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## A Survey Of The Behaviour Of UK Household Dogs

Danny Mills*, C.B. Mills, Animal Behaviour Cognition and Welfare Group, University of Lincoln, Dept of Biological Sciences, Riseholme Park, Lincoln, LN2 2LG UK. * corresponding author: dmills@lincoln.ac.uk

* this paper was presented at the Australian Veterinary Association Conferrence in Canberra, May 2004 and is reprinted here with permission of the author


## Introduction

In the literature there are many reports relating to the prevalence of behaviour problems in dogs based on the caseload of those dealing with these problems (e.g. http://www.apbc.org.uk/data.htm; Askew, 1996; Landsberg et al., 1997). Whilst this information is useful in its own right, it remains largely unknown how this relates to the prevalence of these behaviours in the wider population. The population characteristics in a large sample drawn from throughout the UK, and investigate potential behavioural associations amongst these animals.

## Materials and Methods

A questionnaire was designed to gather largely descriptive data of the household and behaviour of the dogs in British homes. Following revision after pilot studies, the questionnaire consisted largely of closed items except where "other" was given in which case further information (e.g. does your dog chase itself around in circles), to be (e.g. does your dog chase itself around in circles), to
answered if the behaviour occurred; these related to whether the behaviour stopped when the owner asked or whether it stopped when any other form of attention was given. This meant there was a potential maximum of 265 response items related to the behaviour of the dog in a given household. Initial data were gathered by interview involving a team of 34 trained students in their vacation
period. All owners were requested to provide telephone contact details and data were only considered if this information was available. $10 \%$ of respondents were then contacted to determine the validity of the data gathered.

## Results.

The owners of 722 dogs in 502 households provided data for the survey ( 1.44 dogs/household). 518 animals were of reported pedigree type and 204 cross-bred. The origin of 648 dogs was declared, 447 had been obtained from a breeder, 161 were obtained through a rehoming service or of dogs surveyed was 6.5 years, in 356 households there was only 1 dog and 252 dogs were the only pets in the household. 196 were entire bitches, 237 entire males, 192 neutered females and 97 neutered males.

## General activity

89 (12.3\%) dogs from 76 households were reportedly restless during the day and $64 / 52$ ( $8.9 \%$ dogs $/ 10.3 \%$ households) during the night. 166/148 ( $23.0 \%$ dogs) were restless when they travelled with 93 stopping when told and would lick or nibble themselves until sore with 65 stopp when told to and 56 when given attention. 105/96 (14.5\% dogs) chased themselves round in circles, with 75 stopping when told to and 72 when given attention. 44/38 (6.1\% dogs) barked or howled incessantly, 23 would stop when told and 30 when given attention. 526/402 ( $72.8 \%$ dogs) were described as very playful with 348/275 ( $48.2 \%$ dogs) said to be easily overexcited. 588/435 ( $81.4 \%$ dogs)
said to watch their owner all the time, $304 / 225$ (42.1\% dogs) would interfere with the owner when they were doing something unrelated to the dog.
113 (15.6\%) dogs from 82 households were said to bark when left alone, $547 / 399$ ( $75.8 \%$ dogs) when visitors arrived, 339/242 (47.0\% dogs) at other dogs, 110/92 $15.2 \%$ dogs) in the car and $335 / 262$ ( $46.4 \%$ dogs) at other times. Most of the latter related to states of genera jelevision) noise disturbances (45), passersby (39) and attention (28).

## Appette and <br> Appetite and eating behaviour

Data relating to appetite and eating behaviour are summarised in Table 1.
Table 1. Appetite and feeding behaviour. The list of other nusual things is derived from self report and so may be an unusual things is derived from self report and so may be
underestimate of the true prevalence in the population.

| Item | No of dogs | No of households |
| :--- | :--- | :--- |
| Greedy appetite | 321 | 240 |
| Fussy appetite | 173 | 157 |
| Chew stones | 80 | 67 |
| Own faeces | 38 | 29 |
| Other dogs' faeces | 32 | 24 |
| Other animals' faeces | 211 | 159 |
| Other unusual things | 162 | 156 |
| Unusual foodstuffs | 82 |  |
| Paper \& wood items | 29 |  |
| Grass \& soil | 25 |  |
| Plastic and glass | 19 |  |
| Clothing \& furnishing | 17 |  |
| Coal \& charcoal | 4 |  |
| Insects | 2 |  |

