

Style over substance: what can parenting styles tell us about ownership styles and obesity in companion animals?☆

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Abstract

Obesity is a major medical concern in human subjects, and most concerning is the rapid recent increase in childhood obesity. Children are more likely to be obese if their parents are obese, an effect that is mediated both by genetics and environment, most notably parental influence. Four major parenting styles have been recognised: authoritative; authoritarian; indulgent; uninvolved. Too much parental control, as with the authoritarian style, is associated with a higher weight status in children. Conversely, indulgent feeding styles can also have negative consequences and, where control is too lax, a poor relationship with food develops, which may also lead to weight gain. Obesity is also a growing concern in companion animals, and it has parallels with obesity in children. For instance, overweight people are more likely to own overweight dogs. Furthermore, the care that people provide for their pets mirrors that which parents provide for children, and pets are commonly viewed as child substitutes. These similarities raise obvious questions about whether different styles of pet ownership exist, and what part they may play in attitudes to feeding as well as predisposition to obesity in pets. Future work could focus on determining to what extent styles of pet ownership mirror parenting styles, whether there are links to obesity in dogs and cats. Knowledge regarding the owner-pet bond might provide comparative insights into the links between parenting styles and childhood obesity.

Key words: Overweight: Dogs: Cats: Childhood obesity

Obesity in the human population

Obesity is a major concern to human health and is a global epidemic⁽¹⁾. Its major importance comes from the fact that it predisposes to many diseases, including type 2 diabetes mellitus, metabolic syndrome, CVD, arthritis and certain types of neoplasia. Whilst the rapid increase in the prevalence of adult obesity over the last 20 years has been alarming, of greatest concern is obesity in children, where there is a global trend for rapidly increasing prevalence⁽¹⁾.

Parenting styles

Various factors are said to be responsible for the development of childhood obesity including rapid early-life weight gain, socioeconomic status, time spent watching television and sleep duration^(2,3). In addition, parental weight status also exerts a strong positive influence on the weight status of their offspring, with obesity in children being more likely if their parents are obese⁽²⁾. This effect is thought to be related to both nature, through the transmission of genetic

predispositions⁽⁴⁾, and also nurture, not least the ways in which parents raise their children. One aspect relates to misperception of the body shape. In this respect, many obese people do not believe that they are overweight⁽⁵⁾, a misperception that is influenced by the parent's social environment⁽⁶⁾, which can affect compliance with weight-loss programmes⁽⁵⁾. Interestingly, parental misperception is also common, whereby they fail to recognise that their own child is overweight⁽⁷⁾.

A second aspect of nurture relates to feeding habits, use of food rewards and exercise. Indeed, the term 'family food environment' has been coined to summarise this very association^(8,9). Understanding of such influences has improved in recent years with greater knowledge of parenting styles and behaviours. Parenting styles reflect differences in two major variables: the degree of control that the parent exerts on the behaviour of their child; the degree to which the parent responds to the needs and wishes of their child⁽¹⁰⁾. Based on the extent to which these variables are expressed, four different styles have been recognised: authoritative; authoritarian; indulgent; uninvolved⁽¹¹⁾. Parents who make high

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demands on their children and show little responsiveness to their opinions or wishes are said to display an authoritarian style. The authoritative style is demonstrated by parents who have reasonable expectations of their child, but display warmth and adapt their approach to the wishes of the child within certain boundaries. These parents typically use discussion, negotiation and reasoning⁽¹²⁾, as well as providing rationales for certain behaviours^(13,14), and praising the child when they behave appropriately⁽¹⁵⁾. In contrast to authoritarian and authoritative styles, the indulgent parenting style is one in which parents display warmth and respect their needs, but there is limited monitoring of the child's behaviour. Finally, the uninvolved (or 'neglectful') style is characterised by parents who place few demands on the behaviour of their child and are unaware of their child's needs or opinions. Of these, the authoritative style of parenting is associated with the positive outcomes regarding behaviour^(11,16); for instance, there are associations with greater maturity of the child, and greater academic achievement⁽¹⁷⁾.

