“Who’s been a good dog?” - Owner perceptions and motivations for treat giving

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ABSTRACT

Complex relationships commonly exist between owners and their companion animals, particularly around feeding behaviour with an owner’s affection and love for their animal most pronounced through the provision of food. It is notable that the pet food market is experiencing strong year-on-year growth in sales of dog and cat treats. Recognising the role of treat giving in pet nutrition, the objective of the study was to investigate owner attitudes and motivations towards feeding treats (shop bought and other) to their dogs. A researcher-mediated questionnaire consisting of both quantitative and qualitative questions was used to interview dog owners (n = 280) at two locations: an out-of-town retail park and a country park in the East Midlands. Owners almost unanimously viewed the word ‘treat’ within a nutritional context, as opposed to a new toy or other pleasure defining this term. The majority (96%) of owners interviewed reported feeding treats to their dog, with 69% feeding shop-bought treats on a daily basis. A wide range of treats were reportedly given by owners and the majority of owners interviewed fed multiple treat types. No association was found between owner age and frequency of shop-bought treats fed (P>0.05), nor owner age and frequency of food given to the dog from the owner’s plate (P>0.05). A wide range of unsuitable foods which would not be considered balanced for the animal’s nutritional requirements were viewed as a treat by some dog owners. A range of positive and negative views around the feeding of treats were expressed by dog owners, with some citing beneficial effects while others were clearly aware of the association between treat feeding and potential weight gain/obesity. Owner views included themes around positive reinforcement and responsibility but also reflected relational aspects of the human-animal bond. The results of the study show that treat giving is commonplace in feeding regimes and that treats are embedded in the feeding behaviour of many dog owners. However, the different views expressed around the motivations for,
and feeding of, dog treats, reinforce the need to better understand owner psychology linked to this area, and the role this may play in the growing pet obesity epidemic.

**Keywords:** Canine obesity, Treats, Feeding, Owner perception, Motivation

1. Introduction

The number of overweight and obese dogs is increasing and obesity is considered to be the most common nutritional disorder in companion animals (German, 2006). The exact number of affected pets is difficult to estimate but a recent survey has reported that 45% of UK dogs are overweight according to veterinary professionals, with three quarters of vets believing that pet obesity has worsened over the last five years (PFMA, 2014). Understanding the nature of this complex issue is proving challenging: as in human obesity, the underlying causes are likely to be complex, social and multifactorial. A number of associated risk factors that may predispose an animal to obesity have been proposed including lifestyle, behavioural and dietary issues (German, 2010). An additional influence that has also recently been highlighted is the importance of owner attitudes and perception in recognising weight gain in dogs (German, 2011); White et al. (2011). It has been suggested that successful strategies in tackling the problem will rely on gaining a better understanding of the complex social interactions between owners and pets (Linder and Mueller, 2014).

The complex relationships and emotional attachments that develop between owners and their animals often mean pets are considered to be ‘part of the family’. One area where
this affection and love for the animal can be most pronounced is through the provision of food. The complex relationship between feeding patterns and obesity in dogs has been acknowledged where aspects of owner attitudes and behaviour do not necessarily translate into good animal welfare (Wensley, 2008; Bland et al., 2009; Heuberger and Wakshlag, 2011). Recent national surveys monitoring changes in pet welfare issues across the UK have also commonly reported the problem of owners feeding unsuitable foods to their dogs (PDSA, 2012, 2013, 2014).

The provision of treats is often an important component in the relationship between dog and owner (Linder and Mueller, 2014). The current value of the UK dog treat market is estimated to be in excess of £390 million (PFMA, 2015); with a steady year-on-year growth in sales at approximately 5%. Since dog ownership has not seen equivalent growth, the implication of this is that dog owners are purchasing an increasing number of treats for their animals, a claim that appears to be backed up by a number of sources (Bland et al., 2009; PDSA, 2013, 2014).

