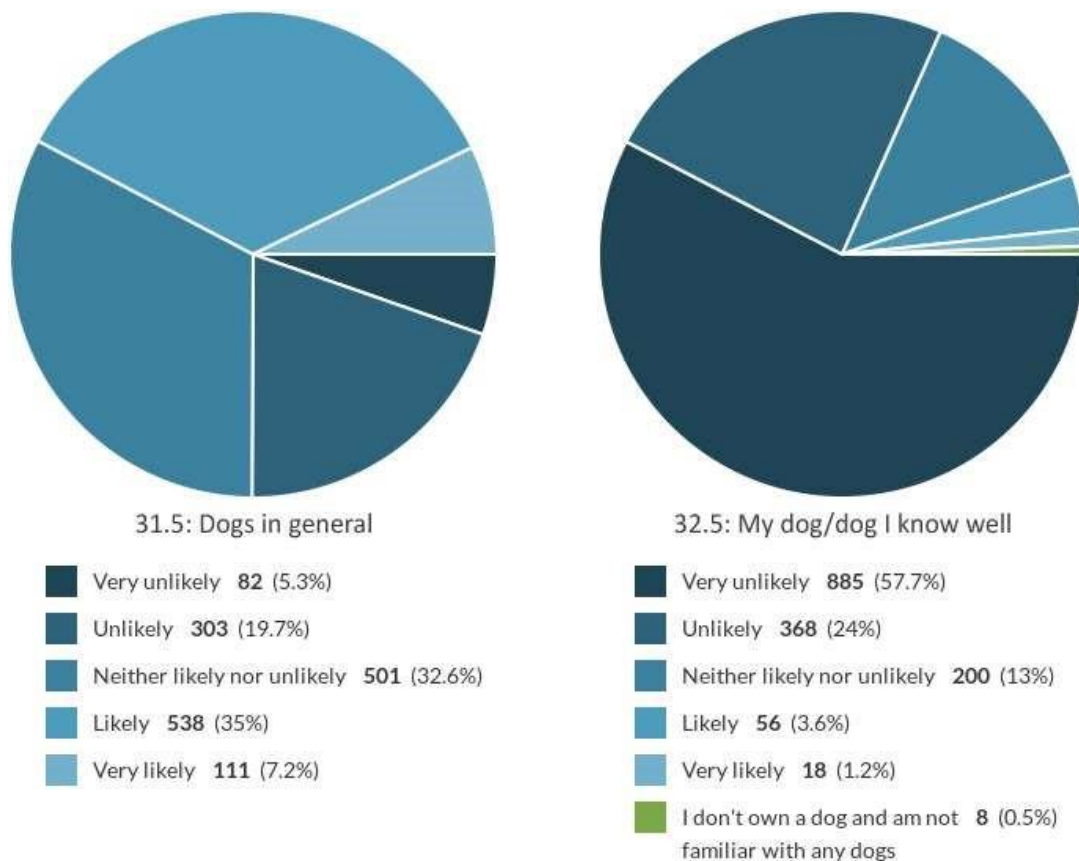
Q31.3 and Q32.3 asked about the likelihood of a dog injuring someone when feeding a regular meal. In this scenario, almost two thirds (62.6%) of respondents said that dogs in general are either unlikely or very unlikely to injure someone, compared with (10.6%) who thought that dogs in general are likely or very likely to injure someone. By comparison, the vast majority of respondents (93.8%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (1.1%) stated that it is either likely or very likely.

Q31.4/Q32.4: How likely is a dog to injure someone when confiscating something a dog shouldn't have?



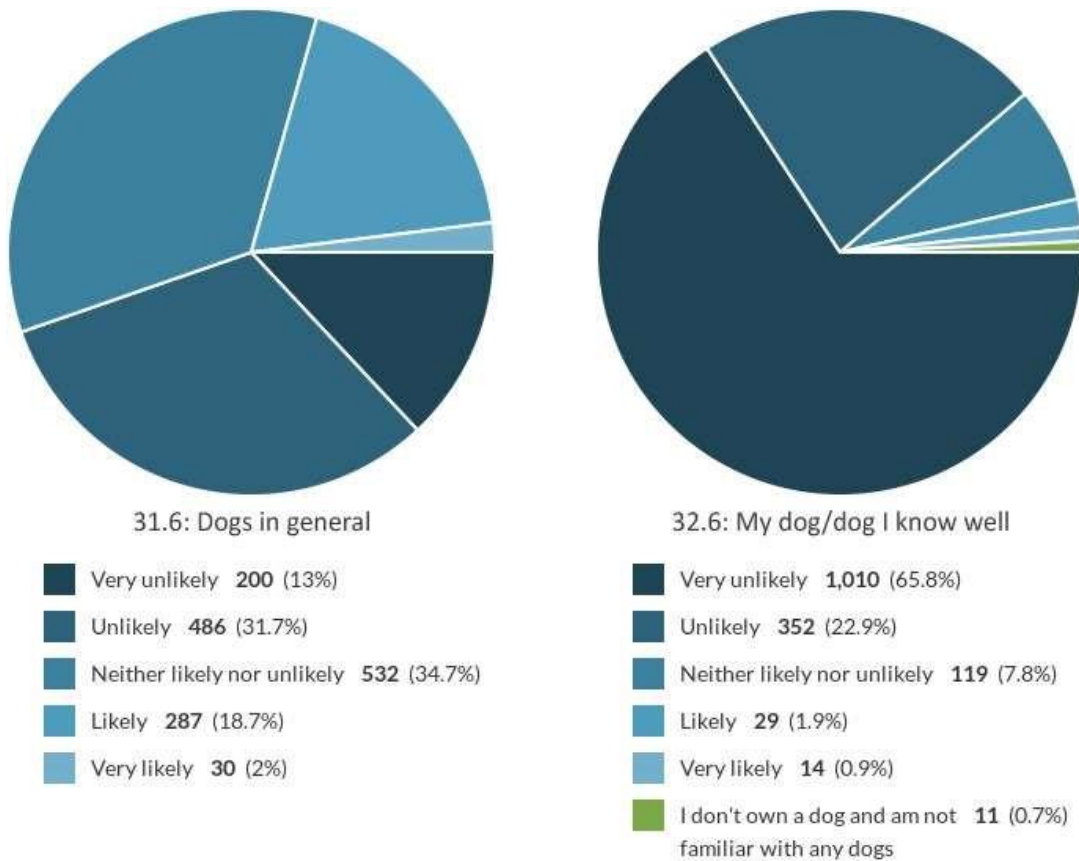
When asked to rate the likelihood that a dog will injure someone when confiscating something it shouldn't have, less than a quarter of respondents (22.3%) said that dogs in general are either unlikely or very unlikely to injure someone, and less than half of respondents (44.6%) thought that dogs in general are likely or very likely to injure someone. By comparison, the majority of respondents (82.9%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (6.2%) stated that it is either likely or very likely.

Q31.5/Q32.5: How likely is a dog to injure someone when punishing a dog by shouting at him/her?



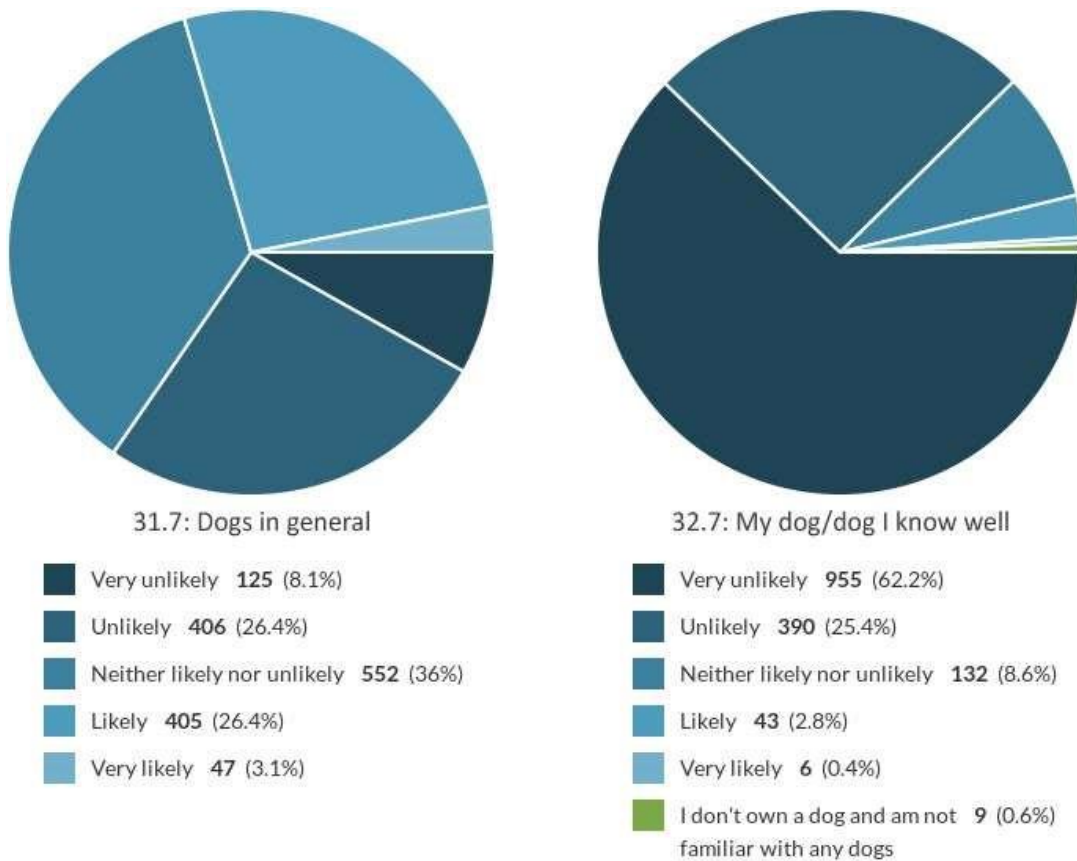
The next question asked respondents to rate the likelihood that a dog will injure someone when punishing a dog by shouting at him/her. A quarter of respondents (25%) said that dogs in general are either unlikely or very unlikely to injure someone, and less than half of respondents (42.2%) thought that dogs in general are likely or very likely to injure someone. By comparison, the majority of respondents (81.7%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (4.8%) stated that it is either likely or very likely.

Q31.6/Q32.6: How likely is a dog to injure someone when lying next to a sleeping dog?



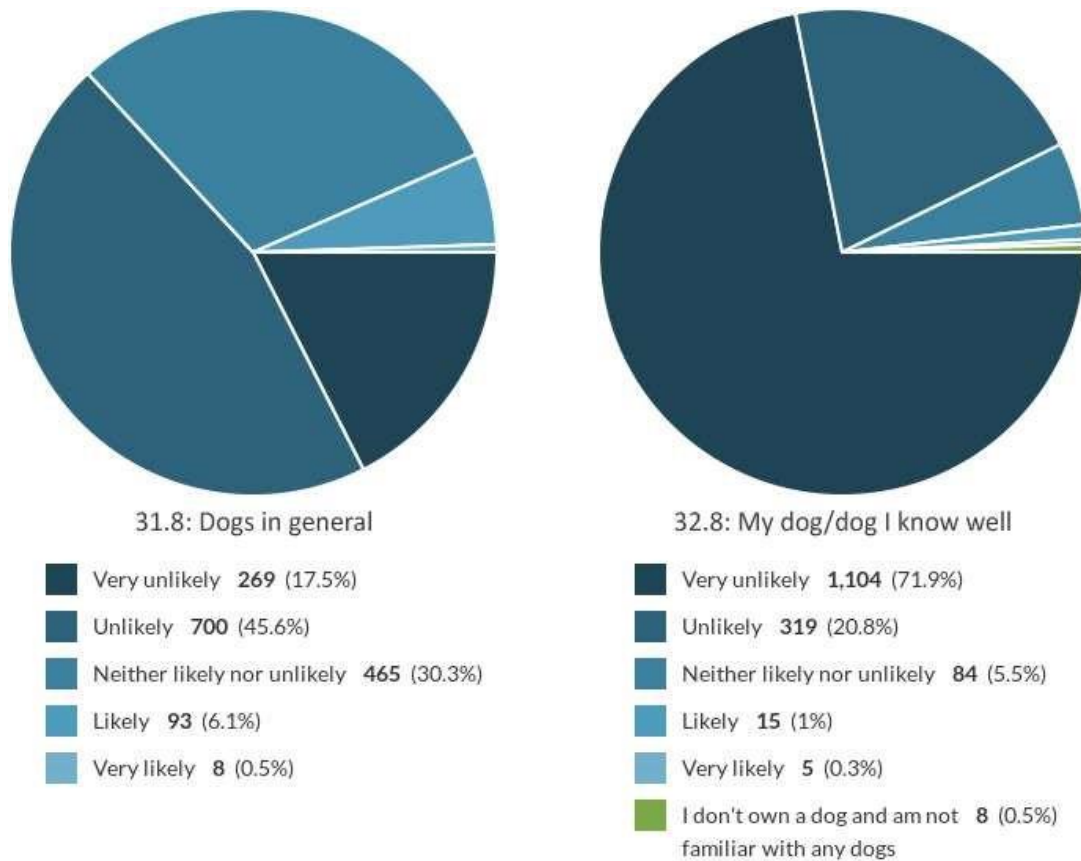
When asked to rate the likelihood that a dog will injure someone when they are lying next to a sleeping dog, 44.7% said that dogs in general are either unlikely or very unlikely to injure someone, and less than half of respondents (20.7%) thought that dogs in general are likely or very likely to injure someone. By comparison, the majority of respondents (88.7%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (2.8%) stated that it is either likely or very likely.

