



### Tasmin MacLennan BSc (Hons) RVN

Tasmin graduated from Edinburgh Napier University with a First-class honour's degree in Veterinary Nursing in June 2018. Since then, she has been working in a small animal first opinion and referral practice in the North of Scotland with her interests mainly being in surgical nursing and anaesthesia. Email: [tasmin.maclennan@crownvets.co.uk](mailto:tasmin.maclennan@crownvets.co.uk)



### Dr. David Smith, SFHEA, MRSB, Edinburgh Napier University

David Smith is a senior teaching fellow in veterinary nursing and biological sciences at Edinburgh Napier University, graduating with a Ph.D. in animal science from the Royal (Dick) School of Veterinary Studies in 1999. His personal research interest includes the nutrition of grazing animals and pedagogical approaches in higher education. Email: [d.smith@napier.ac.uk](mailto:d.smith@napier.ac.uk)

# The influence of media on the ownership of brachycephalic breed dogs

## Tasmin MacLennan BSc (Hons) RVN

Faculty of Health Life and Social Sciences, Edinburgh Napier University, Sighthill Campus, 9 Sighthill Court, Edinburgh, Eh11 4bn, UK

## David Smith SFHEA, MRSB, PhD

School of Applied Science, Edinburgh Napier University, Sighthill Court, Calder Road, Edinburgh, Eh11 4bn, UK

**ABSTRACT:** The aim of this study is to consider whether the media has any influence on an owner's decision to acquire a brachycephalic breed dog. This topic is of current importance due to the increasing demand for brachycephalic breeds and their current use in advertising across various media platforms. Their increasing popularity has brought to the forefront numerous conformation abnormalities, most notably respiratory problems, dystocia and ophthalmic conditions. This ultimately contributes to deteriorating breed health and compromises canine welfare. As veterinary nurses are leading advocates for animal welfare, it is important to understand motivations behind prospective pet owners and educate them accordingly as to promote healthy standards in canine companions.

**KEYWORDS:** Brachycephalic; media; breed standards; purchase motivations; canine welfare

## Introduction

Despite serious medical issues such as brachycephalic obstructive airway syndrome (BOAS) being highlighted in research, the popularity of brachycephalic breeds has risen tremendously in recent years with the registration of French Bulldogs showing an almost 100-fold increase in just over a decade (The Kennel Club, 2018b). Anatomical abnormalities in these breeds that can lead to ill health, such as respiratory difficulties, have also become so prevalent that many consider the problems as "normal for the breed" (Packer, Hendricks & Burn 2012). This problem implicates animal welfare legislation as veterinary intervention may not be sought due to owners assuming the respiratory problems to be normal (Packer et al. 2012). Challand (2016) recognises that to encourage the breeding practice of healthier dogs and to improve canine welfare, it is crucial to first understand the factors that affect the consumer's preferences when purchasing a dog. This research study aimed to fill this gap and

considers whether the media has any influence on an owner's decision to acquire a brachycephalic breed dog.

## Breed standards

Brachycephaly, defined by the foreshortening of the facial skeleton, is one of the most profound phenotypic traits evolving from an artificially selected breeding process (Bannasch et al. 2010). This discrete skeletal mutation gives brachycephalic breeds their distinctive flat-faced appearance; however, this genetic mutation has been shown to predispose brachycephalic breeds to debilitating health conditions such as BOAS, dystocia and ophthalmic conditions (O'Neill et al. 2015; Packer, Hendricks, Tivers & Burn, 2015b).

The Kennel Club (KC) publish breed standards which outline the desired characteristics that pedigree dogs are expected to conform to. For example, the desired characteristics stated for brachycephalic

dogs can include terminology encouraging short muzzles, undershot jaws and wrinkled skin (The Kennel Club, 2018a). These standards are also open to individual interpretation and extreme exaggeration of characteristics can ensue due to vague wording and a lack of explicit proportions (Challand, 2016).

## Facial features, fashion and fads

It has been suggested that dogs exhibiting the brachycephalic head shape have been favoured for hundreds of years due to the similarity of their head shape to that of human infants (Bannasch et al. 2010). Studies have further demonstrated that individual's feelings and behaviours can be strongly affected by a dog's features including breed, age and size (Gazzano, Zilocchi, Massoni & Mariti, 2013). Based on this research concluding that individual's behaviour can be affected by a dog's features, one could deduce that the physical attributions of a dog could form part of the decision-making process when seeing dogs in other settings, for example when seeing specific dog breeds on media platforms.