Training, obedience and contro
13 ( $57.2 \%$ ) dogs from 337 households were said to pull on the lead and 106/95 (14.7\% dogs) drag behind when on the lead. 197/174 ( $27.3 \%$ dogs) had run away when off lead. 661/477 (91.6\% dogs) were said to know the command sit, 479/370 ( $66.3 \%$ dogs) down, 541/411 ( $74.9 \%$ dogs) stay, 397/293 (55.0\% dogs) heel, 629/442 $87.1 \%$ dogs) here/come (although 197/174 might ru $606 / 437$ ( $83.9 \%$ dogs) no 515/371 (71 3\% doss) lea and $366 / 251$ ( $50.7 \%$ dogs) off. 113/91 ( $15.6 \%$ dogs) wer eported to chase livestock, $51 / 48$ ( $7.1 \%$ dogs) cars, 77/70 (10.7\% dogs) bicycles, 68/78 ( $9.4 \%$ dogs) joggers $411 / 334$ ( $56.9 \%$ dogs) cats, 216/184 ( $29.9 \%$ dogs) dogs and $216 / 213(29.9 \%$ dogs) other items. Rabbits and hares
were the most common of these ( 81 ) followed by wild birds
(74), squirrels (60) with less than 20 reports of other items. $66 \%$ of dogs scored tended to chase two or more classes of object.
Owners were asked how they tended to reward their dog ( $n=502$ ). 286 used food, 216 verbal praise, 215 physical contact e.g. patting or stroking and 102 social interaction e.g. play, fussing etc. By contrast 373 used verbal forms of admonishment, 163 admitted using physical punishment, 74 instructive reprimands e.g. "go to bed", 43 force isolation and 13 threatening gestures.

## Aggression

Owners were not asked directly if their dog was aggressive, but when they tended to growl snap or bite. The results for responses relating to aggression in the home are summarised in table 2.
Table 2. Target of aggressive behaviour of dogs and their response to owner intervention

| Target | No of <br> dogs (\%) | Stops when <br> told | Stops when <br> given attention |
| :--- | :--- | :--- | :--- |
| Adult male <br> household members | 45 (6.2) | 39 | 30 |
| Male children in <br> the household | $22(3.0)$ | 19 | 21 |
| Adult female <br> household members | $31(4.3)$ | 27 | 22 |
| Female children in <br> the household | $18(2.5)$ | 17 | 15 |
| Familiar adult <br> male visitors | 48 (6.6) | 36 | 40 |
| Familiar male <br> child visitors | $25(3.5)$ | 21 | 19 |
| Familiar adult <br> female visitors | $41(5.7)$ | 32 | 37 |
| Familiar female <br> child visitors | $30(4.2)$ | 24 | 24 |
| Unknown adult <br> male visitors | 233 (32.3) | 205 | 200 |
| Unknown male <br> child visitors | 106 (14.7) | 96 | 91 |
| Unknown adult <br> female visitors | $191(26.4)$ | 165 | 164 |
| Unknown female <br> child visitors | $108(14.0)$ | 98 | 93 |

132 (18.3) dogs would reportedly appear aggressive at other times in the home: in the presence of other dogs (e.g towards playing (41) and a minority of other occasions $48 \%$ showed aggressive behaviour in 3 or more of the above contexts. 171 dogs were said to growl to keep possession, but 133 would stop when told to. 75 would and 74 snap $r$ bite to protect their food bow. 120 growled 78 would growl to stop people going somewhere and 28 snap or bite at this time. 93 dogs had attempted to or succeeded in biting an adult male, 46 a male child, 57 a female adult and 40 a female child and 201 another dog, of whom 87 of the targets were male and 66 female. 79
attacks on other animals were reported, 27 on cats, 20 on livestock, 18 on wild mammals, 9 on horses and the remaining on wild birds and other pets.

## Other behaviours

$91 \%$ of animals had been known to soil in the house since they had been supposedly housetrained. $161 / 123(22.3 \%$ ( $12.5 \%$ dogs) urinated when excited and $27 / 17$ ( $3.7 \%$ doss) small spots when rolled over. 67 ( $9.3 \%$ ) dogs from 62 households would reportedly mount their owner's legs, 50 would stop when told and 42 if given some other form of attention. 40/38 would try to mount furnishings, with 31 stopping when told and 32 if given attention.
433 (86.2\%) households reported that their dogs engaged in some form of attention seeking behaviour. The most commonly described tactics were: nudging (149), pawing/scratching (121), vocalising (112), 74 jumping up, 66 staring at the owner and 61 presenting an item to th owner. Overall, $58.4 \%$ engaged in 3 or more attentio seeking behaviours.