Q31.7/Q32.7: How likely is a dog to injure someone when hugging or kissing a dog?



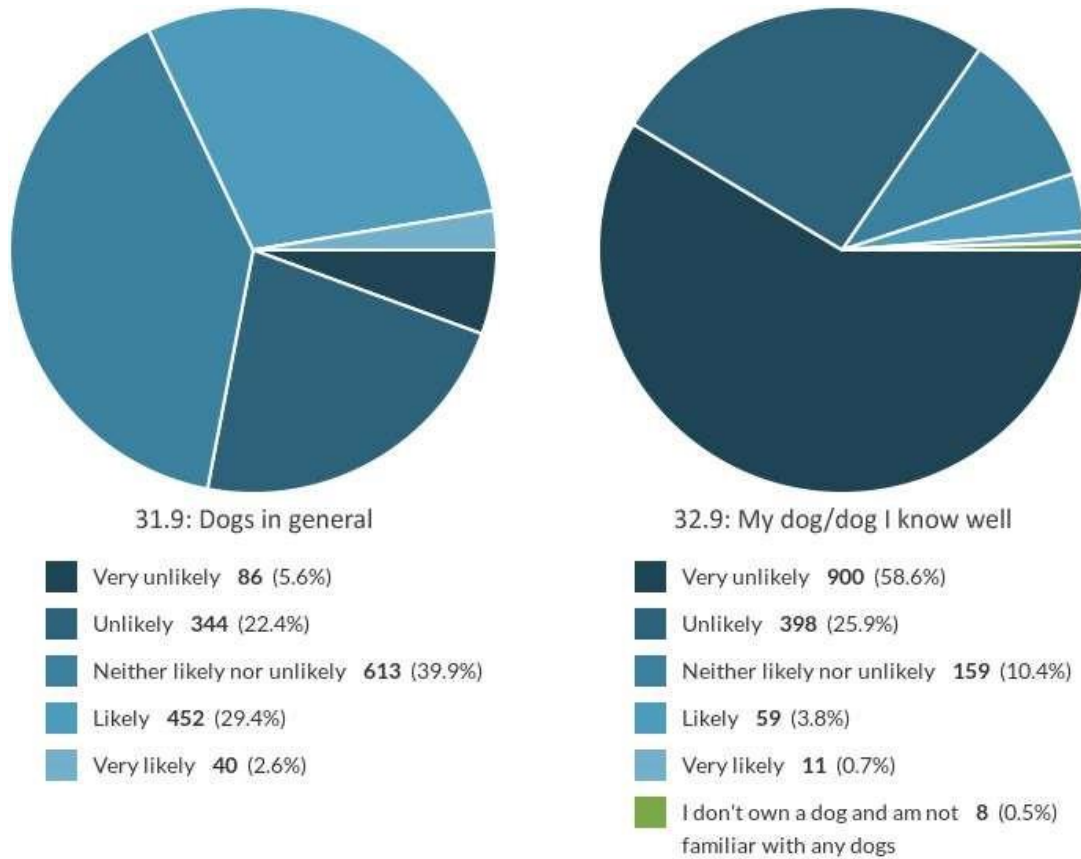
The next question asked respondents to rate the likelihood that a dog will injure someone when hugging or kissing a dog. Respondents were fairly evenly split when it came to dogs in general with 34.5% of respondents stating that they are unlikely or very unlikely to injure someone in this scenario and 29.5% suggesting it was likely or very likely. By comparison, the majority of respondents (87.6%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (3.2%) stated that it is either likely or very likely.

Q31.8/Q32.8: How likely is a dog to injure someone when sitting next to a dog on the sofa?



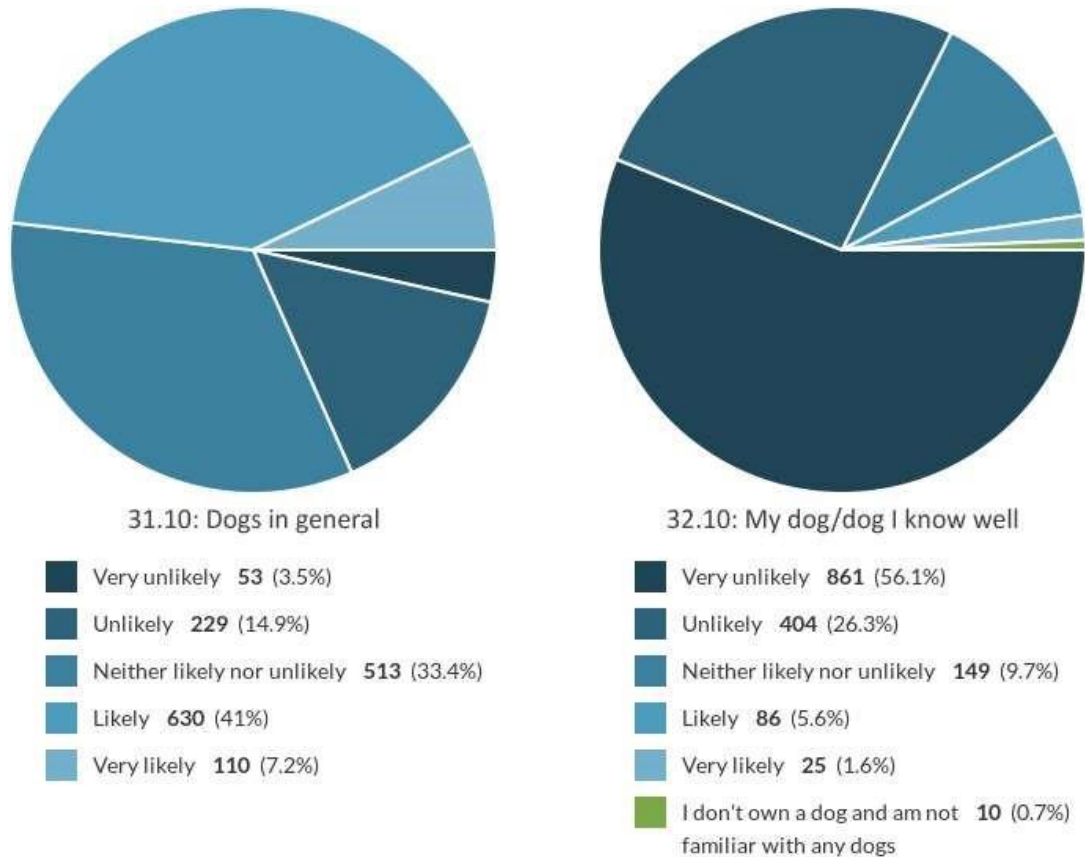
When asked to rate the likelihood that a dog will injure someone when sitting next to a dog on the sofa, 63.1% of respondents said that they think dogs in general are either unlikely or very unlikely to injure someone in this scenario, compared with 6.6% that thought it was likely or very likely. The vast majority of respondents (92.7%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (1.3%) stated that it is either likely or very likely.

Q31.9/32.9: How likely is a dog to injure someone when pushing a dog off when they jump up on a person/ furniture?



The next question asked respondents to rate the likelihood that a dog will injure someone when they jump up on a person/ furniture. Respondents were fairly evenly split again when it came to dogs in general with 28% suggesting it was unlikely or very unlikely and 32.5% of respondents stating that they are likely or very likely to injure someone in this scenario. Once again, the majority of respondents (84.5%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, and a minority (4.5%) stated that it is either likely or very likely.

Q31.10/32.10: How likely is a dog to injure someone when walking towards a dog that's chewing on their treat?

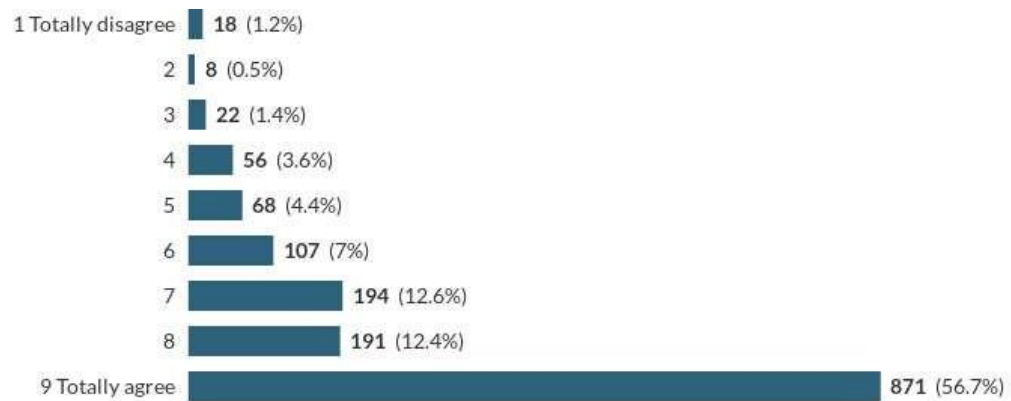


When asked to rate the likelihood that a dog will injure someone when walking towards a dog that's chewing on their treat, 18.4% that thought it was unlikely or very unlikely, compared with 48.2% of respondents said that they think dogs in general are either likely or very likely to injure someone in this scenario. Once again, the majority of respondents (81.4%) said that their own dog or a dog that they know well is unlikely or very unlikely to injure someone in this scenario, with a minority (7.2%) stating that it is either likely or very likely.

Risk aversion

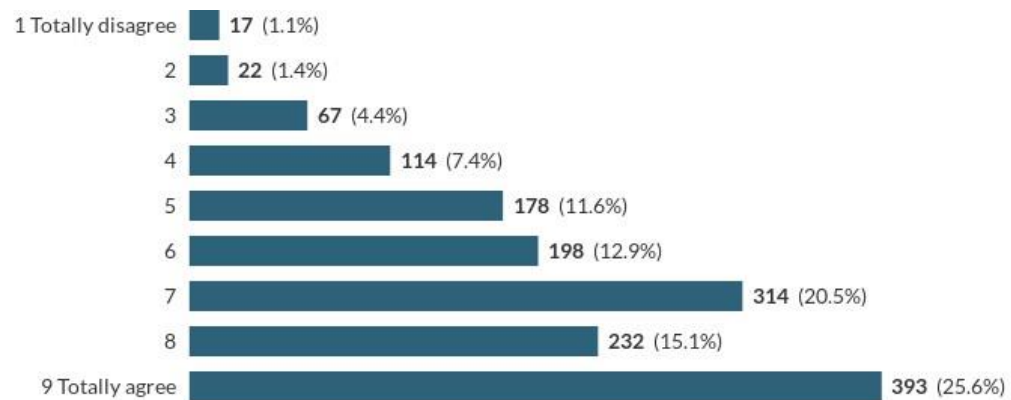
Respondents were asked to complete a short general Risk Propensity Scale (RPS), taken from Meertens and Lion (2008), in order to measure individuals' general risk-taking tendency. While Meertens and Lion's (2008) study did not specifically address the predictive validity of the RPS, they found that those who score differently on the RPS also behave differently when it comes to risk related behaviour. This supplemental information helps to further establish the individual risk-taking tendencies of our sample, which gives nuance to our findings.

Q33.1: Safety comes first



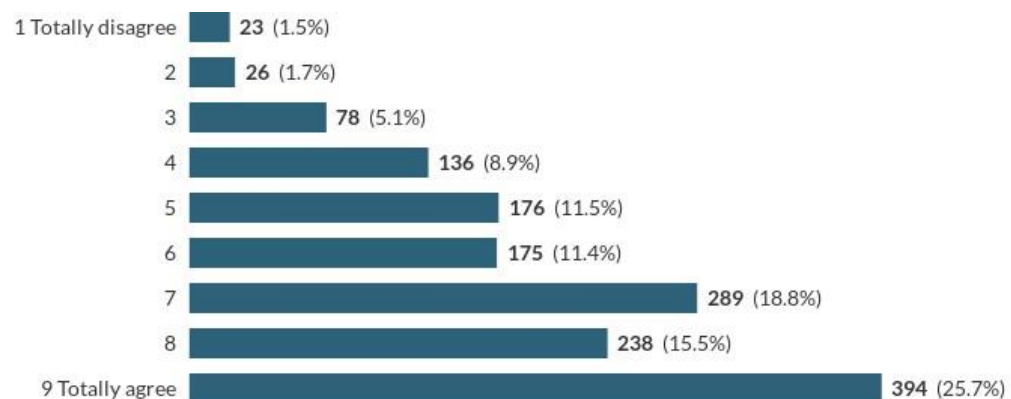
The respondents were asked to indicate the extent to which they agreed or disagreed with a number of statements. Asked whether 'safety comes first,' a majority (56.7%) said they totally agreed. Only 1.2% of respondents said that they totally disagreed with the statement.