Although reference is commonly made to treats in the discourse around dog obesity (Robertson, 2003; Courcier et al., 2010; German, 2010), this specific aspect of feeding by dog owners remains under-researched. For several years, it has been suggested that owners may not be giving proper consideration to the nutritional requirements of their dog when giving treats (Kienzle et al., 1998). In addition, the term ‘treat’ is often not well-defined, particularly given the wide range of food that could be included in the definition, and little is known about the views and opinions of owners with regard to the term, nor the perceived role that treats play in the owner-dog relationship. A greater understanding of owner attitudes and motivations around feeding treats is needed if we are to better recognise how owner factors affect treat-giving behaviour. The main objective of this study
therefore was to examine owner attitudes and views about treats, with a focus on owner perceptions and motivations for feeding them to their dog.

2. Materials and Methods

Recruitment and interviewing of dog owners

This study was carried out at two locations in the East Midlands: an out-of-town retail park and a country park, popular with dog walkers. Data were collected from voluntary dog owners who were approached on an ad hoc basis at the two locations. Identities of study participants were not collected and all data from dog owners has been managed anonymously in line with the University of Nottingham data management policies. On site interviews were conducted by four trained researchers over February and March 2014. Prior to being interviewed, dog owners were initially asked if they wished to participate and were given some verbal information about the nature of the study, along with an information sheet. All interviewees were confirmed to be over the age of 18 years before being interviewed. If a dog was accompanied by more than one individual, the interviewer asked from a response from a nominated person in the group. All answers given were carefully recorded in writing by the interviewer but were not tape recorded so cannot be regarded as verbatim. Following completion of the questionnaire, owners were offered a small gratuity (in the form of a dog exercise toy, e.g. squeaky tennis ball) and reminded about their consent and the details on the information sheet, including further contact information. All protocols and procedures were conducted under Institutional guidelines as approved in advance of the programme by the School of Biosciences Ethical Review Committee, University of Nottingham, UK.

Questionnaire design
Data were collected using a semi-structured questionnaire with an average interview completion time of 10 minutes per owner. The questionnaire composed of 33 questions in total and contained both quantitative and qualitative questions. As in the approach previously used by the research team (White et al., 2011), a number of ‘closed’ questions were included, requiring a single word answer or box ticking on a Likert scale, allowing general patterns and trends to be identified. In addition, the inclusion of more ‘open-ended’ questions allowed dog owners to expand upon their answers given during the interview. Owners were asked about their understanding of, and general views about treats, as well as foodstuffs they considered as treats and their motivations for feeding them. As part of the questionnaire, owners were also asked to allocate their dog’s weight status using one of the following categories: (i) underweight, (ii) ideal weight, (iii) overweight or (iv) very overweight. As before, themes were not determined in advance but were instead inductively identified from the dataset. Samples of both open-ended and closed questions are provided in Table 1.

**Statistical analysis**

Quantitative data were analysed using a generalized linear mixed model analysis (Genstat v14, VSN, International Ltd, Hemel Hempstead, UK) to determine whether treat type (as reported by the owner) varied with owner age (categorised into four groups: 18-30, 31-45, 46-59 and 60+). Similarly, the data were analysed for any association between proportion of dogs receiving each treat type and owner perception of the dog’s weight. In addition, Chi-squared analyses were conducted to investigate whether there were any associations between owner age and 1) frequency of food given from the owner’s plate or 2) frequency of shop-bought treats given to the dog. Feeding frequency was categorised into ‘daily’, ‘3 times a week’, ‘once a week’, ‘once a month’ and ‘never’ for statistical analysis. The probability level taken as indicating statistical significance in this study was 5%.
3. Results

Dog and owner demographics

A total of 280 questionnaires were completed across both sites with 149 interviews from the out-of-town retail park and 131 interviews from the country park. The sampled dog population was balanced according to gender (51% male, 49% female). In terms of age, 75% of dogs were 6 years or younger. Owner demographics revealed that 72% of the sampled dog population had female owners. Owners aged 30 years or under comprised 7% of the sample population, with 23% aged between 31 and 45 years. Owners aged between 46 and 59 made up 41% of those interviewed, with 29% of owners aged 60 or above. Overall, the sampled population was towards older dog owners with 70% of those interviewed aged 46 and over.