A study carried out by Herzog (2006) demonstrated a positive correlation between social contagion and choice of dog breed where Herzog (2006) illustrates pets as a form of fashion, with fads often being initiated by the media. One of the many examples of this was the 424% increase in the registration of Dalmatian puppies in the eight years following the release of the film 101 Dalmatians (Herzog, 2006). Similarly, the Chihuahua, who have been branded to suffer because of their popularity, was analysed through the television

programme "The Simple Life Show" where results recognised that Chihuahuas are given special attention in popular media due to their association with celebrities such as Paris Hilton (Redmalm, 2014). This study highlights the impact that entertainment media and more specifically, celebrity endorsement, can have on the demand of certain dog breeds.

## Research methodology

The sample number for this project was 100 participants and participants were required to be age 18 and above, reside in the UK and own one of the following purebred dogs: Pug, English Bulldog, French Bulldog, Boston terrier, Boxer, Pekingese, Cavalier King Charles Spaniel (CKCS) or Shih Tzu.

Data was collected through an online questionnaire designed using Novisurvey (2007). Participants were recruited online via various social media platforms and were directed to an online questionnaire via a direct link.

The survey consisted of 27 questions, in general, sections can be summarised as:

1. Owner demographics, including age, gender, work profession, number of children in their household and whether they are a first-time dog owner
2. General information about their dog (6 questions), including pet signalment, age of dog at acquisition and whether they are a first-time breed owner
3. Owner media usage, including media activity and selection of most used media platforms

4. Pre-purchase education and behaviour, including whether veterinary advice was sought, whether research was carried out prior to acquisition and if so whether any deterrent information was found
5. Reason for acquisition of breed, including influential factors and reasoning behind choice of dog breed
6. Purchase behaviour, including whether the breed acquired was their first choice and where they acquired their dog from
7. Potential of media influence, including exposure of their dog breed in the media and celebrity/famous people's endorsement of their breed of dog

Data was extracted from Novisurvey and composed on a Microsoft Excel (2016) spreadsheet. Microsoft Excel (2016) and Novisurvey (2007) were used to analyse the results. Demographic data was analysed using simple descriptive statistics including representative percentages and modes. Frequency variables in purchasing factors, media influences and celebrity endorsement was explored using Chi-square contingency tables ( $\chi^2 = (O-E)^2/E$ ) which examined the relationship between variables. A *P*-value of <0.05 was considered statistically significant.

This study was ethically approved by the Edinburgh Napier University's School of Applied Sciences Research Integrity Committee.

## Results

Data was collected between January and March 2018. The survey received 239 responses – 152 responses were valid

Table 1. Canine and owner demographics.

Canine demographics			Owner demographics			
Male	Female		Male	Female	Not specified	
50%	50%		10.5%	88.2%	1.3%	
Neutered	Un neutered	No response	Country of residency	% of people	Number of children in household	% of respondents
62.5%	36.8%	0.7%	United Kingdom	13.9%	0 children	54.6%
Breed	% of owners		England	8.6%	1 child	19.7%
French Bulldog	28.3%		Scotland	68.9%	2 children	14.5%
Pug	21.7%		Not specified	8.6%	>2 children	9.9%
Boxer	15.7%		*Modal age: 26–44 years		Not specified	1.3%
CKCS	12.5%					
Shih Tzu	8.6%					
English Bulldog	6.6%					
Boston Terrier	5.3%					
Pekingese	1.3%					
*Modal age: 2–6 years						

for inclusion, 87 responses were discarded for a variety of reasons, the main reason being incompleteness of the whole survey.

### Demographic data

Respondents who had owned a dog before accounted for 69.7% of the sample; in comparison, 81.5% of respondents had not owned the breed of dog before which they were answering for. Results found that 86.1% of respondents did not seek advice from a veterinary professional prior to acquisition of their breed of dog, however, 85.5% of respondents did carry out prior research before selecting their breed of dog. From all the respondents who had carried out prior research, 36.1% found deterrent research regarding their chosen breed of dog, with the

most common complaint being “issues with breathing” or similar.

### Purchase behaviour

An influential scale consisting of four ratings (*Major/moderate/slight/no influence*) was set against 23 various factors where respondents chose the level of influence of each factor on the decision to acquire their dog breed. There was an overall significant difference in the degree of influence between each factor (Chi-square = 1656.52).

