

A tail with two sides: introducing puppies to household cats



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Summary: The odds of puppies displaying only desirable behaviours following introduction to household cat(s) were higher when puppies were under 10-weeks-old, there were existing dogs in the household, and/or introduction speed was gradual/quite gradual. Barriers were often used to help manage introductions and many owners allowed the cat(s) to control the pace.

Background:

In the UK, approximately 7% of households own both cats and dogs¹. Although these two species can live together amicably^{2,3}, inter-species conflict can result in injury, poor welfare and/or relinquishment⁴⁻⁶.

There is little evidence to support recommendations regarding how best to manage household cat-dog introductions. Hence, data collected from dog owners (as part of an UK/ROI based longitudinal study of canine health and behaviour⁷) were used to explore the behaviours of puppies following introduction to household cats.



Methodology:

Data were collected from **897** owners before their puppies turned 22-weeks-old. From a predefined list, owners selected behaviours they had observed from their puppy following introduction to their household cat(s) and reported how quickly/gradually their pets were introduced. A free-text box was provided for additional details that owners wished to supply.

Multivariable logistic regression analysis identified factors associated with observed desirable behaviour following introduction. The free-text responses were coded inductively to identify the main themes.

Results:

Figure 1: Behaviour displayed by 897 puppies towards household cat(s)

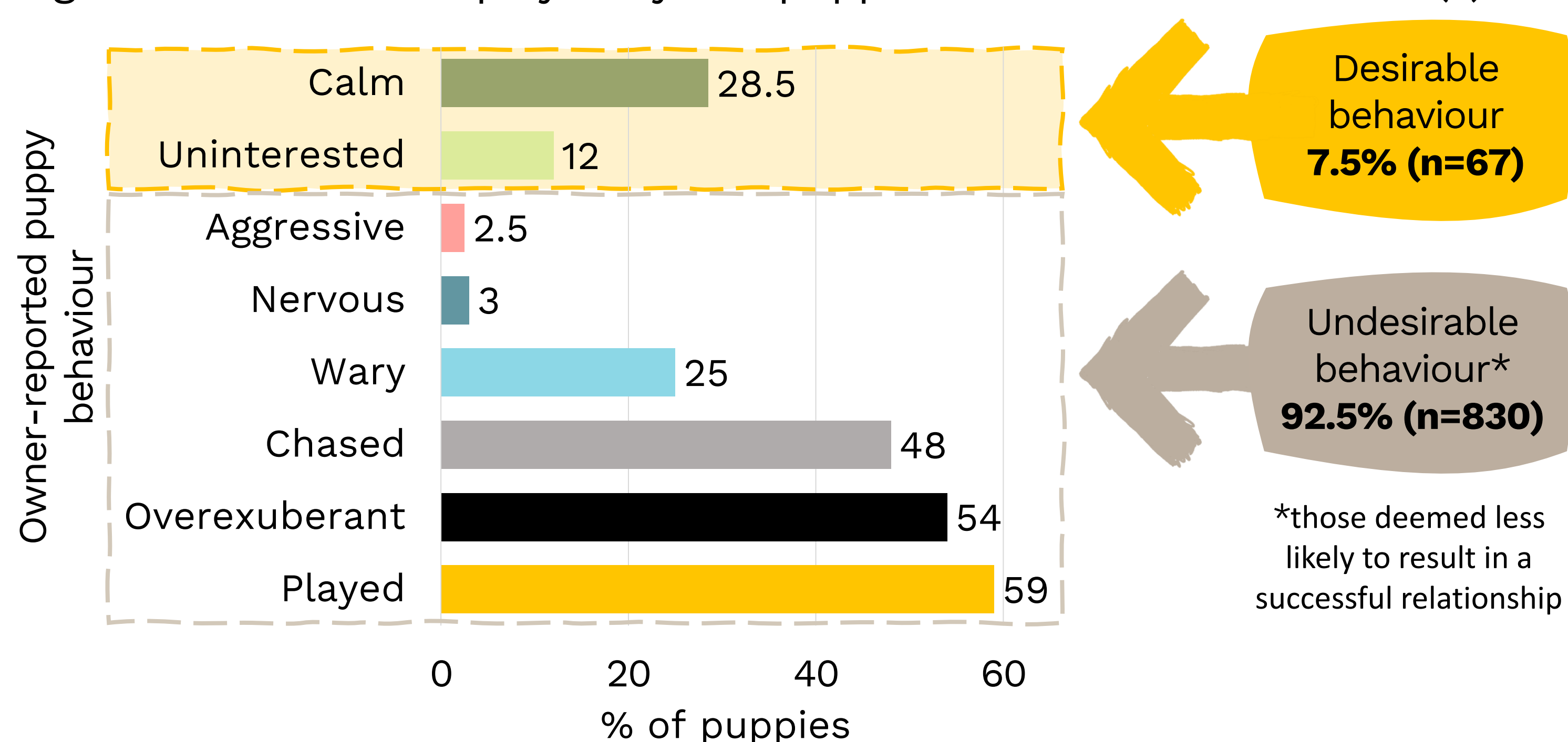


Table 1: Owner-reported introduction speed of puppy to household cat(s)

