# Families with multiple pets

Some **homes** are lucky enough to have **more than one pets**. We are looking into the **composition** and **characteristics** of these families from a number of different angles. Focus is on the families with **dogs** or **cats**.

Half of these homes (**50**%) have **only dogs**, a **25**% have **only cats** whereas the other **25**% has at least **one dog** and at least **one cat**. The **dog-only** homes and the **cat-only** homes have approximately **2.7 pets/home** whereas the families that have both **dogs and cats** are larger, having **3.5 pets / home** (recall that this analysis is for the families with more than one pets).

50%	25%	25%
Only dogs	Only cats	Dog and cats
2.7 / family	**2.7 / family**	**3.5 / family**
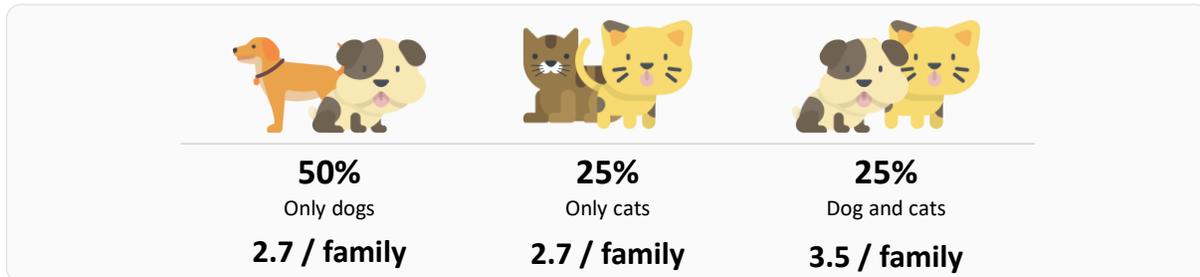
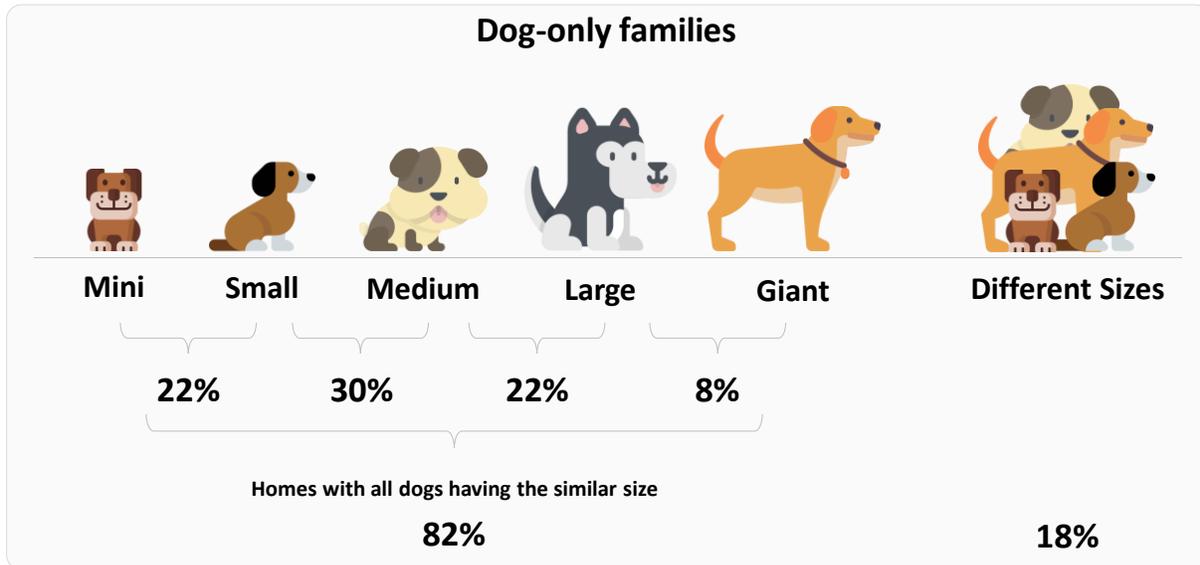## Family composition for dogs

Dog size

Here we are looking into how many of the **dog-only homes** consist of dogs of the **same size**. Having dogs of the **same size** has the benefit that food and toys can be shared which is both convenient and cheaper.

For this analysis, we group the dogs according to their size following the typical **Mini / Small / Medium / Large and Giant classification**. The analysis shows that the common case (**56%**) is for all the dogs of the family to be of the **same category**. The remaining **44%** have dogs **of different size categories**.

