Why Do Dog Breeds with Genetic Disorders Suddenly Get Hot?

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New research explains the attraction to dog breeds that have health problems.

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When I buy a car or a refrigerator, like most people, I do some research. I check the ratings in *Consumer Reports* or the product reviews on Amazon. My final choice is dictated by a reasonably objective evaluation of factors such as repair records and energy efficiency. But when it comes to picking a pet, all bets are off. The average lifetime cost of owning a medium size dog is about $10,000, roughly the same as the price of a used 2012 Toyota Corolla. Yet when choosing a dog rather than purchasing a car, rational decision-making usually flies out the window.

For example, my colleagues and I have found that, like popular baby names, massive shifts in dog breed popularity are produced by mix of social contagion and random chance. And while Disney movies can increase a dog breed’s popularity, obnoxious behaviors such biting their owners and frequent barking usually do not cause a breed’s popularity to decline. And in the United States, popular breeds actually tend to have more genetic disorders than unpopular breeds.
The English bulldog is a classic example of a dog fad run amok. The breed is plagued with a host of genetic disorders. These include persistent dental problems, snoring, dermatitis, sleep apnea, joint disorders, difficulty breathing, cataracts, cleft palate, sudden death, and excessive farting. Indeed, the anthrozoologist James Serpell has referred to bulldogs as the “the veterinary equivalent of a train wreck.” Despite these all these health problems, according data from the American Kennel Club, in the last ten years, bulldogs have jumped from the 13th most popular breed in the United States to the 4th most popular breed.

This raises the question—why do people persistently choose pets that will cost them a small fortune in veterinary bills? In an article just published in the journal *PLOS One*, an all-star team of researchers led by Peter Sandøe of the University of Copenhagen addressed this question. They examined why people chose to own four purebred breeds of dogs. All the breeds were small, and two of breeds had show fad-like booms in popularity. In addition, three breeds either suffered from serious genetic disorders or frequently exhibited behavioral problems.

**The Breeds:**

The researchers focused on these breeds.

*French bulldogs*—This breed was used in the study because of its rapid rise in popularity and its many medical and welfare problems. These health issues were the result of selective breeding for extremely flattened face (“brachycephalic” features). Their protruding eyeballs make French bulldogs 18 times more likely than most breeds to injure their eyes, and they are up to 70 times as likely to have trouble breathing. French bulldogs are also at much greater risk of spinal malformations and chronic pain.

*Chihuahuas*—These animals also became popular rapidly, and they have been selectively bred to be the smallest dogs in the world. Chihuahuas are apt to bite their owners and get in fights with other dogs. And they are prone to bone fractures, dislocated knee caps, and difficult births.

*Cavalier King Charles Spaniels*—King Charles spaniels were chosen because of their relatively stable popularity and the fact that they have been intentionally selected for extraordinarily cuteness (think Lady in the movie *Lady and the Tramp*). But beauty has its costs. Intensive selective breeding for their infantile facial features has resulted in animals with malformed skulls and a condition called syringohydromyelia. This painful condition occurs when the back of the brain becomes squashed out of the skull toward the spinal cord. These dogs are also ten times more likely than most breeds to die of heart disease.

*Cairn Terriers*—Cairn terriers were the healthy control group. They have become extremely popular despite the fact that Toto in The Wizard of Oz was a Cairn. More importantly, unlike the other three breeds, they have not been bred for extreme body conformations. Compared to most purebred breeds, the little terriers have relatively few genetic disorders.

**The Owners**

The researchers studied the decisions of Danish dog owners. The reason was that every privately owned dog in Denmark has to be registered with the Danish Dog Registry. The researchers contacted 3,000 randomly selected owners of dogs from the four breeds (750 from each breed). The owners were asked to take a survey about their dogs. The final sample included the owners of 309 Cairn terriers, 228 King Charles spaniels, 148 Chihuahuas, and 198 French bulldogs.
The Survey

The research survey included items related to basic demographics (sex and education of the owner, breed of their dog, etc.), the frequency of the dog's health problems, the factors the owners considered when choosing their dog, daily activities with their dog (e.g., dog walking, training, etc.), and the breed of dog they would like to get in the future. In addition, the researchers measured how attached owners were to their dogs using a standardized 23-item scale.

The Results

The results were fascinating. Here are some of the highlights.

- Owners of different breeds choose their dogs using different criteria. Owners of Cairn terriers placed a premium on good health when selecting their pet. French bulldog owners, however, were mainly interested in their breed's appearance, and Chihuahua owners cared most about convenience factors such as availability of puppies and cost. King Charles spaniels were motivated by their breed's good looks, but also considered personality and health.

- Perhaps the most intriguing finding concerned differences in how attached owners were to their pets. Chihuahua owners had the highest attachment scores, while Cairn terriers had the lowest attachment scores. The other breeds fell in the middle. For example, this graph indicates the percent of owners who agreed with the statement “I would do almost anything to take care of my dog.”

Source: Graph by Hal Herzog
Among two of the breeds (Chihuahua and King Charles spaniels), owners who reported their dogs had more health and behavior problems were more highly attached to their pets.

While they became hot fast, Chihuahuas did not fare well when it came to owner satisfaction. Twenty-five percent of their owners indicated they probably would not get another Chihuahua as compared to 10% of owners of the other three breeds. Oddly, having a dog with lots of health and behavioral problems did not dissuade most participants in the study from getting the same breed again.

Nature, Nurture, and Animal Ethics

So why are many people attracted to deformed and neurotic dog breeds in spite of their health problems and behavioral issues? In some ways, the answer reflects the nature-nurture issue. Peter Sandøe and his colleagues suggest that the innocent eyes of Chihuahuas and the babyish brachycephalic faces of French bulldogs evoke deep-seated human emotional responses to infant-like features which override the prospect of enormous veterinary bills. This view is certainly supported by the fact that many of the owners in the study were even more highly attached to dogs with a lot of health and behavior problems.

But the results can also be interpreted as supporting the view that breeds of dogs have become forms of pop culture, four-legged fashion statements. After all, the popularity of the two breeds in the study with the most serious health and behavior problems shot up nearly as rapidly as the latest sneaker styles. The author of this recent article in Guardian agrees. He attributes the skyrocketing popularity of French bulldogs in the UK to the impact of French bulldog loving celebrities such as Madonna, Hugh Jackman, John Legend, and Lady Gaga.

But the real take-home message of this research concerns animal ethics. Sandøe and his colleagues emphasize the welfare implications of the persistent and unfortunate trend to choose pets with built-in health problems. They write, “These findings illustrate the need to find better ways to motivate prospective owners to demand that dogs do not suffer from welfare problems related to extreme confirmation and inbreeding.”

Bravo!

References