Q33.2: I do not take risks with my health



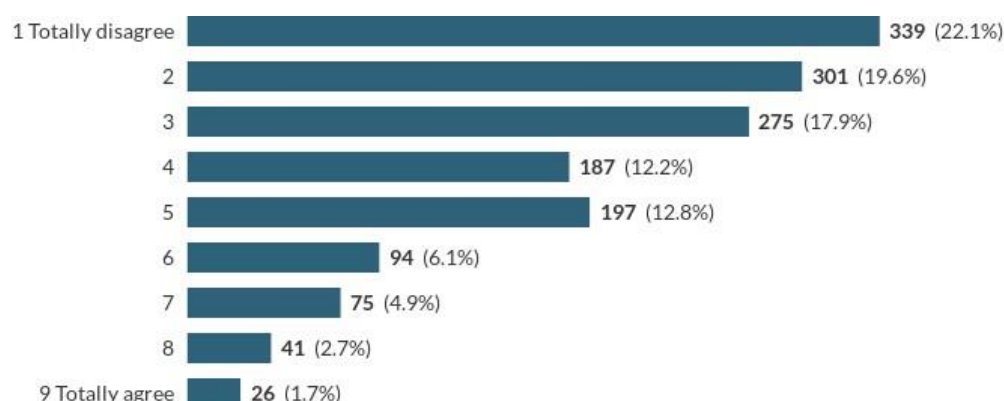
When asked to rate the statement 'I do not take risks with my health,' most respondents were inclined to agree, with 25.6% saying that they totally agree.

Q33.3: I prefer to avoid risks



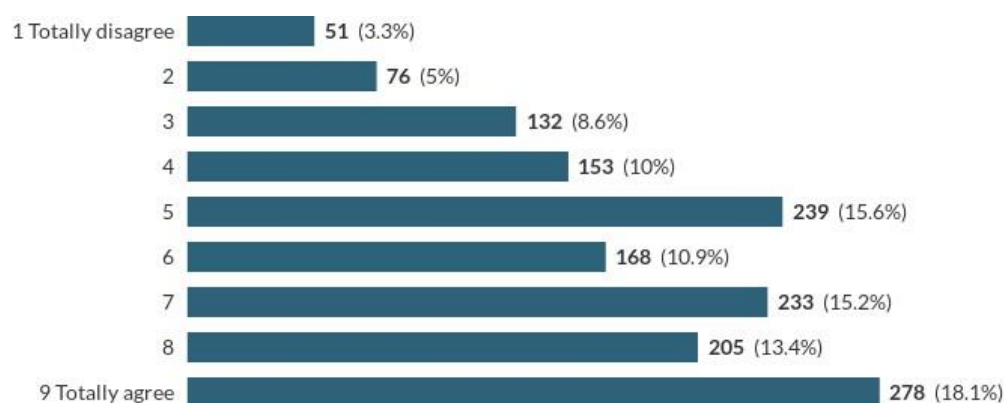
Respondents were generally more likely to agree with the statement 'I prefer to avoid risks.' Again, around a quarter (25.7%) said that they totally agree with the statement.

Q33.4: I take risks regularly



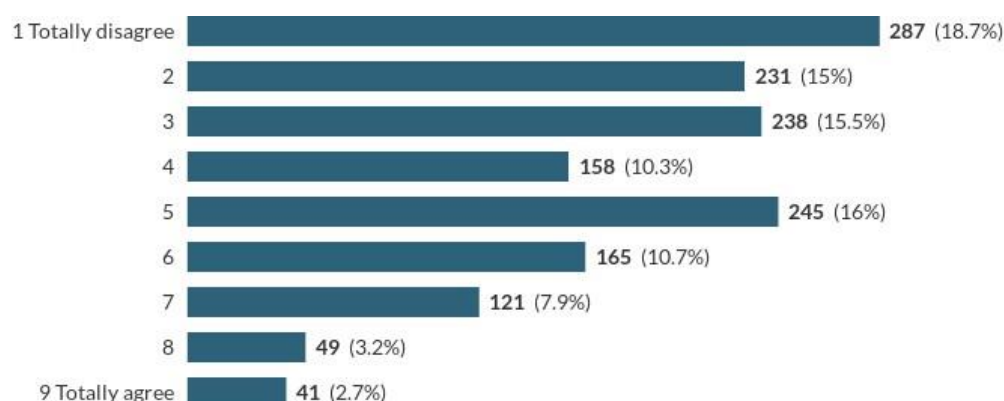
Respondents in general disagreed with the statement 'I take risks regularly,' with 22.1% totally disagreeing with the statement.

Q33.5: I really dislike not knowing what is going to happen



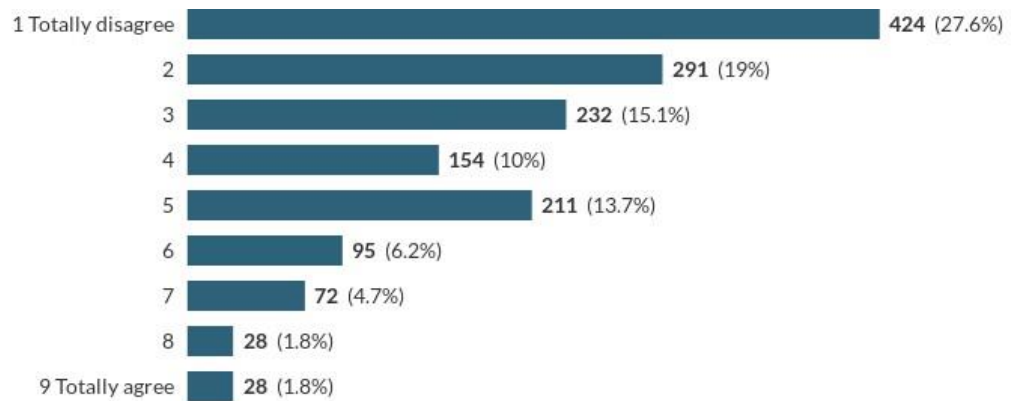
There was less clarity with regards to the statement 'I really dislike not knowing what is going to happen' but in general respondents were more inclined to agree.

Q33.6: I usually view risks as a challenge



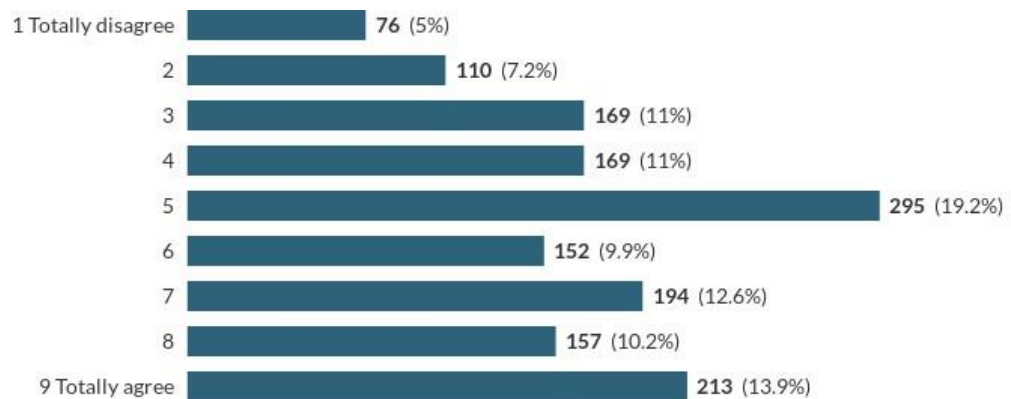
There was a similar variation in response to the statement 'I usually view risks as a challenge' but in general respondents were more inclined to disagree.

Q33.7: I view myself as a risk taker



The respondents were more likely to disagree with the statement 'I view myself as a risk taker,' with 27.6% saying that they totally disagree with the statement.

Q33.8: I view myself as risk averse



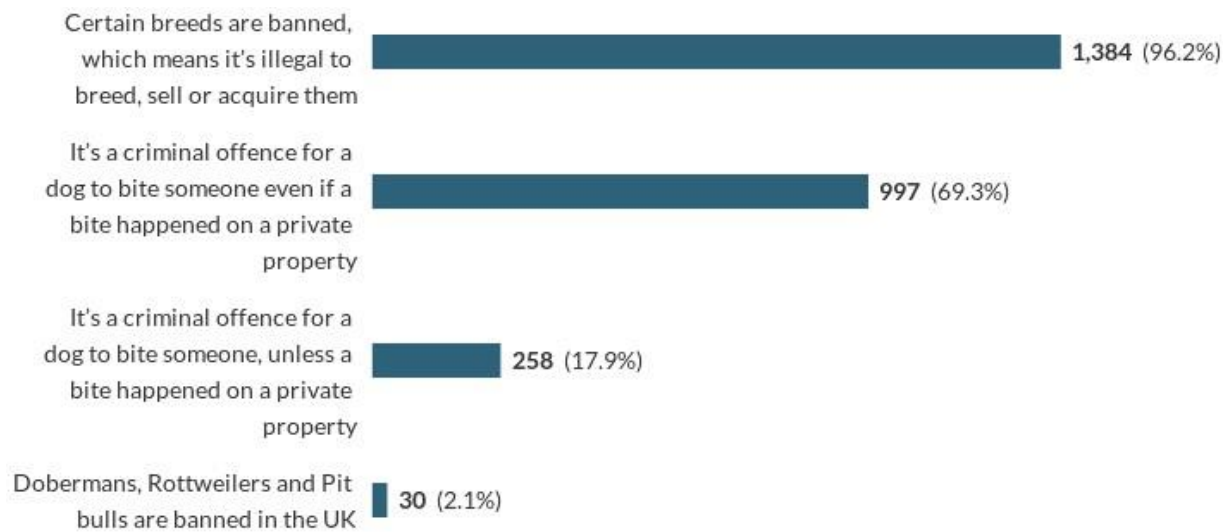
The statement 'I view myself as risk averse' had the most varied response from respondents, though overall more agreed than disagreed. Overall, Q33.1 to Q33.8 revealed that the respondents were generally risk averse.

For Q34 we asked the respondents if there was anything else that they would like to add with regards to the survey questions as a whole. The majority of people answered 'no' to this question or chose not to answer it at all. Of those who answered Q34, 222 (30.9%) made clear that they think a dog's behaviour is determined by the owner's behaviour rather than a dog's breed. Phrases such as 'deed not breed' and 'there are no bad dogs, only bad owners' were found throughout these responses.

Q35 gave the respondents the chance to opt out of the remaining questions. Out of the 1,535 respondents included in the previous questions, 1,438 (93.6%) decided to continue with the survey. From Q36 onwards the figures will reflect this slight reduction in the total number of answers given.

Awareness and understanding of current UK law

Q36: Please select all correct answers. According to current UK law:



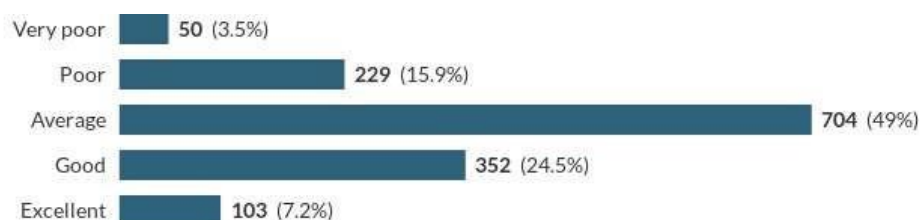
In order to gauge awareness and understanding of the Dangerous Dogs Act 1991, respondents were asked to select which of the four statements in Q36 were correct. The majority of respondents correctly identified which of the statements were true and which were false. The vast majority (96.2%) correctly identified the statement 'certain breeds are banned, which means it's illegal to breed, sell or acquire them' as being true. Over two-thirds (69.3%) of the respondents correctly identified the statement 'it's a criminal offence for a dog to bite someone even if a bite happened on a private property' as being true. Only 17.9% of those surveyed thought that the statement 'it's a criminal offence for a dog to bite someone, unless a bite happened on a private property' was true, meaning that 82.1% correctly identified the statement as false. An even smaller number (2.1%) thought that 'Dobermans, Rottweilers and Pit bulls are banned in the UK,' which means that the vast majority (97.9%) knew that this wasn't true. Overall, this suggests that the sample's awareness of key aspects of the Dangerous Dogs Act 1991 was good.