Owner-reported treat giving behaviour

Owners were initially asked about their definition of the term 'treat' and most defined it within a nutritional context; hardly any owners reported that a treat might be a new toy or anything other than food-related. Subsequent questions around views and feeding frequency of a range of different types of treats revealed the majority (96%, \( n = 268 \)) of interviewed owners reported giving treats to their dogs, and a considerable number of these (\( n = 192 \)) reported feeding shop-bought commercial treats on a daily basis. When questioned, 70% of dog owners considered treats to be an additional extra, rather than an integral part of their dog's diet. Within this group, only 4 owners reported that they adjusted meal size to account for this, to prevent problems with weight gain. Of those owners who considered treats to be a normal part of the dog's diet, only 10 reported that the size of the dog's meal was adjusted depending on the number of treats fed.
The most popular treats given were dog biscuits and dog chews with 77% and 62% of owners considering these a treat for their dog respectively (Figure 1). The least common ‘treat’ given was human chocolate with only 2% of owners reportedly feeding this. Other treats included ‘table scraps’ (29% of owners), cheese (35%) and ‘other human food’ (38%). Owners in the current study fed a wide range of ‘human foods’ as treats to their dogs; aside from meat and vegetables, a range of less healthy foods were also reported such as crisps, sausage rolls, biscuits, cakes and even takeaway food.

Dogs receiving each treat type against owner-reported description of dog weight revealed a greater proportion of ‘very overweight’ dogs receiving table scraps and higher proportions of ‘underweight’ and ‘very overweight dogs’ receiving cheese as a treat (Figure 2). A similar observation was noted for dogs receiving ‘other human food’ with higher proportions of ‘underweight’, ‘overweight’ and ‘very overweight’ dogs reportedly receiving this category of treat.

The majority of interviewed owners in the current study reported feeding multiple treats (Figure 3), with the most common combination (24% of owners) being two treat types. Overall, in the sampled population, 76% of owners gave between one and four different types of treats to their dog. When asked specifically about the frequency of feeding ‘human food’ to their dog, 20% (n = 55) of owners reported feeding it daily, 17% (n = 48) said three times a week, 20% (n = 56) reported once a week feeding, with 8% (n = 23) feeding it once a month and 35% (n = 98) of owners reporting that they never feed human food to their dog. Within the sample population, the type of food considered as a treat by the owner was not significantly affected by owner age (P > 0.05). Similarly, no significant statistical effect was determined between owner age and frequency of shop-bought treats; nor owner age and frequency of food given to the dog from the owner’s plate (P>0.05).
Owners’ views and attitudes toward treat giving

The inclusion of qualitative questions in the questionnaire allowed owners to expand upon their answers to account for their treat-giving behaviour. Specifically these questions allowed owners to discuss their views on treats and motivations for feeding. The data revealed a range of positive and negative views expressed, with some owners clearly aware that overfeeding treats can lead to problems with weight gain and obesity. By contrast, other owners felt that the feeding of treats was beneficial. Another common theme was the idea that treats should only be fed as a reward for good behaviour or earned as part of training for the dog. A selection of reported owner comments is shown in Table 2.

4. Discussion

The overall aim of the current study was to gain a better understanding of dog owner views and attitudes towards treats, and how these relate to their treat-giving behaviour. To the authors’ knowledge, this is the first such study examining more in-depth perceptions and motivations for feeding treats by dog owners.