Mini	Small	Medium	Large	Giant	Different Sizes

Homes with all dogs having the same size
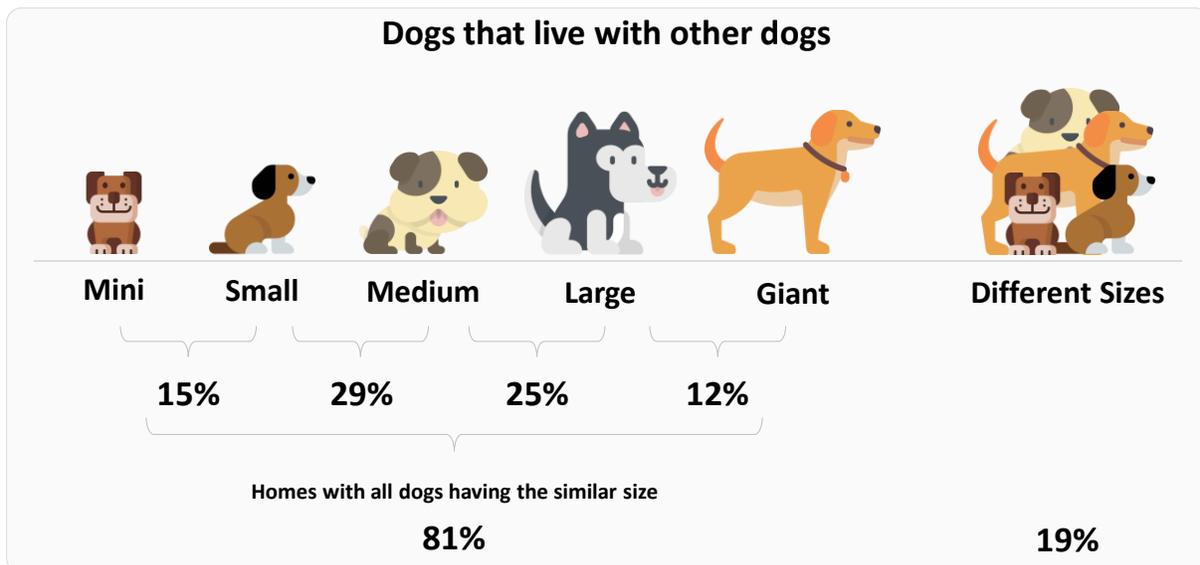
56%	44%
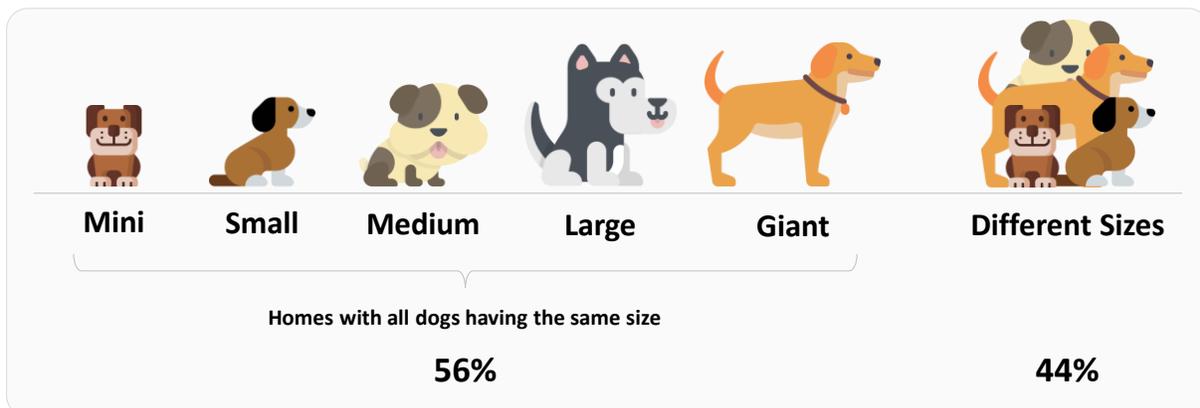
Next, we make a different classification and look into how many homes have dogs of **similar** sizes. That is, group together the dogs that are **Mini or Small**, **Small or Medium**, **Medium or Large** or **Large or Giant**. For clarification, an example of a "heterogeneous" home would be the one that has a Mini and a Giant dog.

When looking into the classification using **"similar sizes"** it becomes obvious that families do have this characteristic. An **82%** of these homes have dogs of **similar sizes** whereas only an **18%** have dogs of "**very different**" sizes. The "Mini or Small" category is at 22%, the "Small or Medium" at 30% and the "Medium or Large" at 22%. The least populated group is the one of "Large or Giant" dogs that is only 8%.