Q37.1: How do you rate the following statement: It should be illegal to own certain breeds of dog



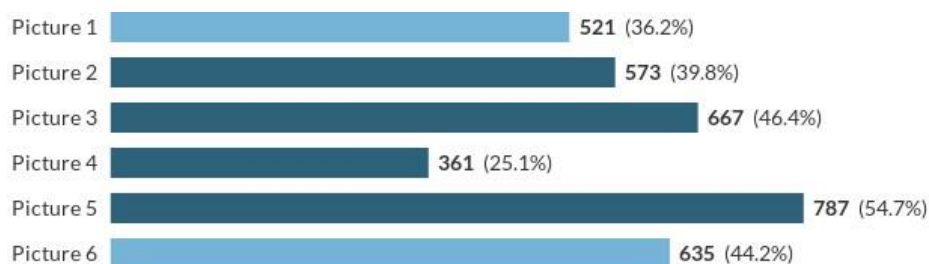
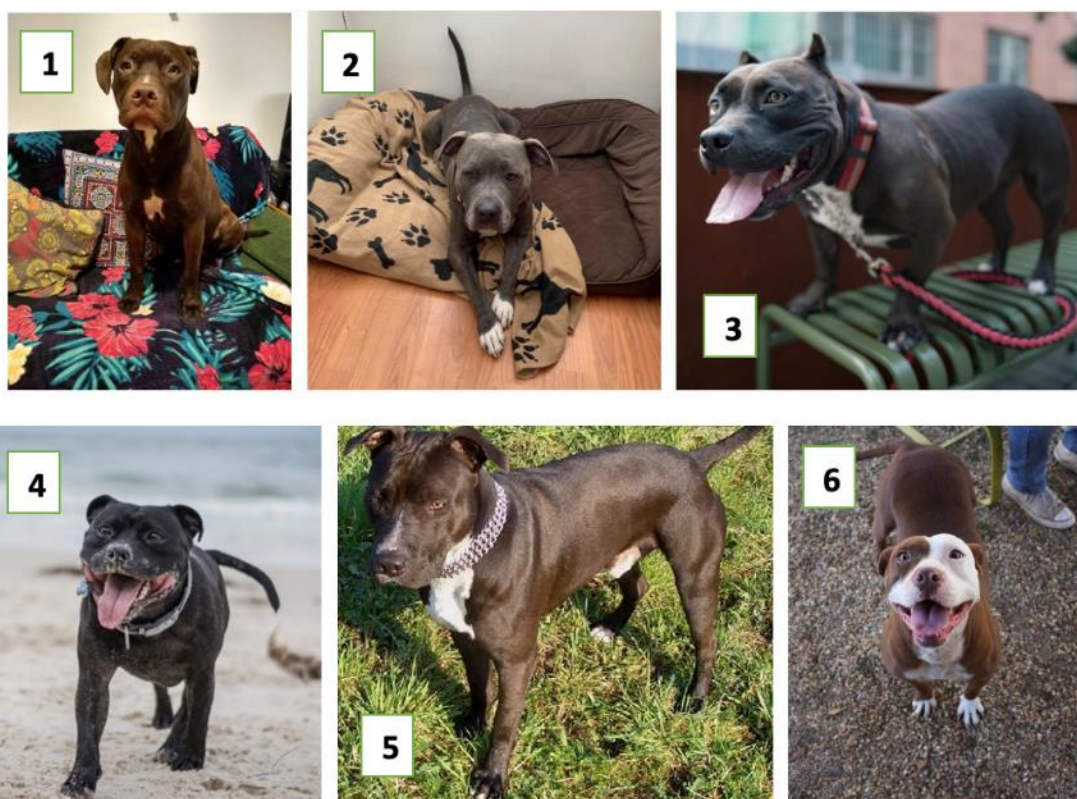
When asked to rate their opinion on breed specific legislation, the respondents gave fairly mixed answers. Less than half (45.8%) said that they either disagreed or disagreed strongly that it should be illegal to own certain breeds of dog. A third (33.5%) either agreed or strongly agreed, and 20.7% neither agreed nor disagreed.

Q38: How do you rate your ability to recognise a dangerous dog breed?



The remaining questions were designed to assess the respondents' ability to recognise dogs who fall under the Dangerous Dogs Act 1991. The first question gauged the respondents' self-perception of their ability to identify dog breeds. Nearly half (49%) rated their ability to recognise a dangerous dog breed as 'average,' with nearly a fifth (19.4%) rating their ability to recognise a dangerous dog breed as poor or very poor and the remaining 31.7% assessing their ability as good or very good.

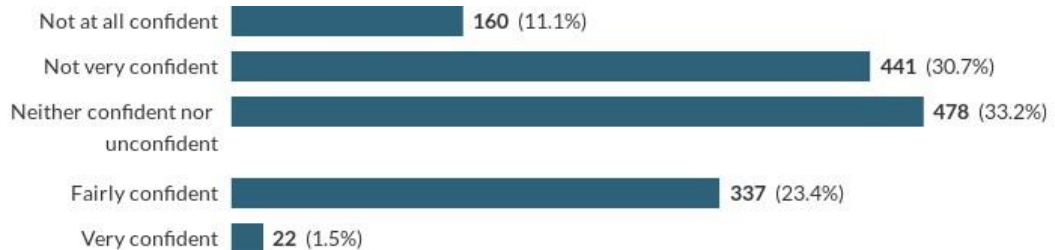
Q39: Which of these dogs is a Pit Bull Terrier? (Select all that apply)



Respondents were then asked to identify dangerous dog breeds from a selection of images, all of which had four decoy images (dark blue) and two images of the actual breed (light blue). Starting with Pit Bull

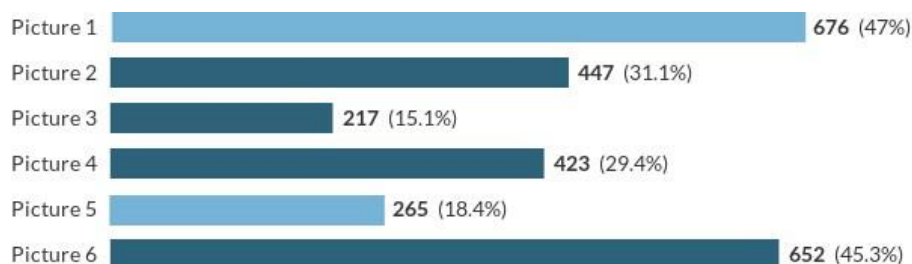
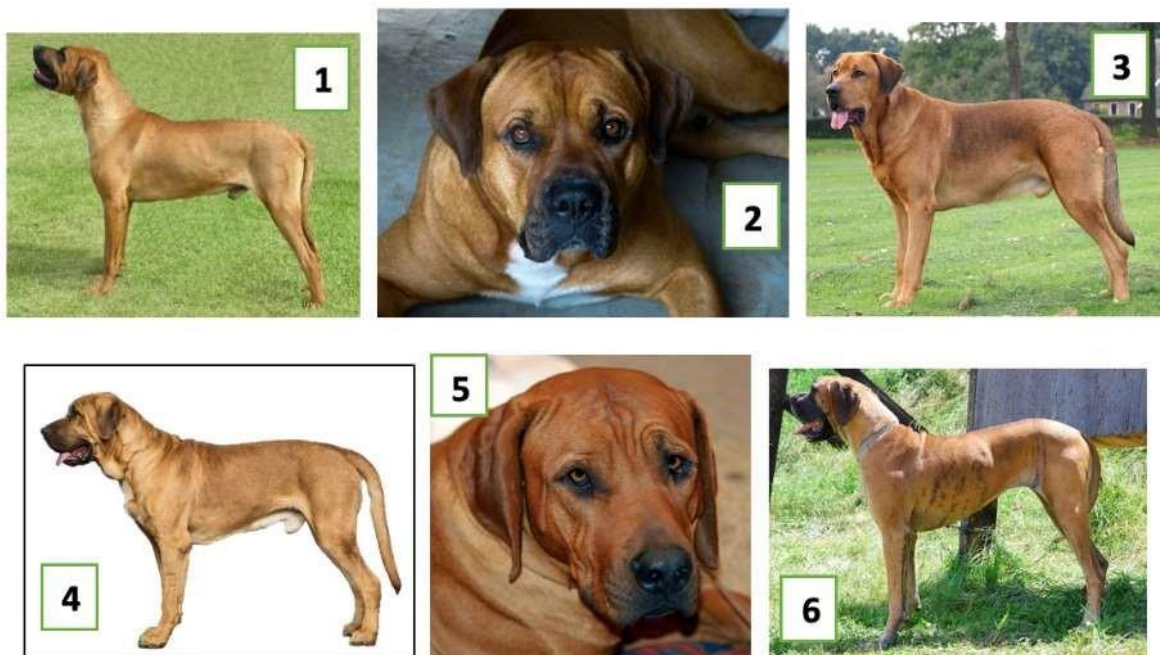
Terriers, respondents were asked to select all of the images of Pit Bulls. For Q39, 36.2% of respondents correctly identified picture 1 as a Pit Bull Terrier and 44.2% correctly identified picture 6 as a Pit Bull. However, respondents also incorrectly identified picture 2 (39.8%), picture 3 (46.4%), picture 4 (25.1%), and picture 5 (57.4%) as Pit Bulls.

Q39a: How confident are you in your answer?



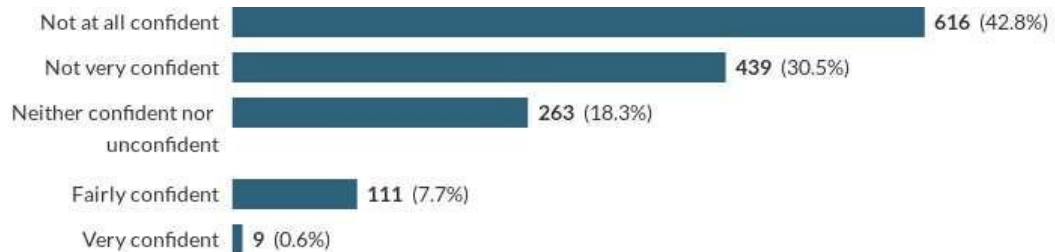
When asked how confident they were in their answers, 41.8% said they were either not very or not at all confident. Only a quarter (24.9%) said they were fairly or very confident and 33.2% said they were neither confident nor unconfident.

Q40: Which of these dogs is a Japanese Tosa? (Select all that apply)



Next, respondents were asked to select all of the images of Japanese Tosas from the selection in Q40. Around half (47%) of the respondents correctly identified picture 1 as a Japanese Tosa, but only 18.4% correctly identified picture 5. Almost half (45.3%) incorrectly thought picture 6 was a Japanese Tosa. Respondents also incorrectly identified picture 2 (31.1%), picture 3 (15.1%), and picture 4 (29.4%) as Japanese Tosas.

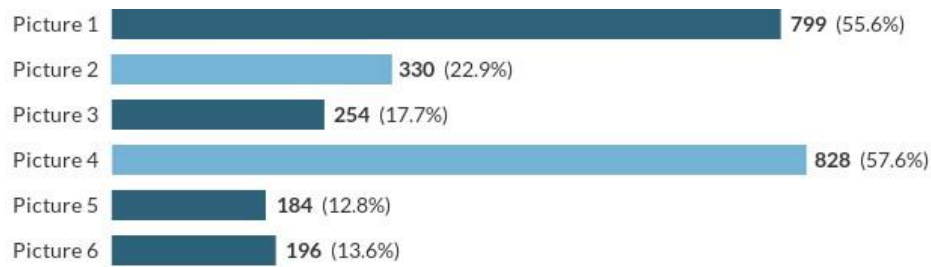
Q40a How confident are you in your answer?



When asked how confident they were in their answers, nearly three quarters (73.3%) of respondents said they were either not very or not at all confident, while only 8.3% said they were fairly or very confident. The remaining 33.2% said that they were neither confident nor unconfident.

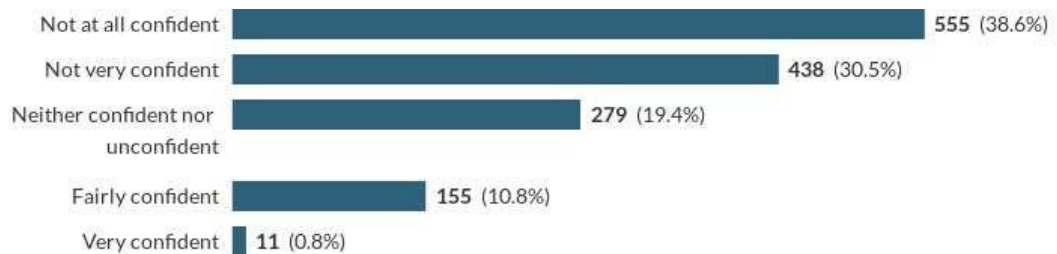
Q41: Which of these dogs is a Dogo Argentino? (Select all that apply)





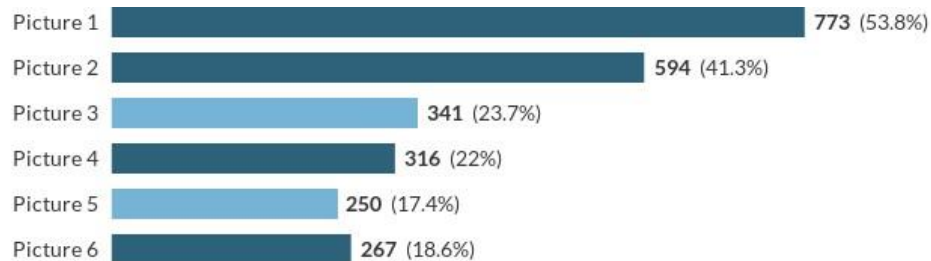
Respondents were then asked to select all of the images of Dogo Argentinos from the selection in Q41. More than half (57.6%) of the sample correctly identified picture 4 as a Dogo Argentino. The other Dogo in picture 2 was only correctly identified by 22.9% of respondents. Of the remaining decoy pictures, more than half (55.6%) incorrectly chose picture 1, 17.7% chose picture 3, 12.8% chose picture 5, and 13.6% chose picture 6.