At a fundamental level, the first interesting observation from the current study was that owners generally view the term ‘treat’ in a purely nutritional context, associated with food or feeding. It was noticeable that hardly any owners even mentioned other factors that could be considered under this term such as a new toy for the animal. This observation tends to reinforce the suggestion that dog owners associate showing affection or love to their animal, largely through the provision of food. Based on the questionnaire results, a large number of dog owners engaged in feeding treats. This observation supports other
findings (PDSA, 2011, 2014; PFMA, 2014) and suggests that the feeding of treats has become commonplace among the dog owning population, and would appear to be supported in view of the ongoing rise in retail sales of dog treats. When asked about their understanding of the term ‘treat’, it was common for owners to report that treats were anything fed that was not in the dog’s main diet, as well as something given infrequently or even as a bribe or distraction. These owner-held opinions, specifically that treats should be fed infrequently, would appear at odds with the collected data where the majority of owners reported feeding shop-bought treats on a daily basis. The findings would indicate there is some disconnection between the perceived views of some pet owners and their self-reported actions and behaviours.

Nearly three-quarters of owners interviewed considered treats to be an additional extra to their dog’s diet, rather than an integral part of it. This is encouraging and demonstrates some awareness among owners that treats should not form part of the dog’s main meal. The idea of a ‘treat allowance’ has been proposed (Laflamme, 2012) whereby treats are limited to 10% of the daily calorie allowance for the dog. However, one important, yet concerning observation from the current study was that irrespective of whether owners considered treats to be part of, or in addition to, the dog’s normal diet, only a minority of owners commented specifically that they made adjustments to the size of the dog’s main meal(s) as a result of feeding treats, to prevent their animal becoming overweight. This observation alone is concerning and clearly suggests that most dog owners may have difficulty gauging the overall daily calorie intake of the animal, and how their feeding of treats may be contributing to this difficulty. No specific association was found between treat feeding and owner age which is in agreement with previous studies (Colliard, 2006). The sample population in the current study was skewed towards older owners and it would therefore be useful for any future work to try to encompass a wider owner demographic.
One positive finding from the study was that only a very small number of owners (2%) reported feeding human chocolate. A number of owners reported feeding cheese to their dog but noted that this was a means of delivering or hiding medication for their animal. This finding could explain the observation in the dataset where higher proportions of underweight and very overweight dogs were reportedly fed cheese as a treat (Figure 2).

More worrying was the range of take-away foods including Chinese takeaway, fish and chips, kebabs, curry and pizza that were reportedly fed by a number of owners. The feeding of takeaway foods was surprising, given the typically high salt and fat content of these which would be advised against for dogs. These data support previous findings highlighting a range of unsuitable foods that are considered a treat by some dog owners (PDSA, 2011, 2012). The range of unsuitable foods given is of particular concern as these human foods would not be balanced for the dog’s nutritional requirements. Although no association was observed between the owner’s perceived health status and their description of their dog’s weight in the current study, it is important to note that the composition of any table scraps offered to the dog will likely be a reflection of the diet and nutritional status of the owner (Heuberger and Wakshlag, 2011). An owner’s diet that is high in salt, fat and sugar will ultimately result in table scraps for the dog that are similar in nutritional composition. Treat feeding is perceived as an integral component in the relationship between dog and owner (Linder and Mueller, 2014) and there is evidence that owners of overweight dogs will turn to other strategies such as weight loss products, attending an obesity clinic or seeking veterinary guidance before they are willing to eliminate treats (Bland et al., 2010).

The inclusion of open-ended questions in the study meant that it was possible to capture owner views of treats, notions of responsibility, and why they feed them. As in previous
work using this approach (White et al., 2011), owners often used personal narratives to explain why they fed treats and expressed their views on the perceived beneficial (or otherwise) aspects of feeding them. Some owners commented that treats were a welcome addition to the otherwise ‘boring’ diet – clearly, revealing the owner’s view that the regular diet was insufficiently interesting for the dog. The idea that treats should only be used as a training aid was another theme that emerged from the dataset. A number of owners expressed the view that treats should only be given to the dog if they were ‘earned’. These questions also captured that some owners had started treat feeding as part of puppy training classes and that this habit had remained as the animal reached adulthood.