Dog-only families

Mini	Small	Medium	Large	Giant	Different Sizes

22%	30%	22%	8%

Homes with all dogs having the similar size
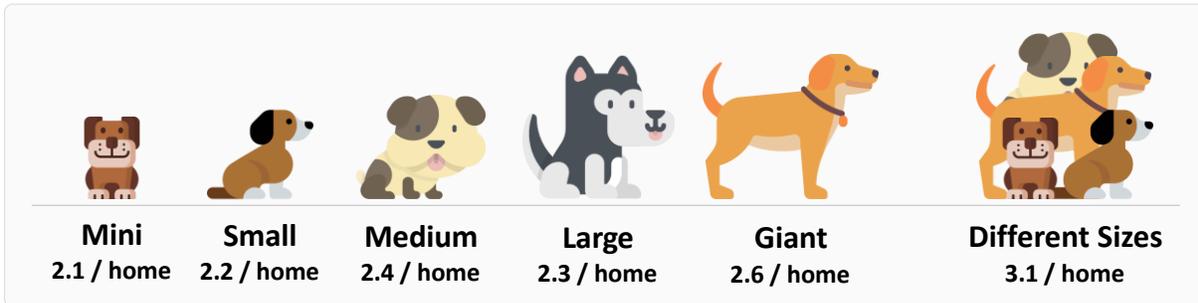
82%	18%

We also looked into the same data from the **standpoint of the dogs**, that is, instead of summing the numbers by "number of homes" we do it by "number of dogs". An **81%** of the **dogs** (forming part to families with multiple dogs) **live** with other **dogs** of **similar size**. Only a **19%** of the **dogs** live with dogs of "**very different**" size.

Dogs that live with other dogs

Mini	Small	Medium	Large	Giant	Different Sizes

15%	29%	25%	12%

Homes with all dogs having the similar size

81%	19%

The reason that these distributions vary is related to the fact that the **number** of **dogs per size** category is **not uniform**. The homes where **all the dogs are of the same size**, tend to have **less dogs** than the ones with dogs of different sizes.

It is the same observation that was made before for the homes that have both dogs and cats, **more diversity** comes with **more pets** per home.

Although one might have expected to see more dogs in homes that only have smaller sizes, it is not the case. Families that only have dogs of the **mini-category** have **2.1 dogs**; this number is **2.2** for **small** dogs, **2.4** for **medium** sized dogs, **2.3** for **large** dogs and **2.6** for **giant** dogs. As for the families that have dogs of **different sizes**, this number is **3.1**.

| Mini	Small	Medium	Large	Giant	Different Sizes
2.1 / home	2.2 / home	2.4 / home	2.3 / home	2.6 / home	3.1 / home

We want to see how many dogs of each size a home has, if they have a dog of that size. That is, if a family has a mini dog, how many mini dogs does it have? There are 1.7 mini-sized dogs per home with mini dogs, 1.6 small-sized dogs, 1.7 medium-sized dogs, 1.6 large and 2.3 giant-sized dogs. Again, we see the same particularity for **giant dogs**. If a family has giant dogs, it has **more of them**!

| Mini	Small	Medium	Large	Giant
1.7 / home	1.6 / home	1.7 / home	1.6 / home	2.3 / home
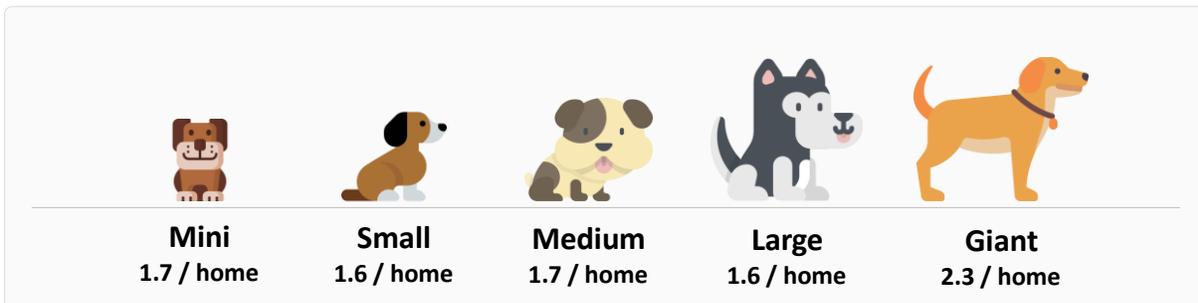
Neutering

Regarding the **neutering**, there three types of families with multiple dogs. A **24%** of these families have **none** of their dogs **neutered / spayed**. A **41%** have **all** their dogs **neutered/spayed** whereas the other **35**%, have **both** neutered/spayed and not-neutered/spayed dogs.