Q41a: How confident are you in your answer?



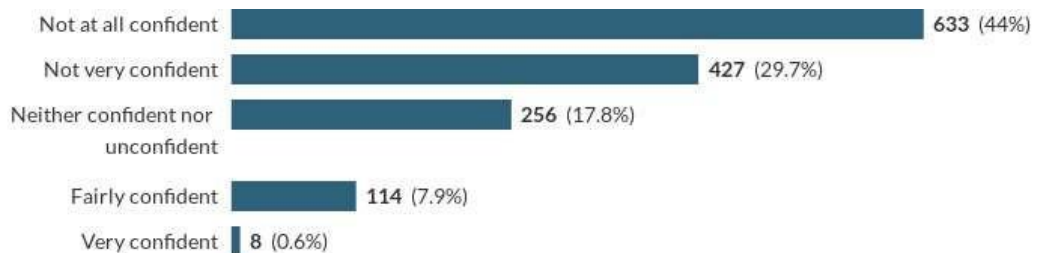
When asked how confident they were in their answers 69.1% said they were either not very or not at all confident, while only 11.6% said they were fairly or very confident and 19.4% said they were neither confident nor unconfident.

Q42: Which of these dogs is a Fila Brasileiro? (Select all that apply)



Finally, respondents were asked to identify Fila Brasileiros in the final image selection in Q42. Respondents were least successful in identifying images of Fila Brasileiros with only 23.7% correctly choosing picture 3 and only 17.4% of respondents correctly choosing picture 5. More than half (53.8%) of respondents incorrectly chose picture 1, 41.3% chose picture 2, 22% chose picture 4 and 18.6% chose picture 6.

Q42a: How confident are you in your answer?

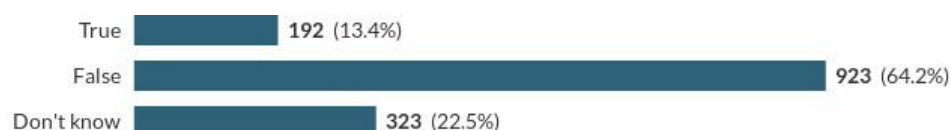


When asked how confident they were in their answers, nearly three quarters (73.7%) said that they were either not very confident or not at all confident. Only 8.5% said they were fairly or very confident and 17.8% said they were neither confident nor unconfident.

Situational Awareness

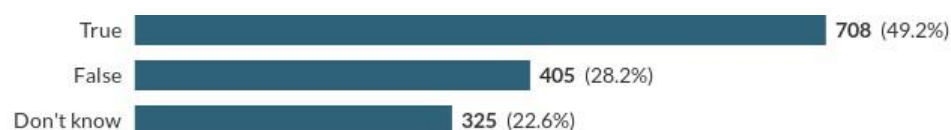
Respondents were asked a series of questions to further examine their situational awareness of dog related injury. Respondents were given a series of statements about dog bite risk and then asked if they thought the statements were true or false. In general, the majority of respondents chose the correct answer, indicating a fairly high level of situational awareness.

Q43.1: Most dog bites in the UK occur in public spaces such as parks or streets



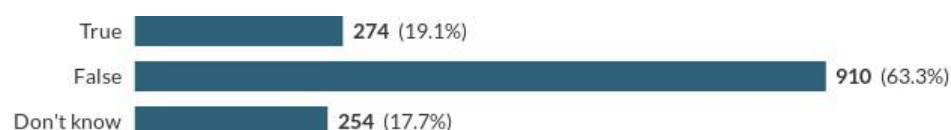
The majority (64.2%) of respondents correctly thought that the statement 'most dog bites in the UK occur in public spaces such as parks or streets' was false, with 13.4% thinking it was true and 22.5% being unsure.

Q43.2: Parents are almost always absent when a dog bites a small child



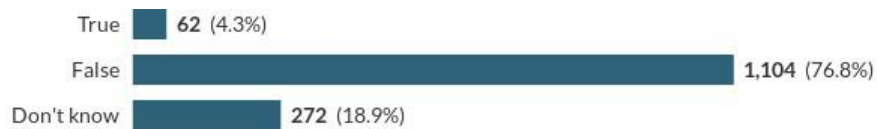
The above results suggest that respondents had a fairly low level of situational awareness when it came to dog risk. The larger part of the sample (49.2%) incorrectly thought that the statement 'parents are almost always absent when a dog bites a small child' was true, whereas only 28.2% correctly thought that it was false and 22.6% were unsure.

Q43.3: It's essential to punish a dog for a bite so it doesn't happen again



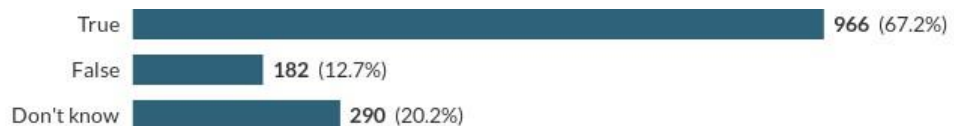
The majority (63.3%) of respondents correctly identified the statement 'it's essential to punish a dog for a bite so it doesn't happen again' as false, while 19.1% thought this was true and 17.7% were unsure.

Q43.4: Pit bulls are responsible for most dog-related injuries in the UK



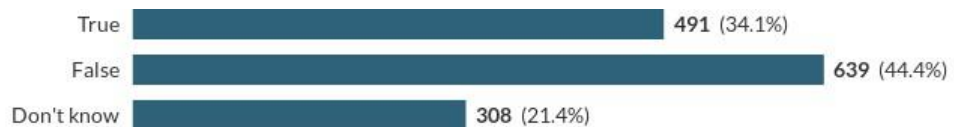
Another majority (76.8%) of the sample said that the statement 'Pit bulls are responsible for most dog-related injuries in the UK' was false, which is correct, while only a small minority (4.3%) thought that the statement was true and 18.9% were unsure.

Q43.5: Postal workers are bitten more often than any other occupation



The majority (67.2%) of respondents correctly identified the statement 'postal workers are bitten more often than any other occupation' as being true. 12.7% of respondents thought this statement was false and 20.2% were not sure.

Q43.6: Neutering (castration/ spay surgery) does not affect chances of dog being aggressive



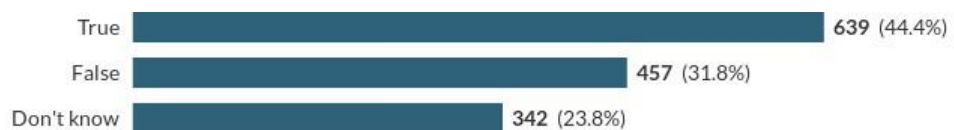
Nearly half (44.4%) of respondents thought that the statement 'neutering (castration/ spay surgery) does not affect chances of dog being aggressive' was false, while 34.1% correctly said that it was true and 21.4% said they didn't know.

Q43.7: Most people bitten in the UK know the dog who bit them



When presented with the statement 'most people bitten in the UK know the dog who bit them' the majority of the sample (78.2%) correctly said this was true, while 8.9% thought it was false, and 12.9% didn't know.

Q43.8: Dogs try to be gentle and avoid biting children



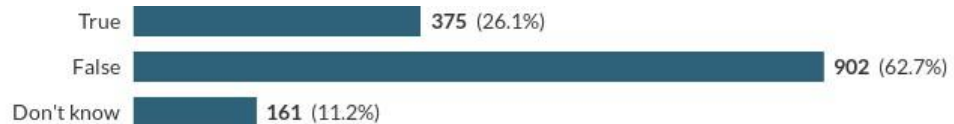
Less than half (44.4%) of respondents incorrectly thought that the statement 'dogs try to be gentle and avoid biting children' was true, while 31.8% correctly said that it was false, and 23.8% were not sure.

Q43.9: You can't be bitten when playing with a dog



The vast majority of respondents (94.4%) knew that the statement 'you can't be bitten when playing with a dog' is false, whereas 4.3% thought this was true, and only 1.3% were unsure.

Q43.10: When entering someone's property, it's my own responsibility to avoid being bitten



A majority (62.7%) of the respondents correctly identified the statement 'when entering someone's property, it's my own responsibility to avoid being bitten' as false, while 26.1% thought that the statement was true, and 11.2% were unsure.

Q43.11: Most dogs enjoy being hugged



A majority (79.6%) of respondents correctly thought that the statement 'most dogs enjoy being hugged' is false, with 9.9% thinking it was true, and 10.5% unsure.

Q43.12: A child is safe playing with a dog, as long as they're nice to them



Finally, when asked if the statement 'a child is safe playing with a dog, as long as they're nice to them' was true or false, the majority of the sample (86.3%) correctly identified this statement as false. Only 6.4% thought that it was true and 7.3% said that they didn't know.

Discussion

The results of this study suggest some effective ways of raising awareness and educating people about dangerous dogs and dog risk. Numerous scholars refer to the need to raise awareness of public health and risk as it pertains to dog behaviour (Rosado et al 2009; Westgarth and Watkins, 2015; Kahn et al, 2003). By identifying the ways that people engage with information about dangerous dogs and the extent to which they trust different information outlets, the findings in this study outline a strategic approach for communicating information about dog behaviour and dog risk.

An important finding from this study is that almost two-thirds of respondents think that there needs to be more public information about the risk posed by dangerous dogs. The question, then, is in what form should this information be distributed? Our study found that television programmes were the most popular and the most trusted source of information about dog behaviour and dog risk. As the results from Q22.6 show, the respondents expressed that they trust television programmes about dog behaviour more than they trust any news source. This suggests that television programmes could be the most effective means of communicating evidence-based information about dog behaviour and dog risk. The results of Q15 showed that 51.7% of respondents who watched television programmes about dog training and behaviour followed the advice of the dog trainers or dog behaviourists on those shows. The television programmes that were most popular amongst the respondents featured a celebrity trainer which indicates that the presence of a celebrity trainer interacting directly with the dogs has more of an impact than the use of a general voiceover. However, it is important to recognise that the training methods depicted in the most popular programmes were varied and include, in the case of Cesar Millan for example, those rooted in 'dominance' or 'alpha theories' which have been widely criticised (Coren, 2010). Therefore, the range and quality of information about appropriate training methods that the public is getting from television programmes may be inconsistent and, in some cases, outdated and potentially dangerous.

In contrast to television programmes about dogs, respondents did not feel that useful information about dog behaviour and dog risk that came from newspaper articles, television news, local authorities, or social media. This indicates a high level of scepticism towards these sources of information particularly as nearly all respondents recalled a news item about a dog attack yet very few thought that either newspapers or television news offered useful information about dog risk. If so, the level of scepticism towards news and social media expressed by the respondents was much higher than that of the general UK population. A 2021 media trust survey from Ofcom found that two-thirds of respondents trusted television news and newspapers, and one-third trusted social media (Ofcom 2021). A survey by Reuters (2021: 62-63) found much lower levels of trust than the Ofcom study with overall trust in UK news media being around 36% and trust in news from social media being only 6%. Although there is distinction to be made between the perception of useful information and trust, the studies provide a useful comparison. Despite how low the Reuters figures are compared to the Ofcom figures, they are much higher than the levels observed in our study.

Scepticism towards information about dangerous dog behaviour and dog risk produced by television news and newspapers exists within a general climate of media distrust. An overwhelming majority (97.1%) of respondents had read or seen a news story about a dog attacking/biting a child or

adult. The breed most commonly remembered as being involved as the attacker was the Staffordshire Bull Terrier. Pit Bulls, Rottweilers, unspecified bull breeds and German Shepherds also ranked highly. Only 9.4% of those who had read or seen a news story about a dog attacking/biting a child or adult said that they could not remember which breed of dog was involved. This suggests that breed is a highly memorable factor in media reporting. While 97.1% of respondents had seen a newspaper article about a dog attack, only 12.6% of respondents thought that newspaper articles provide useful information about the risk posed by dangerous dogs. The vast majority of respondents remember the breed of dog mentioned in a news article, but they retain a high level of scepticism about the information found in news articles.