The association between parenting styles, feeding behaviour and childhood obesity has also been examined. Indulgent feeding styles can have negative consequences because, when control is too lax, a poor relationship with food develops leading to weight gain⁽¹⁰⁾. In some studies, too much parental control, as with the authoritarian style, is also associated with higher weight status in the children⁽¹⁸⁾, suggesting that food restriction or pressuring children to eat certain foods can also be counterproductive⁽¹⁹⁾. A criticism of many of these studies is that they are cross-sectional and, therefore, causality cannot be assumed. Indeed, some prospective studies have questioned this association, and suggest that parents may well be exerting those restrictive/authoritarian practices in direct response to observed characteristics in the child, such as a poor ability to self-regulate food intake^(20,21), or concerns that they may already be overweight⁽²²⁾. However, the findings of other longitudinal studies are consistent with a causative effect of restrictive practices; for instance, in one study⁽²³⁾, pre-existing restrictive feeding practices predicted both an increased BMI, between 5 and 7 years of age, and a greater tendency to eat in the absence of hunger. These disparate findings can, perhaps, best be explained by the fact that the associations between restrictive feeding practices and both feeding behaviour and weight gain are complex. Indeed, one study⁽²⁴⁾ demonstrated a possible two-way effect: for children who were predisposed to obesity, the presence of overweight status in children led to the adoption of restrictive feeding practices by parents, which, in turn, caused additional weight gain in the child. Similar findings were seen on other studies, which also suggest that parents' restrictive feeding practices are often implemented in response to their child being overweight or overeating that, in turn, leads to increased tendencies to overeat and eat when not hungry^(23,25).

Obesity in companion animals

As in human subjects, obesity is a growing concern in companion animals, with recent estimates suggesting that 34–59%

of dogs^(26–28) and 27–39% of cats^(29–31) are overweight or obese. The prevalence of obesity in companion animals has also been steadily increasing⁽³²⁾. Also similar to human subjects, obesity predisposes affected companion animals to many diseases, including diabetes mellitus, osteoarthritis and respiratory disease⁽³³⁾. Furthermore, metabolic derangements are known to occur^(34–36), whilst there are alterations in renal function⁽³⁵⁾. All in all, obesity adversely affects the quality of life⁽³⁶⁾ and shortens lifespan⁽³⁷⁾.

There are many factors that predispose to obesity in companion animals, including certain endocrine diseases (e.g. hypothyroidism in dogs only; hyperadrenocorticism in both dogs and cats)⁽³⁸⁾, neutering^(39,40) and genetics given known breed predispositions (e.g. Labrador retriever, cairn terrier, cavalier King Charles spaniel, Scottish terrier and cocker spaniel for dogs)⁽²⁶⁾. Furthermore, various owner and lifestyle factors have been implicated including socioeconomic status, middle age, apartment dwelling, physical inactivity and a lesser interest in preventive veterinary care^(5,6,27,28,41–44). A variety of dietary factors are also associated with companion animal obesity, including diet type and feeding treats and table scraps^(5,6,27,28,41–47). Owners of obese cats and dogs also observe them more closely during eating^(44,45). Furthermore, cat owners commonly misunderstand feline behaviour; in the wild ancestors of domesticated cats, limited social interaction occurs during feeding; however, owners can mistakenly assume that a display of affection from their cat means that they are hungry and are asking for food⁽⁴⁸⁾. If food is provided under such circumstances, the cat will learn to initiate contact to receive a food reward, causing overfeeding.

Treatment of obesity in companion animals involves dietary energy restriction, most commonly using a purpose-formulated weight-loss diet, and increasing activity^(49,50). There are notable benefits to weight loss with evidence for improved mobility (in obese dogs with concurrent osteoarthritis)⁽⁵¹⁾, improved insulin sensitivity^(34,52,53) and better quality of life⁽³⁶⁾. However, there is a mistaken assumption that weight loss is a straightforward process, with many veterinarians often believing that simply telling an owner to make sure their pet 'eats less and exercises more' will be successful. The reality is that it can be immensely challenging to ensure that a pet loses weight successfully, and the role of the owner is critical. In this respect, owners are responsible for controlling food intake whilst, at the same time, increasing their pet's physical activity^(49,50). Weight loss progresses slowly (typically <1%/week) and often requires aggressive energy restriction^(49,50). This can prove challenging to the owner who may become frustrated with an apparent lack of progress, or find it difficult to resist their pet when begging activity increases as a result of energy restriction. Not surprisingly, therefore, non-compliance is a major problem⁽⁴⁸⁾, with many owners feeding additional food against recommendations^(49,50). Furthermore, many owners choose to discontinue their pet's weight-loss regimen before reaching target weight; indeed, only half of dogs that commence a weight-loss programme successfully complete it^(54,55). Moreover, challenges for the owner exist even after the weight-loss period, because approximately half of dogs