Other owners considered the feeding of treats to be essential and were of the opinion that giving treats in some way kept the dog ‘happy’. Conversely, these owners felt that not feeding treats to their dog was like “not giving children toys”. Owners in this category would appear to be humanising the dog, viewing it as a human child, rather than a pet. These comments appear to reinforce the suggestion that the care provided by owners for their pets could mirror that provided by parents for their children. A number of major parenting styles have been recognised and it has recently been suggested that these could have possible parallels with pet ownership (German, 2015).

Within the sample population, several owners were aware of the potential problems with giving treats to dogs. Reference was made to the need for owners to be responsible and there appeared to be some recognition that it was not always easy for owners to properly keep track of how many treats are being fed. Again, a comparison was made with children by some owners, with concern expressed that giving a high number of treats to children or dogs could result in problems with weight gain in both. These personal views clearly
demonstrate the complex human/animal relationship that exists between the owners interviewed in this study and their dogs. These views are perhaps not surprising, given the complex and multifactorial roles that pets fulfil in society with many owners considering their pet a friend or like a child, and the wider perceived benefits with pets acting as social catalysts and providing companionship which can be clearly beneficial for some owners in providing an enhanced quality of life (McNicholas and Collis, 2000; McNicholas et al., 2005).

The data from the current study reveals that treat feeding appears endemic in feeding regimes and treats are embedded in the feeding behaviour of most dog owners. In agreement with other studies, the majority of dogs were fed treats, and a large number of owners were giving them on a daily basis; comprising of a variety of appropriate and less appropriate foods in relation to the dog’s nutritional requirements. An interesting finding was that large numbers of owners appear to be feeding multiple treat types to the dog, as reflected in the treat combinations reported, with two treat types being the most common. The reasons why owners are feeding multiple types is not clear; it could be that owners feed a combination in the belief that this introduces some variety of taste for the dog although further research is warranted to investigate this further. Whilst some owners in the current study were aware of the potential problems of inappropriate feeding of treats, other owners clearly held differing views and felt that treats were a necessary part of the dog’s diet. When considering these diverse views around the feeding of treats among dog owners, it should be remembered that all owners are now legally bound to provide a ‘duty of care’ towards their pets, including the need to provide a suitable diet (DEFRA, 2006), with the potential of prosecution for pet owners who fail to provide this need. It is evident that some of the foods reportedly given by owners in the current study would not be viewed as suitable for the dog. As part of the wider debate around effective weight
management strategies for pets, the importance of gaining a better understanding of diet (including treats) and how this plays a key role in the relationship between owner and pet is outlined in recent guidelines for veterinary professionals, published by the American Animal Hospital Association (Brooks et al., 2014).

Further research would be warranted around the nutritional specification of commercial dog treats and the role that marketing and packaging of these treats plays in owner purchasing decisions and justification of treat use. There has been a recent call from the insurance industry for clearer labelling on dog and cat treats (Anon, 2015). Although the dog treat market is more established, sales of treats for cats also appear to be rising (PFMA, 2015). It would be interesting to explore whether similar views and motivations for treat feeding, as expressed by dog owners in this study, were also expressed by owners of cats. Another area that was evident in the dataset that warrants future research is how treats are used as training aids and the ease (or otherwise) felt by owners in their ability to stop providing them to the dog when the programme of training is complete. Linked to this, the idea of what is considered as the treats being ‘earned’ by the dog; is it appropriate positive reinforcement for desired behaviour, or some other owner-perceived factors.

These results provide some useful insights but it is acknowledged that only two sites were used for this study within the East Midlands during a specific time of year. Owner populations were skewed towards older female participants, possibly due to the fact that interviews were carried out during the day. Another caveat is that where the weight status of the dogs was highlighted in this study, the weight status was allocated purely by the owner, without verification by a veterinary professional. Previous research (White et al., 2011) suggests that some owners of overweight animals may not perceive them to be such, viewing them as an ‘ideal weight’ status, which could have influenced the weight
allocation categories. Nonetheless, the results from this study yield detailed insights into the wide range of views and opinions expressed, and behaviour of dog owners with regard to feeding treats. These findings should help inform the wider debate, especially around the area of owner attitudes, with regard to feeding behaviour and the role this plays in the growing pet obesity epidemic.