For the *Major influence* category, *Companionship* was rated the most influential factor as represented by 72.4% of respondent decisions (Figure 1). This was followed by the perception of the dog breed to be *Good with children* (52.6%), the *Breed size being suited to*

*the owner’s lifestyle* (52%) and the dog’s *Appearance and looks* (25%). The perception of the breed to be *Generally healthy* was the most moderately influencing factor (42.1%) (Figure 2). *Obedience* was the most slightly influencing factor (26.3%) and *Celebrity ownership* was the least influential factor with 96.1% of respondents reporting that this had *No influence* on their decision. This was followed by *Status symbol* (91.4%), *Social media exposure* (86.8%) and *Working ability* (83.6%).

Data was also gathered to assess the influence of the dog breeds perceived health status with the inclusion of factors *Generally healthy* and *Long-life expectancy*. Despite the perception of the dog breed as *Generally healthy* representing the highest rated moderate influencing factor, it had *No influence* on 27.6% of respondent’s decision. In addition to this, *Long-life expectancy* had *No influence* on 55.3% of respondent decisions (Figure 3). These results were compared with the level of influence of the dog’s aesthetics which were assessed using the factors *Appearance and looks* and *Facial features*. Findings indicated that *Facial features* were somewhat important, ranging from a slight influence to a major influence, in 68.4% of respondent decisions. Similarly, *appearance and looks* were considered somewhat important, ranging from a *Slight* to a *Major influence*, in 77.6% of respondent decisions (Figure 4).

Respondents were asked whether they felt that famous owners of brachycephalic dogs can affect people’s opinion of the breed. Results of this test were significant (Chi-square = 9.72) with 44% of respondents indicating that famous people that own a brachycephalic breed can affect people’s perception of the breed. These results are relevant as 96.1% of respondents specified that *Celebrity ownership* had no influence on their own decision to acquire a brachycephalic breed.

### Discussion

The results of this study showed that companionship, the dog being good with children, the size of the breed suited to the owner’s lifestyle and the dog’s appearance and looks were rated as the most influential factors when acquiring a brachycephalic breed. Despite previous studies demonstrating that certain media

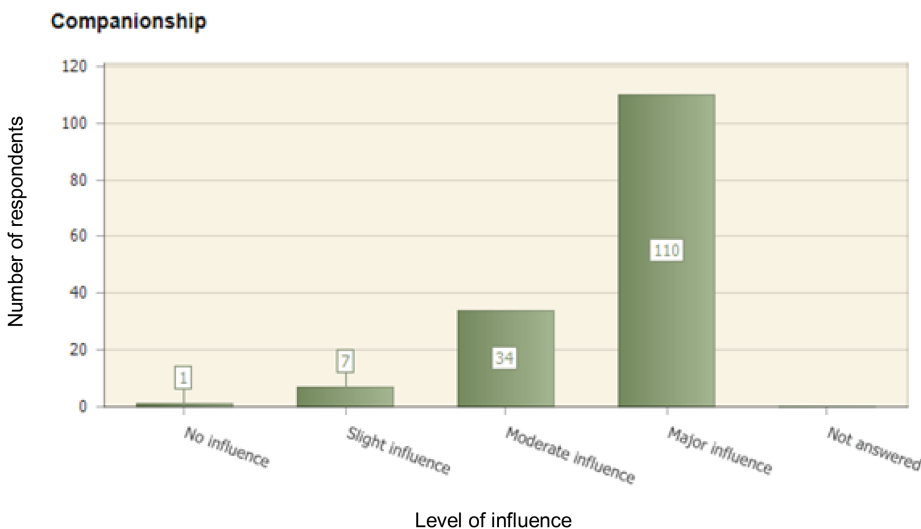


Figure 1. The most influential factor when acquiring a brachycephalic breed dog.