## Grouping of behaviours

Many of the item responses were classified according to their demographic characteristics and into groups of "behavioural signs" relating to obedience, tendency to chase, general activity, attention seeking behaviour, vocalisation, urination, housoiling, aggressivity, owner absent problems, submissiveness, sexual behaviour, coprophagia, fussy eating, greediness and unusual appetite. Simple correlations between these were then determined. centred on the median values for the category in order to determine their significance and examine potential higher order relationships. This revealed only significant pairwise associations. These were: activity and attention seeking (positive), activity and aggression (positive), activity and chasing (positive), activity and obedience (negative), obedience and housetraining (negative), housetraining and
chasing (positive), housetraining and aggression (positive). chasing (positive), housetraining and aggression (positive), Average linkage cluster analysis was then used to assess the grouping of behaviour of individuals in single dog homes $(n=356)$. Within the 20 clusters obtained by average linkage, there were some reasonably clear inclusive feature consists of individuals who fell below the median level of obedience but were above the median score for activity. They also tended to be attention seekers with a fussy appetite and were more aggressive than typical. In the second group ( $\mathrm{n}=6$ ) individuals were obedient but highly active, housetrained dogs with a greedy appetite and tended to show redirected sexual behaviour. They also tended to be aggressive. In the third group, ( $n=5$ ) individuals were a unusual things. They did not show submissive urination tend to be aggressive. In the forth group ( $\mathrm{n}=61$ ) dogs were of above median activity without other consistent defining features. In the fifth group ( $n=13$ ) members were generally housetrained but disobedient with low activity scores and an absence of submissive urination. The sixth group 6 $(\mathrm{n}=12)$ consisted of dogs that tended to be both active an aggressive in a large number of contexts. The seventh
group defined ( $n=162$ ) appeared to represent a population of dogs with no exceptional group features and this of dogs with no exceptional group features and this group ( $n=46$ ) the main defining feature of individuals was their high level of aggressivity with no consistency in any
other dimension. In the ninth group $(\mathrm{n}=3$ ) very active, disobedient, aggressive dogs who tended to chase were clustered. In the tenth group ( $n=8$ ) individuals tended to be haracterised by disobedient, aggressive dogs who tended mall numbers of doss and individuas with above median
aggression.

When asked to evaluate their dog's behaviour, 260 ( $51.8 \%$ f owners reported their dog had an annoying habit and $324(64.5 \%$ ) described endearing habits (primarily affectionate behaviours directed towards the owner, greeting behaviour and obedience). 127 ( $25.3 \%$ ) of owners described at least one behaviour as a problem. The most common of these were aggression and predation (48), 27 elated to obedience and control, 21 to barking and ocalisation, 13 to overexcitability / activity level and 11 to nervousness.

## Discussion

These data not only provide a benchmark for the norm but also provide an initial suggestion at the potential groups of behaviours which may commonly be seen in pet dogs. The norm provides a point of reference for the prevalence of解 sought. Such data also provided an initial basis for advising potential dog owners on what behaviour they might expect from their pet. The overall impression gained from the data that the majority of dogs appear to show more difficulty senerally recognised, as evidenced by their behaviour. Thus even dogs without overt manifestations of stress which are reported to be a problem by their owners, may be struggle to cope. Further research is clearly needed into the psychological needs and limits of the domestic pet dog. The discrepancy between what dogs actually do and what is eported to be a problem is also highlighted in this work wners reported an obedience problem despite the widespread prevalence of disobedience, and whilst 348 dogs were reportedly easily overexcited only 13 owners considered this a problem; 39 animals were reported to chew furnishings in the house but only 11 owners complained of a destructiveness problem and although 67 logs mounted their owners only 8 reported a problem elated to inappropriate sexual behaviour. Greater wareness of these indings may also help guide the ptimise canine welfare and reduce the risk of surrender to rehoming centres.

## Reference

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## Acknowledgements

he authors would like to thank all of the students involved gathering the data for this work and Ceva Animal Health for sponsoring the work.

Key words: activity, adaptation, aggression, dog, survey.

## Daniel Mills

Daniel Mills graduated from Bristol University in 1990 before going into small animal and then mixed practice. In 994, he joined De Montfort University where he niversity to support their animal science programmes. In 2001, the Department transferred to the University of Lincoln, and he is now based at their Riseholme Campus. He has written one book and co-edited three others ncluding the new BSAVA Manual of Canine and Feline Behavioural Medicine and he frequently publishes articles in both the popular and scientific press. His research group has been at the forefront of the development of the use of f behaviour problems in companion animals. His other research interests include psychopharmacology. psychobiological models of behaviour problems and animal raining and cognition. Daniel Mills is the first vet to in the United Kingdom to be recognised as a Specialist in eterinary behavioural medicine by the RCVS.