| None neutered	All neutered	Neutered and not neutered
24%	**41%**	**35%**
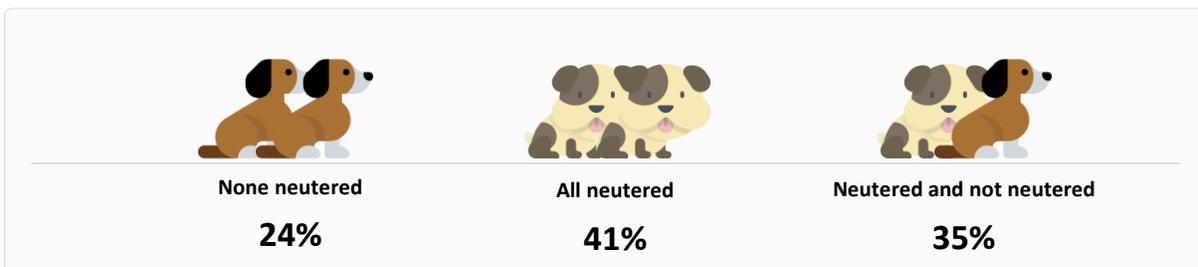
Breed

Another interesting question is to see whether families with multiple dogs have dogs of the **same or different breeds**. For a **48%** of the homes with multiple dogs, **all dogs** are of the **same breed** whereas **52%** has dogs of **different breeds** (note that this analysis includes only the pure-breed dogs).

All dogs of the same breed	Different breeds
48%	**52%**
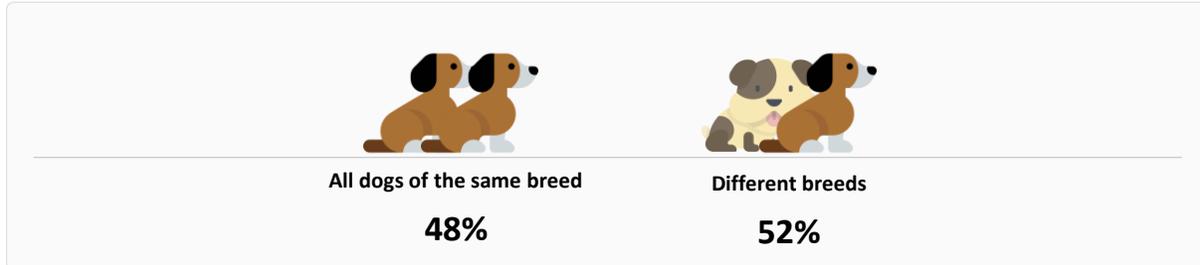
Age

Finally, we also look into the **age difference** of dogs in the same home. What we want to know is whether there is a trend to have dogs of similar age or not. Each bar of the following chart shows the age difference between the youngest and the oldest dog of the family.

The trend is quite obvious. The families with multiple dogs **tend** to have **dogs of the similar age**. Actually, for a **22%** of these families, the youngest and eldest dogs **differ by less than a year**.
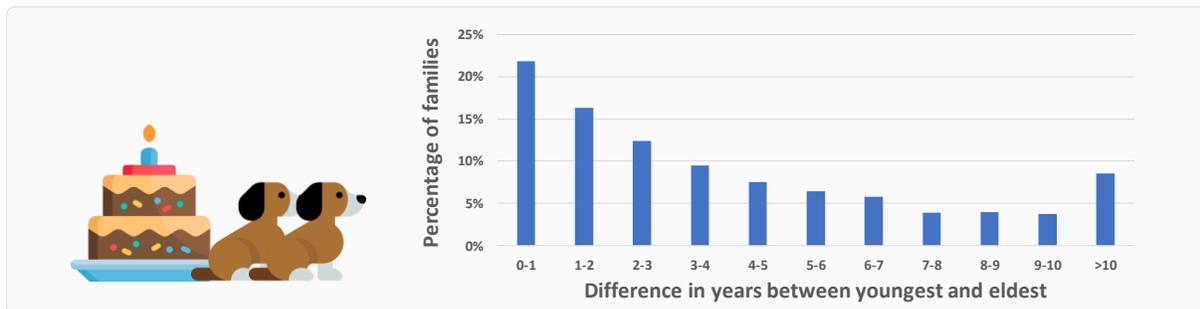
Family composition for cats

Size

The classification of cats with respect to their weight is not so meaningful as this range is typically very small.

Neutering

Neutering is an **important characteristic** for cats as it is directly **related** to their care **needs**. Typically, neutered / spayed cats eat different food compared to the non-neutered/spayed ones. It is interesting to see whether homes are uniform in this aspect.

