**OVERWEIGHT DOGS ARE MORE LIKELY TO DISPLAY UNDESIRABLE BEHAVIOURS: RESULTS OF A LARGE ONLINE SURVEY OF DOG OWNERS FRON THE UNITED KINGDOM**

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**Introduction**

Much of the global canine population is now overweight, and this can adversely affect health, lifespan, and quality of life. Undesirable behaviours are also common in pet dogs, and these can adversely affect welfare, as well as being stressful to owners. However, links between obesity and behavioural disorders have never previously been explored.

**Materials and methods**

An online survey was conducted between June and August in 2014, coinciding with the broadcast of a National UK television programme, exploring dog health, welfare and behaviour. Information gathered included signalment, overweight status, and the prevalence of a range of undesirable behaviours. The University of Liverpool Ethics Committee approved the project, and owners consented to data use. Fisher's exact test and multiple logistic regression analysis were used to determine associations between overweight status and owner-reported behaviours.

**Results**

A total of 17028 responses were received. After 'cleaning' (to remove obvious errors and missing data) and 'editing' (so that only dogs >2y were included), the final dataset comprised 11500 dogs, 1815 (15.8%) of which were reportedly overweight. Owners of overweight dogs were more likely to see them as "a baby" (odds ratios [OR] 1.39, *P*<0.001) and allow them to sleep on their bed (OR 1.42, *P*<0.001). Overweight dogs were also more likely to eat faeces (OR 1.19, *P*=0.007), guard food (OR 1.61, *P*<0.001), and steal food (OR 1.74, *P*<0.001). Other undesirable behaviours more commonly reported in overweight dogs included barking, growling or snapping at familiar people, strangers and other dogs (all *P*<0.001), and being fearful of outdoors (OR 1.42, *P*<0.001). Finally, owners were more likely to report that unsociable behaviours adversely affected their dog's health (OR 1.29, *P*<0.001).

**Discussion and conclusion**

Overweight status is associated with an increased odds of displaying many undesirable behaviours. Further studies are required to explore the reasons for these associations.