that successfully reach target weight subsequently rebound⁽⁵⁶⁾. Therefore, far from this being a simple process with almost-perfect success, it is the minority of obese pet dogs that successfully lose weight, return to optimal condition and then keep the weight off. Many of the challenges evident in companion animal weight-loss programmes are similar to those faced by people who attempt to lose weight by restricting food intake. Indeed, long-term weight-loss success is disappointing with dietary management in human subjects, with studies suggesting that most participants ultimately fail and up to two-thirds actually regain more weight than they originally lost⁽⁵⁷⁾. Dietary factors play a crucial role because poor eating restraint is associated with the likelihood of rebound^(58,59).

Therefore, notable parallels exist between human and companion animal obesity, and this is not surprising for outbred species sharing the same environment. However, more specifically, obesity in pets may be an intriguing model for childhood obesity. In this respect, the care that people provide for their pets mirrors that which parents provide for children. Indeed, there are similarities between the interactions between owners and their dogs, and between parent and child⁽⁶⁰⁾. The owners of obese pets tend to overhumanise them^(44,45), and pets are often viewed as substitutes for children⁽⁶¹⁾. Furthermore, the dogs of overweight people are more likely to be overweight than the dogs of owners who are not overweight^(62,63) and, as is the case with parents misperceiving the body shape of their children, misperception of the body shape is also seen in pet owners^(64,65). Owners 'normalise' their animal's body condition, where most owners of overweight dogs underestimate their dog's body condition^(64,65). Therefore, given the known impact that parenting styles have on childhood obesity, it raises obvious questions about whether different styles of dog ownership exist, and what part they may play in attitudes to feeding as well as predisposition to obesity in pets.

Mapping parenting styles to pet ownership styles

Unfortunately, limited information exists in the veterinary literature regarding styles of pet ownership. One recent study⁽⁶⁶⁾ suggested that owners typically display one of three different 'orientations' towards their pet, namely 'dominionistic', 'humanistic' or 'protectionistic'. Dominionistic owners value pets in terms of their functional value (e.g. protection); humanistic owners view their pets as surrogate human beings and have a close attachment; and protectionistic owners have a general high regard for animals, and all pets, viewing them as valuable companions and free-thinking creatures. However, it is unclear as to whether and how such orientations relate to the parenting styles described earlier. Although to the author's knowledge, there has been no attempt to relate such styles to companion animal obesity, there are striking similarities with known observed patterns of dog ownership (Table 1). Nevertheless, given the lack of research in this field, it is an area in much need of development.

Clearly, therefore, the veterinary and animal nutrition community have a lot to learn about the basics of pet ownership styles. A lot of fundamental work is required, and there are many unanswered questions. For instance, it would be fascinating to know whether styles of pet ownership do indeed mirror the recognised parenting styles. It would also be of interest to compare the styles of owners of different pet species, and even different breeds within a species. Finally, for adults who are both parents and pet owners, it would be fascinating to determine to what extent their style of pet ownership mirrors their parenting style.

How can pet ownership styles help improve our understanding of causes of obesity?