In the majority of these homes, a **48%**, **all cats** are **neutered / spayed**. For a **21%** of the homes **none** of the cats are **neutered** and **31%** of the homes have **both** neutered and not neutered cats.

None neutered	All neutered	Neutered and not neutered
21%	**48%**	**31%**
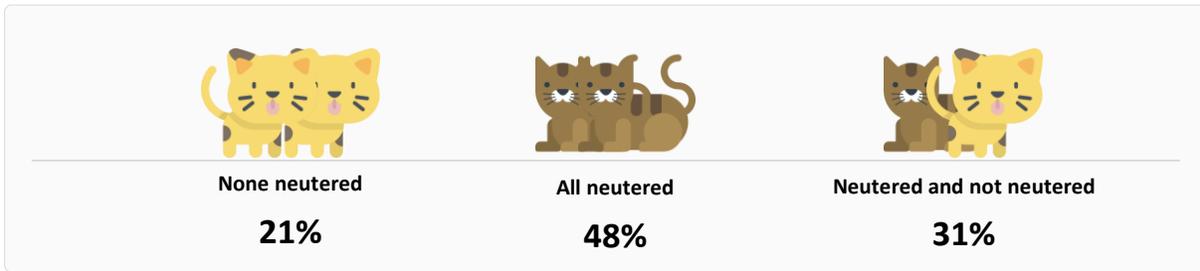
Breed

Looking into the breeds composition might be less relevant for cats as the majority of them are either "Common European" or "Common Shorthair cats". A **39%** of the homes with **multiple cats** have cats of the **different** breeds, whereas for a **61%** of them all cats are of the **same** breed.

All cats of the same breed	Different breeds
61%	**39%**
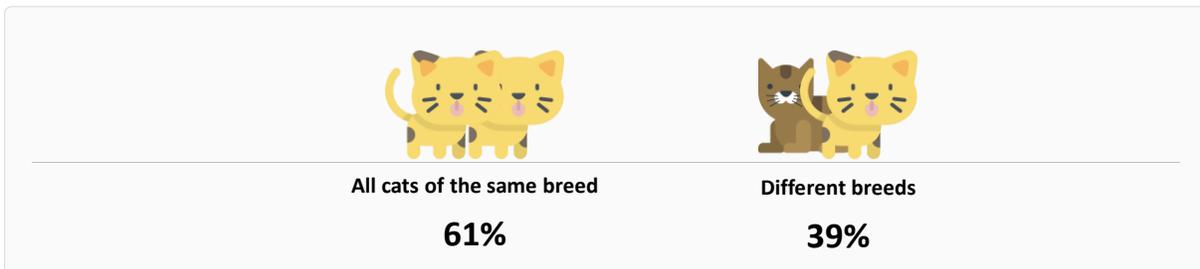
Age

As for the **age difference** between the **youngest** and **eldest** cat of the family, we observe a very similar trend as with dogs. Families **tend to have cats of similar age**. For a **25%** of them, the eldest and the youngest cats are at most **one year away**.
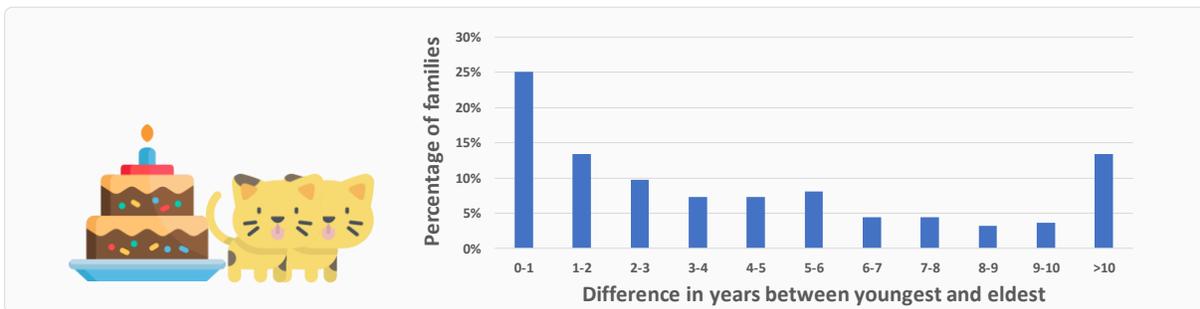
Conclusions

From our analysis it becomes clear that for families with multiple pets, these pets tend to have **similar characteristics** in terms of **size**, **neutering**, **breed** and **age**. In addition, it becomes clear that **families** with **less variance** tend to have **less members** compared to the ones that host pets of wider range of characteristics.