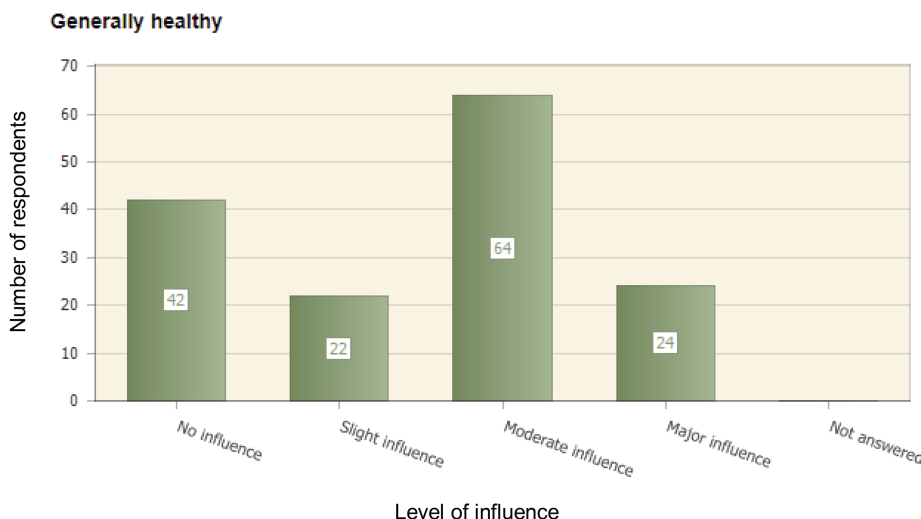


Figure 2. Respondent data for the perception of the breed to be generally healthy.

### Long life expectancy

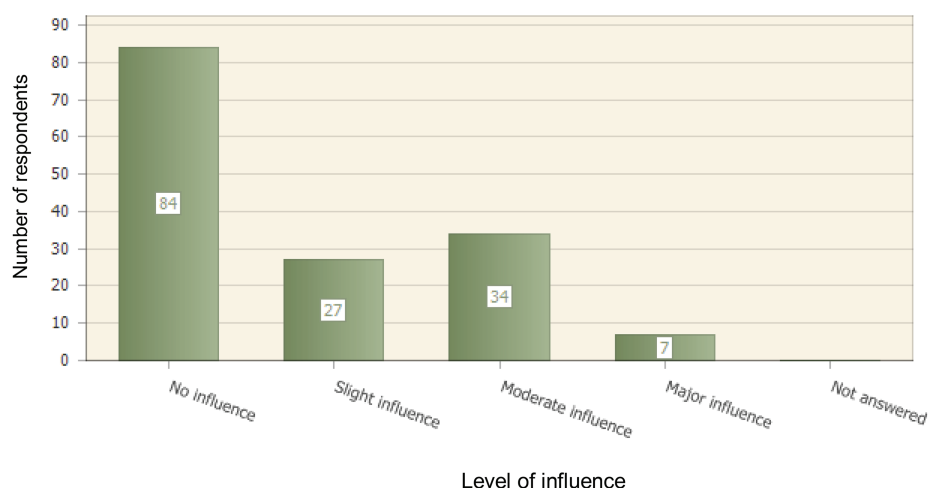


Figure 3. Respondent data for long-life expectancy.

### Facial features

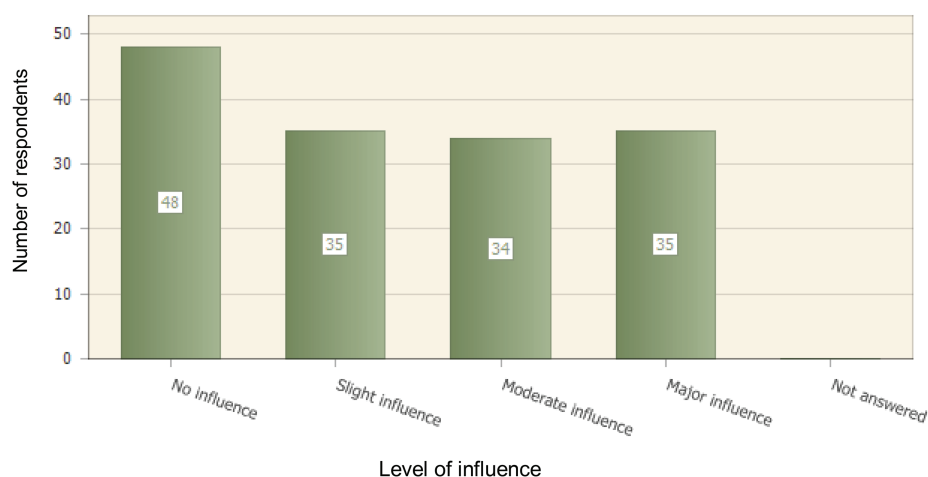


Figure 4. Respondent data for facial features.

platforms, such as films, can have a lasting effect on dog breed popularity (see Ghirlanda et al. 2014; Herzog, 2006), this current study did not find the media as a highly influential factor when acquiring a brachycephalic breed dog. It could be possible that respondents did not consider these factors as influential or as important in comparison to other factors in this section that were rated highly influential.