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Conflict of interest

None of the authors of this article has a financial or personal relationship with other people or organisations that could inappropriately influence or bias the content of the paper.
REFERENCES


Table 1. Sample questions included in questionnaire interviewing dog owners about their motivations / reasons for treat-giving

<table>
<thead>
<tr>
<th>‘Open’ questions</th>
<th>‘Closed’ questions</th>
</tr>
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<tbody>
<tr>
<td>What do you understand by the term ‘dog treat’?</td>
<td>How often do you give shop-bought treats to your dog?</td>
</tr>
<tr>
<td>What is the main reason for giving treats to your dog?</td>
<td>Do you consider treats to be part of your dog’s normal diet or an additional extra?</td>
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Table 2. Sample of dog owner comments in relation to treat feeding

<table>
<thead>
<tr>
<th>Owner comments</th>
<th>Themes</th>
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<tbody>
<tr>
<td><strong>Positive views of feeding treats:</strong></td>
<td></td>
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<tr>
<td>“All pet owners should give treats, like you give to a child”</td>
<td>Relational (reflecting the nature of the animal-human bond)</td>
</tr>
<tr>
<td>“I think dogs need treats, it keeps them happy, not giving treats is like not giving children toys”</td>
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<tr>
<td>“Treats are something other than boring dog food”</td>
<td></td>
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<tr>
<td>“I don’t give them unless the dog does something for it, they are used for training”</td>
<td>Utility (Positive reinforcement / training)</td>
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<tr>
<td>“Dogs don’t perceive treats as a treat – they need to be earned”</td>
<td></td>
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<tr>
<td>“Treats should only be given for a purpose – e.g. training”</td>
<td></td>
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<tr>
<td><strong>Recognition of potential problems with feeding treats:</strong></td>
<td></td>
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<tr>
<td>“People pour treats on their dogs too frequently and it does the dog no favours”</td>
<td>Notions of Irresponsible owners (Awareness that many dogs are fed too many treats)</td>
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<tr>
<td>“Treat feeding can be a serious issue and owners need to be responsible”</td>
<td></td>
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<tr>
<td>“Some people give treats instead of a balanced diet”</td>
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<tr>
<td>“You need to be careful what you treat with and don’t do it too often. Like a child will put on weight if fed too much”</td>
<td>Risks of Overfeeding (Awareness of link with weight gain/obesity)</td>
</tr>
<tr>
<td>“People seem to feed treats often without realising how much they are feeding”</td>
<td></td>
</tr>
<tr>
<td>“Treats can have high fat content so need to be careful of overfeeding”</td>
<td></td>
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</tbody>
</table>
**Figure 1.** Type of treats fed by dog owners

![Bar chart showing the percentage of owners feeding different types of treats to their dogs.]

- DC = Dog chew
- DD = Dog chocolate drop
- DB = Dog biscuit
- HB = Human biscuit
- B = Bones
- P = Pigs ear/trotter
- TS = Table scraps
- C = Cheese
- HC = Human chocolate
- OH = Other human food

*DC = Dog chew, DD = Dog chocolate drop, DB = Dog biscuit, HB = Human biscuit, B = Bones, P = Pigs ear/trotter, TS = Table scraps, C = Cheese, HC = Human chocolate, OH = Other human food*
Figure 2. Proportion of dogs receiving each treat type against owner-reported classification of dog weight

DC = Dog chew, DD = Dog chocolate drop, DB = Dog biscuit, HB = Human biscuit, B = Bones, P = Pigs ear/trotter, TS = Table scraps, C = Cheese, HC = Human chocolate, OH = Other human food
Figure 3. Frequency of reported treat combinations given by dog owners