Between 1998–2018, 28,652 children were bitten by a dog in the UK (Tulloch 2021: 2). Numerous scholars address the need for educating children about dog behaviour and dog risk (Kahn et al 2003; Lakestani and Donaldson 2015; Owczarczak-Garstecka et al 2018). The findings of our study reveal that the respondents have strong opinions when it comes to educating children. As Q22.8 showed, the overwhelming majority of respondents think that children need to be taught how to interact with dogs. This indicates that the respondents recognise that the safest way to interact with a dog is not intuitive and requires instruction. By far the most popular opinion was that parents should teach children how to interact with dogs. However, an obvious issue with relying on parents to teach their children how to interact with dogs is the question of the parents' understanding of dogs. For children who live with dogs, their parents probably already play the role of educator and yet children are most commonly bitten in the home (Jakeman 2020: 4). Another problem with the idea of parents as educators relates to children who do not live with dogs. With these children, it seems even less likely that their parents will possess a good level of dog-related knowledge, and yet these children will also encounter dogs in their lives.

Another popular opinion amongst the respondents was that education on dog risk and dog behaviour should come from schools. However, as Coleman et al (2008) has shown, although educational programmes do foster knowledge of responsible pet ownership there is little evidence of retention of knowledge 2-4 months after instruction in the case of primary school children. There is, therefore, a compelling case for educational programmes to be repeated during primary school years to reinforce the learning. Well-designed and well-implemented educational programmes can only do so much if children receive daily instruction from parents who have low awareness of dog risk and canine body language. This strongly indicates the need for a range of educational strategies targeted at adults and children. As Q19 showed, 58.2% of respondents that currently own a dog had attended dog training/socialisation classes or used the services of a dog trainer or dog behaviourist. While we cannot know how many of these individuals are parents, this provides an avenue for educating adults. However, low income or unwaged people and those with caring responsibilities or disabilities may not be able to take advantage of dog training classes due to financial or time constraints, lack of transport or accessibility issues. One solution to this is free or subsidised online and in-person community dog training classes targeted at these groups of dog owners. Given the high levels of engagement with television programmes about dog training and behaviour, the programmes themselves offer opportunities for education and celebrity trainers could be utilised in public information campaigns. All educational programmes have resource and cost implications which cannot be overlooked. It is however important to set these in context against the public health costs. In England, adult hospital

admission rates for dog bites tripled between 1998 and 2018 with estimates for direct health costs to the NHS estimated at £71 million in 2017/2018 (Tulloch et al., 2021).

Our findings also suggest that interpretations of canine body language are highly varied. There was rarely an agreement from respondents in terms of the specific interpretation of canine body language. There were however instances of general agreement in how the respondents interpreted, for example, 'play bows' and bared teeth where the respondents did agree whether the dog's emotional state was positive or negative. Despite the lack of agreement on specific interpretations, respondents were consistently confident in their ability to interpret canine body language. Moreover, how they would respond to the behaviour was equally varied with some instances where a significant number of respondents chose a response that could escalate a situation. This presents a complex and problematic picture as levels of confidence in ability to interpret canine body language was high but the interpretation was mixed and inconsistent in cases where body language might be considered more 'subtle' (for example ears back, tense mouth). Perhaps unsurprisingly, there was also an observable disparity between how the respondents perceived their own dogs compared to how they perceived dogs in general. The respondents were far more confident that their own dog, or a dog that they knew well, was unlikely to injure a person in risk prone scenarios. However, the respondents expressed much less confidence about dogs in general. This indicates strongly that greater levels of public information about dog body language and how to respond is needed for adults and reinforces the argument for educational programmes.

These disparities exhibit a clear trend. Respondents tended to think much more highly of their own dog, their own understanding of dog behaviours, and their own knowledge of dog risk. However, they thought less favourably about other dogs and perceived higher levels of risk associated with dogs in general. The disproportionately high levels of confidence in known dogs compared to dogs in general may go some way to explain why so many dog bites involving children occur in the home. Results from this survey strongly suggest that there are high levels of confidence that 'my dog is not like dogs in general' and therefore does not pose the same level of risk, even in recognised higher risk situations. We speculate that this disparity could be, at least partially explained, by the dogs' status as a family member, and the tendency to anthropomorphise companion animals. Those dogs considered family members are therefore more trusted and humanised compared with the idea of 'dogs in general'. It is important then that any educational programmes help those living with companion canines to understand that all dogs, including the ones they live with, have a shared canine body language and behaviours. Where respondents did express agreement was with regards to dog behaviour related to the influence of training. An overwhelming majority of respondents agreed that training, teaching, or socialising dogs can change their behaviour. This illustrates the trust that people have in the prospect of behaviour modification.

The findings of the survey illustrate a significant complexity when it comes to opinions around what makes a dog more likely to be dangerous. The respondents generally considered aggressive behaviour as the best way to classify a dog as dangerous. Aggression here relates to a range of behaviours, such as barking, growling, and snarling, as well as both provoked and unprovoked aggression. Overall, respondents tended to focus on specific behaviours rather than physical traits. As shown in Q23, the majority of respondents did not believe that the breed, size, age, or sex of a dog makes them more likely to be dangerous. However, a majority did believe that bite history, health, and genetics make a dog more likely to be dangerous. The survey asked respondents about breed and dog

risk across four questions: Q.20 was an open question that asked which characteristics should classify a dog as dangerous; Q.21 and 21a asked respondents to recall which breed of dog was reported in a memorable news story about a dog attack; Q23.1 asked if breed was more likely to make a dog dangerous; and Q37.1 asked if respondents believed it should be illegal to own certain breeds of dog. The design of the survey intentionally placed the open question before any questions that prompted respondents to think specifically about breed. Only 4% of respondents elected to write breed in response to being asked which characteristics make a dog dangerous. After being prompted to think about dog attacks and breed in media reporting, 31% later agreed that breed was more likely to make a dog dangerous, and responses to Q.37 showed that nearly 34% thought it should be illegal to own certain breeds of dog. While the majority of people did not think that breed increased the likelihood that a dog would be dangerous, a significant portion (around a third) of the sample still think that it does. A similarly significant number of respondents agreed that it should be illegal to own certain breeds, compared with nearly 46% who disagreed and a fifth of respondents who neither agreed or disagreed. As the weight of evidence shows that there is no significant link between breed and bite risk, it is important that public information is explicit. The legislative focus on breed and dangerous dogs and the tendency for media reporting of dog attacks to focus on certain breeds contribute to ambiguous public messaging about dog risk. When it comes to which characteristics make a dog more likely to be dangerous, our findings suggest that this is an area that needs to be targeted in education.

An interesting outcome of Q23 is the perceived relationship between a dog being dangerous and their genetics or breed. Modern dog breeds tend to be identified visually, and as recent genetic studies have shown, 'physical traits are exceptionally heritable' (Morrill et al 2020: 5). While a dog's breed is determined by their genetics, over 50% of respondents did not think that a dog's breed made them more likely to be dangerous despite half the sample thinking that a dog's genetics made them more likely to be dangerous. This tension might arise from the way that the word 'genetics' might have a different meaning in common parlance than it does in science. The respondents might use the term 'genetics' to refer to behavioural traits rather than physical traits. For example, the offspring of a dangerous dog might be more likely to be dangerous because they share their parent's genetics. However, the results of Q24.4 do complicate this assumption. An overwhelming majority of respondents said that training, teaching, or socialising dogs can change their behaviour. If behaviours can be changed through training, this begs the question about the public perception of the role that genetics plays in determining whether a dog should be considered dangerous. Further research into how dog owners understand the heritability of dog behaviours could provide some highly insightful answers to these questions.

By ranking a series of statements designed to measure individuals' general risk-taking tendency, it was revealed that in general the respondents were more risk averse. This helps to understand the results of the situational awareness questions. Our data indicated a fairly high level of situational awareness in our sample with the respondents correctly answering 9 out of 12 questions. Interestingly, the questions that the respondents did not answer correctly related to their understanding about dog behaviour around children and the link between parental supervision and dog risk. Over 44% of respondents thought that 'dogs try to be gentle and avoid biting children' and only 31.8% said this was false. Nearly half of the sample agreed that 'parents are almost always absent when a dog bites a small child' while only 28.2% thought, correctly, that it was false. This is particularly interesting given the importance that the respondents placed on educating children about dog behaviour, and the role that

parents should play in that education. This, again, highlights a need for more and better dissemination of information about dog risk and dog behaviour.

Our findings suggest that respondents are aware of the general scope of the Dangerous Dogs Act 1991. Despite the respondents' knowledge of the Dangerous Dogs Act 1991, there is a significant issue when it comes to identifying dangerous dog breeds. The respondents were asked to identify illegal dog breeds from a series of photographs. Before this task, the majority of the sample assessed their own ability to recognise a dangerous dog breed as average, good, or excellent. However, during the task the respondents' level of confidence dropped significantly. This lack of confidence was reflected in the results of the task where the respondents' choices were inconsistent, and often wrong. With Q39, this means that four dogs were incorrectly identified as pit bull terriers by over a thousand experienced dog owners in a controlled environment. These findings are consistent with other studies that test the abilities of experts and professionals to identify dog breeds (Bleasdale-Hill and Dickinson 2016: 72; Morrill et al 2022; 8-9; Olson et al 2015: 201; DEFRA, 2009: 14-16). The lack of confidence expressed by the respondents and extremely low success rates for breed identification should be kept in mind when thinking about how dog bites are reported in the news. The inconsistency of experts and professionals to identify dog breeds, combined with the high levels of uncertainty amongst dog owners regarding their own ability to identify dog breeds, begs the questions about who is identifying the breeds mentioned in news reports on dog bites and dog attacks. In addition, this general lack of ability to identify banned types make it quite probable that someone could unwittingly buy or adopt a banned breed of dog without realising.

Recommendations

This study, then, has highlighted that public understanding of dog behaviour and dog risk needs to be improved. A clear majority struggled to identify breeds banned under current legislation. As studies show that even experts have trouble identifying banned breeds, it is highly unlikely that a member of the public will know if they come in contact with a banned breed or type of dog. In terms of people's understanding, this study showed that while the majority of individuals do not think that breed influences how dangerous a dog might be, a significant portion still do. While this insight is promising, it shows that more work needs to be done to educate people on what the science is saying, namely that there is no link between breed and dog risk. Breed specific legislation is not protecting the public from dog bites and fatalities and the continued focus on breed as an indicator or risk not only flies in the face of scientific evidence to the contrary but may also present confusing public messaging that equates bite risk with only certain types of dog. Focus must be shifted from breed to education and an increased awareness of canine body language. Although respondents showed a good situational awareness when it comes to dog risk, this was reduced in matters relating to dog behaviour around children and the link between parental supervision and dog risk. Dogs who were known to the respondents were considered much less of a risk than 'dogs in general'. And, while the respondents in this study generally agreed on the body language being either positive or negative, when presented with more subtle body language there was less agreement and a range of interpretations. Failure to understand a dog's stress signalling may contribute to unsafe interactions (Meints, 2018) therefore a better knowledge of canine body language would be beneficial to both humans and dogs.

In terms of how to provide education on dog behaviour and dog risk, the respondents expressed a preference for parents to be educators and for schools to provide educational programmes. While this is an interesting insight, the question of the competency of parents in dog-human interactions underscores the need for increased awareness for both adults and children. Studies into the effectiveness of school programmes for primary children suggest that awareness education must be repeated as single programmes may not be effective. For adults, the most trusted media format in our study was television and given the costs associated with engaging a behaviourist and dog training classes, television shows are, according to this survey, the most accessible and accessed source of information on dog training and dog behaviour. Television programmes about dogs generally provide an excellent route by which to communicate awareness of dog stress signalling. Although this could be effective public communication route, developing a television programme or changing an existing format is not a realistic option and training methods across programmes are varied. Celebrity trainers and celebrities associated with popular dog programmes could be used for public messaging and campaigns with the caveat that the messaging is consistent and aligned with positive reinforcement training methods. A localised approach that provides online and in-person dog training sessions combined with council information about commercial dog training programmes and local behaviourists could address need within groups of dog owners who are for varied reasons unable to access dog training programmes. Finally, there is a perceived lack of useful information about dog risk on social media. Infographics, comics, cartoons, and positive memes could be used effectively for public education and are easily shared. Dog awareness should be considered in the context of rising public health costs, a result of increased dog bites and a clear indicator of the failure of current legislation, and appropriate campaigns developed to communicate at scale.