So, how might the concept of ownership styles help with the topic of pet obesity? First, as with parenting styles and

Table 1. Key characteristics of human parenting styles⁽¹⁰⁾ and possible parallels with pet ownership

Parenting style	Associated feeding style	Possible examples of equivalent pet ownership styles
Authoritarian	Encourage eating using highly directive behaviours and are unsupportive	Consistency (time and type of food) No or few treats Food used to exert dominance (e.g. making a pet wait before commencing eating)
Authoritative	Actively encourage eating using non-directive and supportive behaviours	Consistency (time and type of food) Positive encouragement to eat right food Occasional functional treats (e.g. dental chews) Treats used in a positive way (e.g. behaviour training) No table scraps given
Indulgent	Make few demands to eat but those demands are supportive	Type and timing if food determined by pet Diet altered to suit pet's preferences Treats and table scraps frequently used Owner feeds pet by hand
Uninvolved	Make few demands on children to eat and are unsupportive	Owner shows little interest in pet Outdoor living pet (cat), sporadically visits at meal times Diet variable in amount and feed times Type of food determined by cost/convenience

childhood obesity, it would be worth determining whether different styles of pet ownership predisposed to obesity. A greater understanding might also help us to understand better what factors are associated with the failure of weight-loss programmes in obesity animals, most notably the high non-compliance and rebound rates^(54–56,67). It would be fascinating to explore the extent to which styles of pet ownership may influence success with weight programmes. In this respect, most current weight management strategies require the owner to exert control over both the amount and type of food fed, and also the denial of certain foods (including treats), akin to an authoritarian style. Owners with other styles might find such strategies difficult to adopt, predisposing them to fail. Most problematic would likely be those preferring and indulgent feeding style. Furthermore, although the use of an authoritarian style may enable other clients to succeed in slimming their pet, this strategy might then increase the likelihood of subsequent regain during the maintenance phase. Those foods denied during weight loss become more desirable for both the pet (increasing the likelihood of food stealing or consumption in excess if offered) and the owner (because a period of denying such food might increase the desire of the owner subsequently to feed it as a reward). A final question regarding effects of pet ownership on weight management would be to what extent pet ownership styles could be changed by education. If, like parenting styles, certain styles of pet ownership were known both to predispose to weight gain, and to adversely affect weight-loss outcomes, would it be possible to train an owner to adopt a different style?

A further challenge for companion animal weight management is the reluctance of veterinarians to discuss the topic of obesity with clients, as highlighted by a recent study suggesting that the topic is raised in only 1.4% of veterinary consultations⁽⁶⁸⁾. Given the current prevalence in dogs and cats (see previous text), many owners of overweight companion animals receive limited guidance from their veterinarian regarding optimal body condition. The reasons why veterinarians are reluctant to discuss the overweight status of a pet with their owner are not known, but might partly be due to concerns about offending the owner. Such reluctance might arguably be greater when owners are themselves overweight, not least given the positive association between BMI in owners and the body condition of their dog exists^(62,63). Clearly, therefore, this is a topic that many veterinarians find challenging and difficult to raise with clients. It is possible that knowledge of pet ownership styles could help. In this respect, if a veterinarian could identify the style of ownership, it might be possible to tailor their approach. In time, specific strategies could be developed for different owner styles, enabling greater tailoring of the approach than is currently possible.

Finally, knowledge of pet ownership styles could ultimately be used to help in obesity prevention. If certain styles were known to predispose to obesity, then targeted owner education could be applied to those owners with styles likely to predispose to weight gain. A recent study has identified that different populations of cat exist that respond differently to

long-term *ad libitum* feeding⁽⁶⁹⁾. Some cats are unable to regulate their food intake, leading to gradual lifelong weight gain, whilst others maintain stable weight and optimal body condition lifelong, presumably by regulating intake. Therefore, this work suggests that different groups of cat have different feeding styles, some of which are regulators, whilst others tend to overeat. When it comes to preventing weight gain, attention should be paid for matching pet ownership style to feeding style. For example, an owner with an indulgent feeding style might not be a good match for a cat that overeats, but might be fine if they were to own a cat that regulates; the owner could be free to feed what they wish, without the risk of undesirable weight gain developing in their cat. Instead, a better match for an overeating cat might be an owner with an authoritative style. Such an owner would provide consistency in terms of timing and amount of food provided and, thus, provide external control to ensure that an ideal weight is maintained.

Conclusions

In summary, the concept of parenting styles and its role in childhood obesity is fascinating, and knowledge developed in this field may have relevance to pets, not least those prone to obesity. It remains to be seen to what extent these styles are mirrored in pet populations, and what use we can make of such knowledge.

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