With it being widely established that dogs have evolved over time from a predominantly functional, working role to that of a companion role for humans (Bennett, Cooper, Rohlf & Mornement, 2007), it may be regarded as predictable for people to consider companionship as the main reason for acquiring a dog. The results from this current study identifies that working ability had no influence in 83.6% of respondent's decision in acquiring their breed, further suggesting the importance of these breeds as companion animals, as opposed to serving

a working purpose. Based on previous research, it has been established that women are most commonly the primary caregivers for dogs (Sax et al. 2003), with additional research demonstrating that women have a greater tendency than males to embrace the dog-companionship experience and score higher across all dimensions of dog-companionship (Dotson & Hyatt, 2008). This research could explain why companionship was rated as one of the most influential factors in this study as 88.2% of respondents were female.

With the emphasis of keeping animals as companions, importance has been placed on physical appearance, often at the detriment to canine health or functionality (Asher et al. 2009). Results demonstrated that the dog's appearance influenced 77.6% of respondent's decision in the study. Facial features also influenced 68.4% of respondent's decision in acquiring a brachycephalic breed. This suggests

that the distinctive, flat-faced appearance and wide eyes of the breeds were strongly influential factors in the acquisition of the breed.

It could be perceived that the results of this study are potentially conflicting as the perception of the breed to be generally healthy was considered somewhat influential in 72.4% of respondent's decision. Yet, 86.1% of respondents did not seek advice from a veterinary professional prior to acquisition of their dog and long-life expectancy for the dog had no influence on over 50% of respondent's decision to acquire the breed (Figure 2). These figures demonstrate that the dog's appearance was considered as a higher influencing factor when acquiring the breed than the dog's health and function. This discovery is potentially very problematic as brachycephaly has directly predisposed some breeds to a variety of conditions of the head and neck, such as BOAS, which can result in severe breathing problems (Packer, Hendricks, Tivers & Burn, 2015a).

## Conclusion

The study has found that there is a clear and statistically significant variation across owners and the influential factors for acquiring a brachycephalic breed dog. The dog's appearance remained as one of the most influential factors in why owners chose these breeds despite many brachycephalic breed health concerns being a direct result of conformation. This suggests that a more targeted education and intervention is required in this area, directed at prospective dog owners, to highlight the breed associated health risks in brachycephalic dogs and how to make responsible dog purchasing choices. The UK KC is also in a unique position through their publication of breed standards to discourage the exaggeration of high-risk conformation in brachycephalic breeds and drive positive change for canine welfare.

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## Disclosure statement

No potential conflict of interest was reported by the authors.



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## Multiple Choice Questions

- 1. What are the three most notable conditions that brachycephalic dogs are predisposed to?**

  - (a) Urinary tract conditions, dystocia and Otitis
  - (b) Respiratory difficulties, dystocia and ophthalmic conditions
  - (c) Ophthalmic conditions, gastrointestinal disorders and dermatitis
  - (d) Respiratory difficulties, urinary tract conditions and Otitis
- 2. What does BOAS stand for?**

  - (a) Bulldog obstructive airway syndrome
  - (b) Brachycephalic oral abnormalities
  - (c) Brachycephalic obstructive apnoea syndrome
  - (d) Brachycephalic obstructive airway syndrome
- 3. What is brachycephaly defined as?**

  - (a) Elongation of the facial skeleton
  - (b) Deformation of the facial structure
  - (c) Foreshortening of the facial skeleton
  - (d) Restriction of breathing
- 4. What did this study find to be the four most influential factors when acquiring a brachycephalic breed dog?**

  - (a) Good with children, companionship, size of the breed suited to owner's lifestyle, appearance and looks
  - (b) Size of breed suited to owner's lifestyle, celebrity ownership, status symbol, appearance and looks
  - (c) Status symbol, good with children, obedience, long-life expectancy
  - (d) Working ability, companionship, celebrity ownership, appearance and looks
- 5. Which organisation publishes breed standards which outline the desired characteristics that pedigree dogs are expected to conform to?**

  - (a) The RCVS
  - (b) The BVA
  - (c) The Kennel Club
  - (d) The RSPCA

For the answers to the MCQs, please go to: <http://www.bvna.org.uk/publications/veterinary-nursing-journal>