Summary of recommendations:

- A significant portion of the public believe there is a link between breed and bite risk. Breed specific legislation is not protecting the public from dog bites and fatalities and the continued focus on breed as an indicator of risk in legislation and in media contributes to confusing public messaging that equates bite risk with only certain types or breeds of dog. Focus must be shifted from breed to education about dog bite risk and an increased awareness of canine body language.
- The public believe there should be more information about dog risk. Dog awareness should be considered in the context of rising public health costs as a result of increased dog bites, a clear indicator of the failure of current legislation, and appropriate campaigns developed to communicate at scale.
- Owner error accounts for a substantial number of dog bite injuries. It is not enough to only raise awareness of dog body language alone. Awareness raising and education should include how to recognise signals of stress or discomfort in dogs, information about common high-risk situations in which injuries take place, and how to respond appropriately in situations where dogs are stressed, in discomfort, or communicating threat aversion signals.
- Awareness education for primary school children is supported by the majority of the public. Although there is majority support for parents to teach children about dog risk it is unlikely that consistent messaging will be delivered within homes without major investment in awareness

campaigns for adults. There is significant support for schools to deliver education programmes for children. Education programmes for children should be repeated during primary education.

- Television programmes about dogs generally provide an excellent route by which to communicate and raise awareness about dog risk and body language. Celebrity trainers and celebrities associated with popular dog programmes could be used effectively for public messaging and campaigns with the caveat that the messaging is consistent and aligned with positive training methods.
- A localised approach could be supported by councils through the organisation of in-person and online community dog training classes for unwaged and low-income dog owners, and the provision of information about local commercial dog training classes and Animal Behaviour and Training Council accredited behaviourists.
- There is a perceived lack of useful public information about dog risk on social media. Infographics, comics, cartoons, and memes could be used effectively for public education and awareness raising about dog body language and are easily shared across social media.

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6. Appendices

Appendix 1: Survey

Dogs Survey

Information and Consent

Title of the project: Dangerous Dogs: public awareness of dog risk

This form contains information about the study. You can ask the researchers any questions about the project at any time.

What is the purpose of this study?

This study is interested in public awareness and understanding of dogs. Specifically, this research seeks to understand what members of the public know about different types of dogs, where their information comes from, and how they perceive dangerous dogs and dog risk.

Who is conducting this study?

The researchers for this study are Professor Claire Parkinson (Principal Investigator) and Dr Lara Herring (Co-Investigator). The research team is based in the Department of Creative Arts at Edge Hill University.

What is involved if I take part in this study?

You will answer an online questionnaire. It should take around 20 minutes to complete.

What will I get?

There is no payment. We are very grateful to everyone who takes the time to be part of this study and hope you find the experience interesting. We want to know your views and opinions.

Where and when will the study take place?

The study began in January 2021 and will end in April 2021. The research is all done online and includes different regions across the UK.

What information will be collected?

You will be asked for your views on different types of dogs, awareness of dangerous dogs and risks posed by

dogs.

Do I have to take part?

You do not have to take part. Your participation is voluntary, and you are free to withdraw at any time prior to the submission of the questionnaire, without giving any reason. At Edge Hill, we are committed to respecting and protecting your personal information. To find ways in which we use your data, please see edgehill.ac.uk/about/legal/privacy. Academic research is a public good for current and future generations, so the lawful basis for research data collection is actually that of 'public task' i.e. the collection of personal data is 'necessary for the performance of a task (research) carried out for reasons of public interest'

What happens to my information?

All information is kept confidential. This research is for academic research purposes and the information you provide will be seen only by the research team. The findings will be included in a report and set of web-based materials, a policy briefing document and a webinar or on campus event to disseminate findings to relevant groups and organisations. The findings may also be published in an academic journal or book. All questionnaire data will be held on password protected drives and destroyed 5 years after the end of the project. Data collected may be made available, in anonymised form, to independent internal/external third parties in accordance with standard University audit procedures.

How can I contact the researcher?

Principal Investigator's details: Professor Claire Parkinson

Email: claire.parkinson@edgehill.ac.uk

Who do I contact if I have concerns about the study?

Professor Matthew Pateman (Head of Department) email: matthew.pateman@edgehill.ac.uk

1. This is a UK-based study and as such we are interested in the experiences of UK residents. What is your country of residence? * Required

2. I understand that the research will involve an online questionnaire * Required

☐ yes

3. I understand that all information I give will be treated in strict confidence, my answers will be anonymous, and that I will not be named in any written work * Required

☒ yes

4. I have read and understood the participant information provided by the research team (above) * Required

☒ yes

5. I consent to taking part in the research and completing the questionnaire * Required

☒ yes

6. I am aware that I can withdraw from the research process up to the point of submitting my responses * Required

☒ yes

Demographic Questions

7. In which age range are you? * Required

- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65-74
- ☐ 75 and above

8. Which best describes your gender? Please select one option, or use the self-describe option. * Required

- ☐ Male
- ☐ Female
- ☐ Prefer not to say
- ☐ I prefer to self-describe my gender

8.a. If you prefer to self-describe your gender, please do so here

9. What is your ethnic group? * Required

- ☐ White: English / Welsh / Scottish / Northern Irish / British
- ☐ White: Irish
- ☐ White: Gypsy or Irish Traveller
- ☐ Other White background
- ☐ Mixed multiple / ethnic groups: White and Black Caribbean
- ☐ Mixed multiple / ethnic groups: White and Black African
- ☐ Mixed multiple / ethnic groups: White and Asian
- ☐ Other mixed / multiple ethnic background
- ☐ Asian / Asian British: Indian
- ☐ Asian / Asian British: Pakistani
- ☐ Asian / Asian British: Bangladeshi

- ☐ Asian / Asian British: Chinese
- ☐ Other Asian Background
- ☐ Black / African / Caribbean / Black British: African
- ☐ Black / African / Caribbean / Black British: Caribbean
- ☐ Other Black / African / Caribbean background
- ☐ Other ethnic group: Arab
- ☐ Other ethnic group

9.a. Other White background, please write here

9.b. Other mixed / multiple ethnic background, please write here

9.c. Other Asian Background, please write here

9.d. Other Black / African / Caribbean background, please write here

9.e. Other ethnic group: Arab, please write here

9.f. Other ethnic group, please write here

10. What is your occupation (if retired, please select retired and list your former occupation) * Required

- ☐ Managers, directors and senior officials
- ☐ Professional occupations

- ☐ Associate professional occupations
- ☐ Administrative and secretarial occupations
- ☐ Skilled trades occupations
- ☐ Caring, leisure and other service occupations
- ☐ Sales and customer service occupations
- ☐ Process, plant and machine operatives
- ☐ Unskilled trades occupations
- ☐ Retired

10.a. If you selected retired, please state former main occupation

11. Which annual income band applies to you? * Required

- ☐ Less than £20,000
- ☐ £20,000 - £29,999
- ☐ £30,000 - £39,999
- ☐ £40,000 - £49,999
- ☐ £50,000 - £59,000
- ☐ £60,000 and above
- ☐ Retired
- ☐ Prefer not to say

Main survey questions

12. Are you a dog owner or have you ever owned a dog? (Choose one) * Required

- ☐ I don't have a dog and never had a dog
- ☐ I don't currently have a dog but I had a family dog as a child
- ☐ I currently have a dog- this is my first dog since I was a child
- ☐ I currently have a dog- I have had other dogs as an adult

12.a. Is your dog a bull breed?

- ☐ yes
- ☐ no

12.b. Was your childhood dog a bull breed?

- ☐ yes
- ☐ no

12.c. Do you intend to own a dog in the future?

- ☐ yes
- ☐ no

12.d. Is your current dog a bull breed or have you ever had a bull breed?

- ☐ yes
- ☐ no

13. How do you rate the following statement (*Please note: if you are using a mobile phone you may find it easier to select the option, "view as separate questions instead," for this question.) * Required

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am good with dogs and dogs like me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Do you watch television programmes about dog training or dog behaviour? * Required

- ☐ yes
- ☐ no

14.a. If yes, which programmes do you watch regularly?

- ☐ Dogs Behaving (Very) Badly – Channel 5
- ☐ Puppy School – Channel 4
- ☐ Me and My Dog: The Ultimate Contest – BBC2
- ☐ Dog School – Apple TV/Prime
- ☐ Pit Bulls & Parolees – Really
- ☐ The Secret Life of Puppies – Ch5
- ☐ Dogs: An Amazing Animal Family – Sky
- ☐ The Dog Whisperer with Caesar Millan – Sky
- ☐ It's Me Or The Dog – Channel 4
- ☐ 12 Puppies and Us – BBC2
- ☐ Puppy Prep – Prime/Apple TV
- ☐ Our New Puppy – Ch5
- ☐ The Wonderful World of Puppies – Ch5
- ☐ Pup Academy – Netflix
- ☐ Pick of the Litter – Netflix
- ☐ Dogs – Netflix
- ☐ We are the Champions 'Dog Dancing' - Netflix
- ☐ Dog Detectives – Quest Red
- ☐ Dogs 101: New Tricks – Animal Planet
- ☐ Other

14.a.i. If you selected Other, please specify:

15. Do you follow the advice of any dog trainers or dog behaviourists on television? * Required

- ☐ yes
- ☐ no

15.a. If yes, which trainer or behaviourist or programme?

16. Do you watch any other television programmes about dogs? * Required

- ☐ yes
☐ no

16.a. If yes, which programmes?

- ☐ Pooch Perfect – BBC1
☐ The Dog Rescuers with Alan Davies – Channel 5
☐ Paul O'Grady: For The Love of Dogs - ITV
☐ Crufts – Channel 4
☐ Seven Days Out 'Westminster Dog Show'– Netflix
☐ Animal Cops Phoenix – Quest Red/Animal Planet
☐ Animal Cops Houston – Quest Red
☐ Animal Cops Philadelphia – Really
☐ Send in the Dogs – Sky
☐ The Yorkshire Vet – Channel 5
☐ Dr Jeff – Rocky Mountain Vet – Animal Planet
☐ The Supervet: Noel Fitzpatrick – Channel 4
☐ The People's Vet- All 4
☐ Other

16.a.i. If you selected Other, please specify:

17. Do you follow any online dog training programmes? * Required

- ☐ yes
- ☐ no

17.a. If yes, which online dog programmes do you follow?

18. Do you follow the advice of any dog training books? * Required

- ☐ yes
- ☐ no

18.a. If yes, which books?

19. If you currently have a dog, have you ever attended dog training/socialisation classes or used the services of a dog trainer or dog behaviourist **for this dog**? * Required

- ☐ yes
- ☐ no
- ☐ I don't currently have a dog

20. What characteristics, in your view, should classify a dog as dangerous? * Required

21. Have you ever read or seen a news story about a dog attacking/biting a child or adult? * Required

- ☐ yes
☐ no

21.a. If yes, can you remember what breed of dog was involved in the incident? If more than one story, any breeds you recall being involved?

22. How do you rate the following statements:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Newspaper articles provide useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Television news provides useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The local authority (council) provides useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social media provides useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My friends/family provide useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Television programmes about dog behaviour provide useful information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There needs to be more public information about the risk posed by dangerous dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children should be taught how to interact with dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents should teach children how to interact with dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools should teach children how to interact with dogs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. The following characteristics make a dog more likely to be dangerous

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Breed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bite history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neuter status (spay/castration)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Genetics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. How do you rate the following statements:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Dogs understand what they are doing- e.g. a dog knows what they are doing when they bite or initiate play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dogs respond to the behaviour of people and dogs instinctively, without understanding the consequences of their behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What a dog does is a reflection of their character	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training, teaching, or socialising dogs can change their behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

25.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

25.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

25.b.i. If you selected Other, please specify:

25.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

25.c.i. If you selected Other, please specify:

26. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

26.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

26.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently

- ☐ Play with them
- ☐ Nothing
- ☐ Other

26.b.i. If you selected Other, please specify:

26.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

26.c.i. If you selected Other, please specify:

27. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

27.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

27.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy

- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

27.b.i. If you selected Other, please specify:

27.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

27.c.i. If you selected Other, please specify:

28. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

28.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

28.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently

- ☐ Play with them
- ☐ Nothing
- ☐ Other

28.b.i. If you selected Other, please specify:

28.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

28.c.i. If you selected Other, please specify:

29. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

29.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

29.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

29.b.i. If you selected Other, please specify:

29.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

29.c.i. If you selected Other, please specify:

30. Select up to 3 adjectives that best describe the emotions of the dog in this picture:



* Required

- | | | |
|--------------------------------------|-------------------------------------|---------------------------------------|
| <input type="checkbox"/> angry | <input type="checkbox"/> anxious | <input type="checkbox"/> aroused |
| <input type="checkbox"/> awkward | <input type="checkbox"/> bored | <input type="checkbox"/> calm |
| <input type="checkbox"/> carefree | <input type="checkbox"/> confused | <input type="checkbox"/> content |
| <input type="checkbox"/> disgusted | <input type="checkbox"/> drowsy | <input type="checkbox"/> distressed |
| <input type="checkbox"/> excited | <input type="checkbox"/> frustrated | <input type="checkbox"/> guilty |
| <input type="checkbox"/> happy | <input type="checkbox"/> hungry | <input type="checkbox"/> irritated |
| <input type="checkbox"/> jealous | <input type="checkbox"/> playful | <input type="checkbox"/> relaxed |
| <input type="checkbox"/> restless | <input type="checkbox"/> sad | <input type="checkbox"/> stressed |
| <input type="checkbox"/> tense | <input type="checkbox"/> surprised | <input type="checkbox"/> upset |
| <input type="checkbox"/> comfortable | <input type="checkbox"/> worried | <input type="checkbox"/> apprehensive |