Introduction speed	Desirable behaviour (%)	Undesirable behaviour (%)
Gradually (slowly over a period of >1 day)	35 (10.2)	307 (89.8)
Quite gradually (gradually over the first day)	15 (7.8)	177 (92.2)
Quite quickly (interaction controlled for ≤2 hours)	6 (3.3)	174 (96.7)
Immediately (they were together straight away)	11 (6.0)	172 (94.0)

Multivariable logistic regression analysis:

Variables (categories in brackets) assessed for association with desirable puppy behaviour:

- Sex of puppy (Female or Male)
- Number of cats in household (Continuous variable)
- Number of dogs in household (Continuous variable)
- Another dog aged ≥1 year in household (No or Yes)
- Age puppy joined household (Continuous variable)
- Age of puppy when puppy-cat data were collected (<10 weeks or 10-22 weeks)
- Introduction speed (Gradually/quite gradually or Immediately/quite quickly)
- Kennel Club groups (Gundog, Hound, Pastoral, Terrier, Toy, Utility, Working)

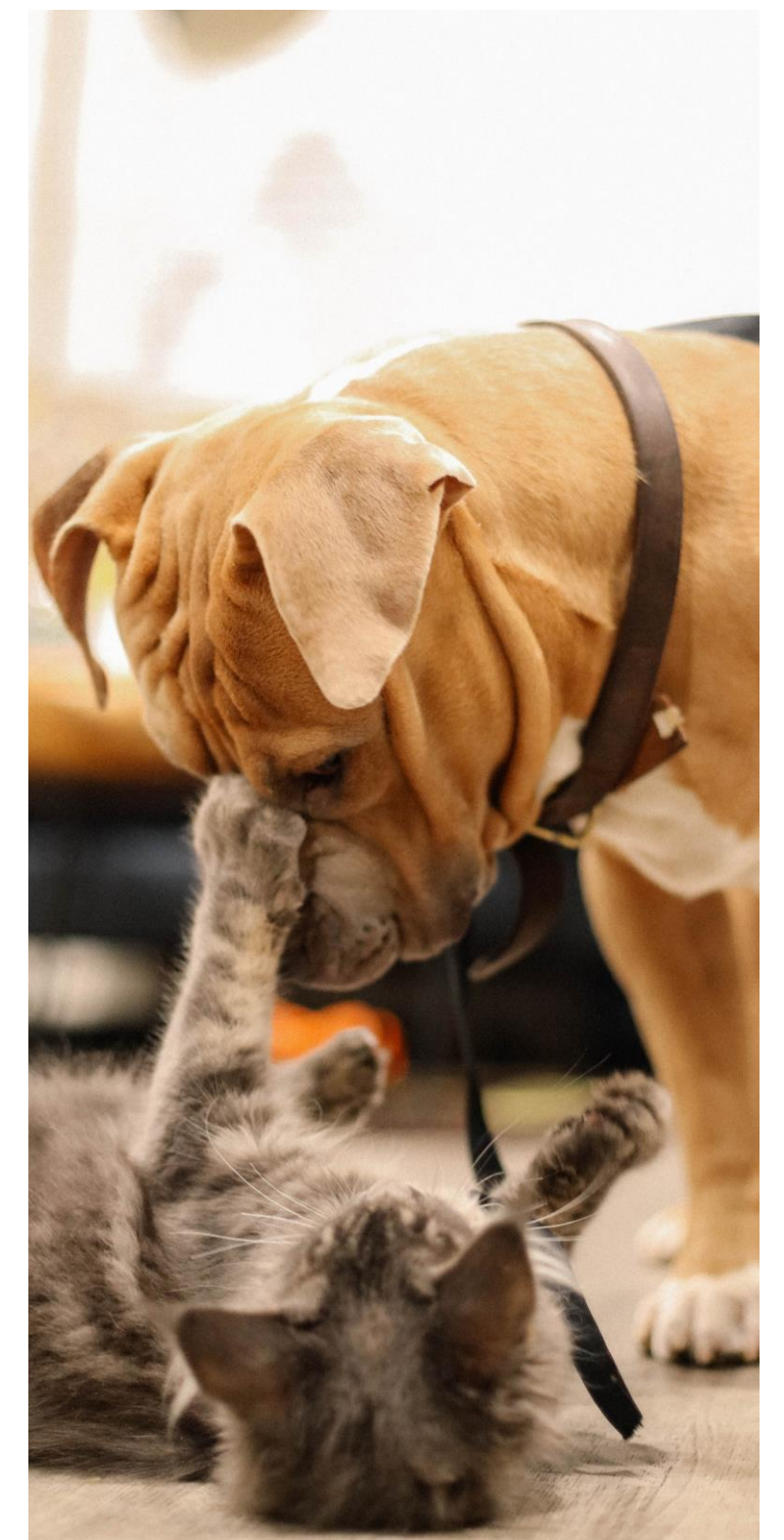


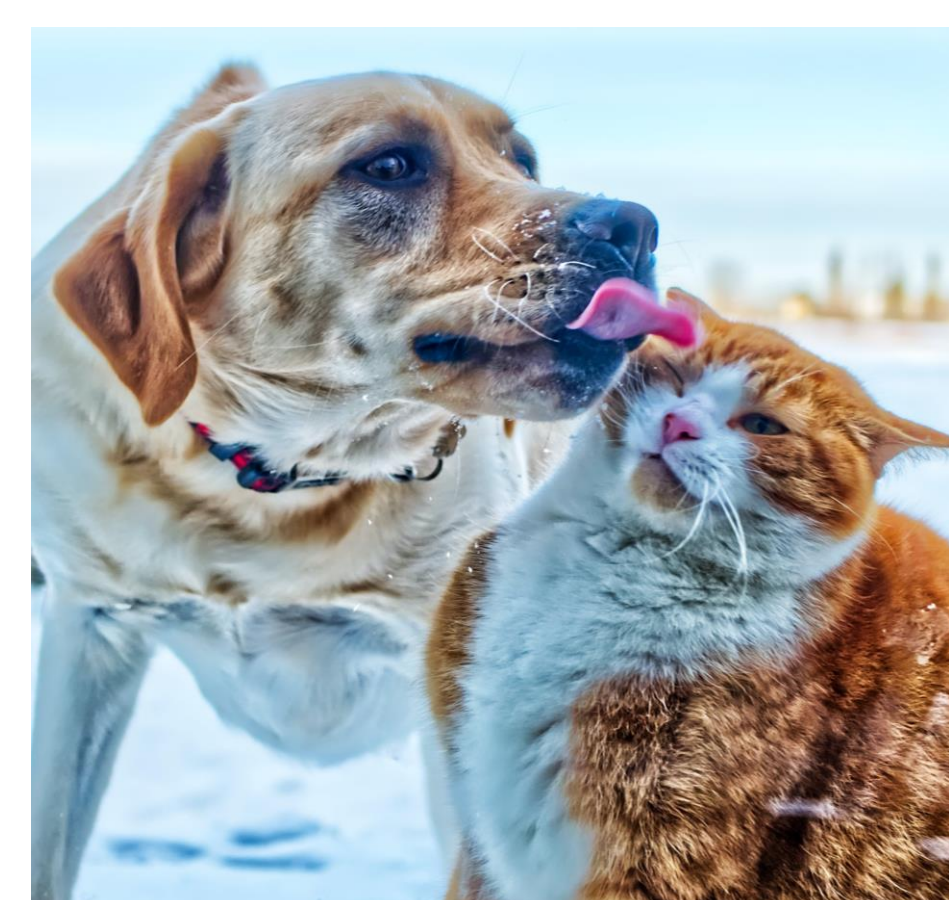
Table 2: Multivariable model of variables that were significantly associated with desirable behaviour from puppies following introduction to cat(s)

Variable	Desirable behaviour (%)	Undesirable behaviour (%)	OR (95% CI)	P value
Age of puppy when puppy-cat data were collected				
<10 weeks	31 (18.2)	139 (81.8)	5.2 (3.0-9.0)	<0.001
10-22 weeks	36 (5.0)	684 (95.0)		
Number of dogs in household				
Continuous variable			1.4 (1.3-1.7)	<0.001
Introduction speed				
Gradually/quite gradually	50 (9.4)	484 (90.6)	2.4 (1.3-4.4)	0.003
Immediately/quite quickly	17 (4.7)	346 (95.3)		

Main themes found in the qualitative analysis:

Many owners left the introduction up to a cat, allowing the cat to control the introduction, for example, one owner said: **“the cat is slowly sorting the puppy out”**. When considering the pace of introduction, owners frequently stated the **“introduction will go as quickly as the cat wants”**.

Interventions used by owners included encouraging or rewarding desirable behaviours and discouraging chasing, barking and excitable behaviours. Management strategies often relied on physical barriers, such as stair gates.



The puppy-cat interactions varied. Some owners reported **“meetings have been calm and friendly”**, but others described their cat(s) avoiding the puppy completely, and sometimes directing aggression towards the puppy (for example, hissing/swiping). Although chasing behaviour was commonly observed in puppies, most owners interpreted the behaviour as **“not in an aggressive way”**.

Discussion: The odds of puppies exhibiting only desirable behaviours following introduction to household cat(s) were higher when puppies were under 10-weeks-old, the number of existing dogs in the household was higher, and/or the introduction speed was gradual/quite gradual. These results can help inform recommendations for introducing puppies to household cats. From the free-text responses, we learned owners largely allowed the cat(s) to control the pace. Owners also used barriers, encouragement, and discouragement to manage introductions. Future analysis will explore how these factors impacted on the introductions.



References: ¹ Murray, J., Gruffydd-Jones, T., Roberts, M., Browne, W. Assessing changes in the UK pet cat and dog populations: numbers and household ownership. *Vet Rec.* 2015; 177(10):259.

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⁷ Murray, J., Kinsman, R., Lord, M., et al. 'Generation Pup' – protocol for a longitudinal study of dog behaviour and health. *BMC Vet Res.* 2021; 17,1.