Influence of living in a multicat household on health and behaviour in a cohort of cats from the United Kingdom

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Introduction

Living in a multicat household has been associated with increased risk for various feline health and behavioural issues, including obesity, bite wounds, periuria and aggression towards people. However, the evidence supporting these associations is often anecdotal or based on retrospective studies.

This study aimed to address this weakness in the evidence base by using prospectively collected data from a longitudinal study to evaluate the potential associations between multicat households and the presence of health and behavioural issues in cats.

Approach

Data from the Bristol Cats Study – a longitudinal study of UK pet cats – were evaluated, and the details of cats that had remained in either a single cat or multicat household between questionnaires one (completed when cats were two to four months old) and five (completed when cats were two-and-a-half years old) were selected for analysis.

Information extracted for analysis included details on selected measures of health and behaviour (overweight/obesity, abscess/cat bite, periuria and negative interactions with owners) and potential explanatory factors for these outcomes (owner income and education, playing time, time spent outdoors and cat density).

The cats were divided into those that lived in single cat households and those that lived in multicat households, with those in multicat households being further divided based on whether there were agonistic interactions (eg, hissing or blocking behaviours) between cats in the household. Univariable and multivariable logistic regression models were then used to analyse associations between household type and each of the measures of health and behaviour.

KEY FINDINGS

- Cats living in non-agonistic multicat households had decreased odds of negative interactions with the owner, compared with single cats and those in agonistic multicat households.
- No association was found between household type and the odds of obesity, abscesses or periuria.

Results

Of the 783 cats included in the study, 78.7 per cent were living in multicat households. Of these, 62.2 per cent were in households reporting agonistic interactions between cats. No statistically significant association between household type and the likelihood of cats having obesity, abscesses or periuria was found ($P>0.2$).

The likelihood of negative interactions with the owner (eg, growling or hissing) was influenced by the intercat relationships in the household. The odds of negative interactions with the owner in single cat households and agonistic multicat households were not significantly different. However, non-agonistic multicat households had reduced odds when compared with single cat households ($P<0.001$).

Interpretation

No evidence was found for an association between household type and owner-reported overweight/obesity or periuria in this sample of cats. Although, this lack of association could be due to the study having insufficient statistical power.

Living in a single cat household was associated at univariable level with having an abscess or cat bite, indicating that such injuries are more likely to be the result of an agnostic encounter with an unfamiliar cat than between cats within the same household. However, it may be that confounding factors existed that were not detected in this study.

The cats in the present study were all young, so play-related aggression could be a potential reason for the finding that cats in single cat households were more likely to have negative interactions with the owner than cats in non-agonistic multicat households. However, the likelihood of negative interactions with the owner was the same in agonistic multicat households as in single cat households. An explanation for this could be that intercat conflict in agonistic multicat households can lead to redirected aggression towards the owner.

The results of this study should be interpreted with some caution, as this cohort is not necessarily representative of the general population of UK cats. The occurrence of health and behaviour outcomes in this cohort is also low, resulting in a lack of power to detect small but possibly clinically relevant effects. Finally, the definition of an agonistic household was derived from owner reporting of agonistic behaviours, so it is possible that some cats may have been mis-identified as having agonistic interactions.

Significance of findings

The findings of this study suggest that cats may not necessarily be at increased risk of health and behavioural issues when living with other cats, and this should be taken into account when considering the welfare of cats in multicat households.

As the likelihood of negative interactions with the owner was influenced by the intercat relationships rather than the multicat household itself, it is important that veterinary practices and rehoming centres promote methods of establishing and maintaining good intercat and cat-human relationships.

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