30.a. How confident are you in your answers? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

30.b. If a dog **that you know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them

- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

30.b.i. If you selected Other, please specify:

30.c. If a dog that you **did not know** behaved in this way, what would you do? * Required

- ☐ Leave them alone/ ignore them
- ☐ Pet them/give them cuddles/ stroke them
- ☐ Slap them gently
- ☐ Say NO or shush
- ☐ Give them treats or offer them a toy
- ☐ Talk to them gently
- ☐ Play with them
- ☐ Nothing
- ☐ Other

30.c.i. If you selected Other, please specify:

31. In general, how likely are dogs to injure a person in the following contexts?

	Very unlikely	Unlikely	Neither likely nor unlikely	Likely	Very likely
When opening the door for a parcel delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When playing with rucker/pull toy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When feeding a regular meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When confiscating something a dog shouldn't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When punishing a dog by shouting at him/her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When lying next to a sleeping dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When hugging or kissing a dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When sitting next to a dog on the sofa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When pushing a dog off when they jump up on a person/ furniture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When walking towards a dog that's chewing on their treat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. How likely is **your dog or dog you're very familiar with** (e.g. friends'/ family dog) to injure a person in the following contexts? * *Required*

	Very unlikely	Unlikely	Neither likely nor unlikely	Likely	Very likely	I don't own a dog and am not familiar with any dogs
When opening the door for a parcel delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When playing with rucker/pull toy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When feeding a regular meal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

When confiscating something a dog shouldn't have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When punishing a dog by shouting at him/her	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When lying next to a sleeping dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When hugging or kissing a dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When sitting next to a dog on the sofa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When pushing a dog off when they jump up on a person/ furniture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When walking towards a dog that's chewing on their treat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. Please indicate the extent to which you agree or disagree with the following statement by selecting the option you prefer. Please do not think too long before answering; usually your first inclination is also the best one.

	1 Totally disagree	2	3	4	5	6	7	8	9 Totally agree
Safety comes first	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not take risks with my health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I prefer to avoid risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take risks regularly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I really dislike not knowing what is going to happen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually view risks as a challenge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I view myself as a risk taker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I view myself as risk averse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Thinking about the survey questions as a whole, is there anything else that you would like to add?

Thank you for your participation so far. Your answers are of great value to our study. We would like to ask you a few more questions about particular dog breeds. These last questions should not take longer than three minutes of your time. However, you can opt out of the survey now if you don't wish to continue.

35. I would like to * Required

↶ opt out

↶ continue

29 / 37

Additional Questions

36. Please select all correct answers. According to current UK law: * *Required*

- ☐ Certain breeds are banned, which means it's illegal to breed, sell or acquire them
- ☐ It's a criminal offence for a dog to bite someone even if a bite happened on a private property
- ☐ It's a criminal offence for a dog to bite someone, unless a bite happened on a private property
- ☐ Dobermans, Rottweilers and Pit bulls are banned in the UK

37. How do you rate the following statement

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
It should be illegal to own certain breeds of dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. How do you rate your ability to recognise a dangerous dog breed? * Required

- ☐ Very poor
- ☐ Poor
- ☐ Average
- ☐ Good
- ☐ Excellent

39. Which of these dogs is a Pit Bull Terrier? (Select all that apply)



Required

*

☐ Picture 1
☐ Picture 4

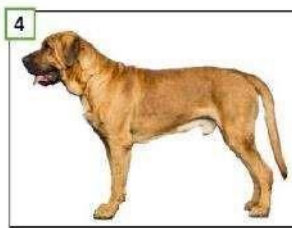
☐ Picture 2
☐ Picture 5

☐ Picture 3
☐ Picture 6

39.a. How confident are you in your answer? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

40. Which of these dogs is a Japanese Tosa? (Select all that apply)



Required

*

☐ Picture 1
☐ Picture 4

☐ Picture 2
☐ Picture 5

☐ Picture 3
☐ Picture 6

40.a. How confident are you in your answer? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident

- ☐ Fairly confident
- ☐ Very confident

41. Which of these dogs is a Dogo Argentino? (Select all that apply)



* Required

- | | | |
|------------------------------------|------------------------------------|------------------------------------|
| <input type="checkbox"/> Picture 1 | <input type="checkbox"/> Picture 2 | <input type="checkbox"/> Picture 3 |
| <input type="checkbox"/> Picture 4 | <input type="checkbox"/> Picture 5 | <input type="checkbox"/> Picture 6 |

41.a. How confident are you in your answer? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

42. Which of these dogs is a Fila Brasileiro? (Select all that apply)

1



4



5



6



*

Required

☐ Picture 1

☐ Picture 2

☐ Picture 3

☐ Picture 4

☐ Picture 5

☐ Picture 6

42.a. How confident are you in your answer? * Required

- ☐ Not at all confident
- ☐ Not very confident
- ☐ Neither confident nor unconfident
- ☐ Fairly confident
- ☐ Very confident

43. Please decide whether you think the statements below are true or false

	True	False	Don't know
Most dog bites in the UK occur in public spaces such as parks or streets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents are almost always absent when a dog bites a small child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's essential to punish a dog for a bite so it doesn't happen again	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pit bulls are responsible for most dog-related injuries in the UK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postal workers are bitten more often than any other occupation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neutering (castration/ spay surgery) does not affect chances of dog being aggressive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most people bitten in the UK know the dog who bit them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dogs try to be gentle and avoid biting children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You can't be bitten when playing with a dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When entering someone's property, it's my own responsibility to avoid being bitten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most dogs enjoy being hugged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A child is safe playing with a dog, as long as they're nice to them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for completing the survey.

Please click 'Finish' to submit your responses.

Your responses have been submitted. Thank you.

Key for selection options

1 - This is a UK-based study and as such we are interested in the experiences of UK residents. What is your country of residence?

United Kingdom

Other

Appendix 2: Q17a: If yes, which online dog training programmes do you follow? Full results

Absolute Dogs	28
Adolescent Dogs Online Dog Training Academy	2
App: Dogo	2
Blue Cross website	1
Bombproof Boxer	1
Bone Canis	1
Brilliant Family Dog (Beverley Courtney)	1
British College of Canine Studies	1
Canine Assist	1
Canine Confidence with Janet Finlay	3
Canine Principles (various courses)	1
CARE (Reactive Dogs UK)	6
Cesar Millan (Dog Whisperer)	3
Danny Wells Dog Training	2
Di Martin (Click-2-Heel)	2
Disc Dog University	1
Dog Owners' Training School	1
Dog Pawfection	1
Dog Training College	2
Dognition	1
Dogs Trust Dog School	3
Dr. Dunbar's Dog Behavior & Training Academy	2
Facebook (Unspecified)	4
Facebook group/page: Dog Training Advice and Support	2

Facebook group/page: Dog Training and Support	2
Facebook page (local trainer)	2
Facebook Page: Impactt Behaviour	2
Facebook Page: MK9 dog training	1
Facebook: Julie Naismith's SubThreshold Training	1
Facebook: Kayleigh Stangroom - Dog trainer	1
Facebook: Ogilvie Dogs	1
Facebook: Pawfection Dog Training and Behaviour	1
Facebook: Surrey Search Dogs	1
Fenrir Dog Training	6
Grisha Stewart: Online Dog Training School	1
Hannah Molloy	1
Hearing Dogs for Deaf People	1
IMDT Courses	5
Into Shape Agility Online Dog Training	2
J&J Greenwood Dog Training	1
Jan Fennell: The Dog Listener	1
Janet Finlay (Canine Confidence)	1
Karen Pryor Clicker Training	3
Leerburg	4
McCann Dog Training	1
Nosey Barker Dog Training	1
Obsidian K9 Online Academy	2
Paws Positive Dog Training	1
Perfectly Polite Dachshunds online training course	1

Pupford Academy	2
Puppito (Smart Phone App)	1
Q-Me Agility	1
Robert Cabral Online Dog Training System	1
RSPCA website	1
Sarah Fisher	2
Say It Once Dog Training	1
Scentwork	1
Sexier than a Squirrel programme	10
Snapchat ('pit bulls rescue')	1
Southend Dog Training	17
Teacher's Pets Dog Training	1
Tellington TTouch Training	1
The Beagle Lady: Kellie Wynn	1
The Labrador Site	1
The School of Online Canine Science	11
ThinkDog! with Sarah Whitehead	1
TikTok (Unspecified)	2
TikTok: Jonas Black	1
TrainWithIvan	1
Trust Technique	1
Victoria Stilwell Academy	6
WaggaWuffins Canine College	1
WKD Trained Dogs	1
YouTube (Unspecified)	11

YouTube Channel: Animal Planet (Pit Bulls & Parolees)	1
YouTube channel: Behaviour Matters	1
YouTube channel: Canine Performance	1
YouTube Channel: Chirag Patel	2
YouTube Channel: How To Train A Dream Dog (Michele Lennon)	1
YouTube channel: It's Me or the Dog	2
YouTube channel: Kamal Fernandez	1
YouTube channel: Kikopup	2
YouTube channel: McCann Dog Training	3
YouTube channel: Sophia Yin	1
YouTube channel: Susan Garrett	3
YouTube channel: Zak George	16
YouTube: APDT	1

Appendix 3: Q18a: If yes, which books? Full results.

Absolute Dogs	28
Adolescent Dogs Online Dog Training Academy	2
App: Dogo	2
Blue Cross website	1
Bombproof Boxer	1
Bone Canis	1
Brilliant Family Dog (Beverley Courtney)	1
British College of Canine Studies	1
Canine Assist	1
Canine Confidence with Janet Finlay	3
Canine Principles (various courses)	1
CARE (Reactive Dogs Uk)	6
Cesar Millan (Dog Whisperer)	3
Danny Wells Dog Training	2
Di Martin (Click-2-Heel)	2
Disc Dog University	1
Dog Owners' Training School	1
Dog Pawfection	1
Dog Training College	2
Dognition	1
Dogs Trust Dog School	3
Dr. Dunbar's Dog Behavior & Training Academy	2
Facebook (Unspecified)	4
Facebook group/page: Dog Training Advice and Support	2

Facebook group/page: Dog Training and Support	2
Facebook page (local trainer)	2
Facebook Page: Impactt Behaviour	2
Facebook Page: MK9 dog training	1
Facebook: Julie Naismith's SubThreshold Training	1
Facebook: Kayleigh Stangroom - Dog trainer	1
Facebook: Ogilvie Dogs	1
Facebook: Pawfection Dog Training and Behaviour	1
Facebook: Surrey Search Dogs	1
Fenrir Dog Training	6
Grisha Stewart: Online Dog Training School	1
Hannah Molloy	1
Hearing Dogs for Deaf People	1
IMDT Courses	5
Into Shape Agility Online Dog Training	2
J&J Greenwood Dog Training	1
Jan Fennell: The Dog Listener	1
Janet Finlay (Canine Confidence)	1
Karen Pryor Clicker Training	3
Leerburg	4
McCann Dog Training	1
Nosey Barker Dog Training	1
Obsidian K9 Online Academy	2
Paws Positive Dog Training	1
Perfectly Polite Dachshunds online training course	1

Pupford Academy	2
Puppito (Smart Phone App)	1
Q-Me Agility	1
Robert Cabral Online Dog Training System	1
RSPCA website	1
Sarah Fisher	2
Say It Once Dog Training	1
Scentwork	1
Sexier than a Squirrel programme	10
Snapchat ('pit bulls rescue')	1
Southend Dog Training	17
Teacher's Pets Dog Training	1
Tellington TTouch Training	1
The Beagle Lady: Kellie Wynn	1
The Labrador Site	1
The School of Online Canine Science	11
ThinkDog! with Sarah Whitehead	1
TikTok (Unspecified)	2
TikTok: Jonas Black	1
TrainWithIvan	1
Trust Technique	1
Victoria Stilwell Academy	6
WaggaWuffins Canine College	1
WKD Trained Dogs	1
YouTube (Unspecified)	11

YouTube Channel: Animal Planet (Pit Bulls & Parolees)	1
YouTube channel: Behaviour Matters	1
YouTube channel: Canine Performance	1
YouTube Channel: Chirag Patel	2
YouTube Channel: How To Train A Dream Dog (Michele Lennon)	1
YouTube channel: It's Me or the Dog	2
YouTube channel: Kamal Fernandez	1
YouTube channel: Kikopup	2
YouTube channel: McCann Dog Training	3
YouTube channel: Sophia Yin	1
YouTube channel: Susan Garrett	3
YouTube channel: Zak George	16
YouTube: APDT	1