

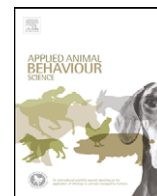


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# Describing the ideal Australian companion dog

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### ARTICLE INFO

#### Article history:

Accepted 30 April 2009

Available online xxx

#### Keywords:

Behaviour

Dog

Human–animal interaction

Ideal dog

### ABSTRACT

Dogs have had a long association with humans and are believed to be the first domesticated animal species. Many breeds of dog exist today which vary considerably in physical appearance and temperament. These differences have arisen primarily from selective pressures imposed by humans to create dogs suitable for various working roles. Nowadays, however, few breeds undertake the work they were once bred for; rather dogs are kept primarily as companions. With differing lifestyles and an increase in urban living it is necessary to identify what constitutes an ideal dog in the present day. This study identifies the characteristics important to the Australian public in their “ideal dog”. To determine this, 877 participants (79.8% female) aged 18–82 years (mean = 34.3, SD = 14.5) were surveyed. A number of behavioural and physical characteristics were identified as important to Australians. These included dogs being medium sized, short haired, de-sexed, safe with children, fully housetrained, friendly, obedient and healthy. Participants also wanted their ideal dog to come when called, not to escape from their property, to enjoy being petted and to display affection to their owners. Desirable behavioural characteristics were grouped using Principal Component Analysis into five factors, labelled calm/compliant, sociable/healthy, energetic/faithful/protective, socially acceptable, and non-aggressive. Together these accounted for 45.7% of the total variance. Independent-samples *t*-tests revealed significant differences in importance of the components for men versus women, dog owners versus non-owners and whether participants lived with children or not. Women preferred a dog who is calm/compliant [ $t(870) = -2.33, P = 0.02$ ], sociable/healthy [ $t(870) = -2.57, P = 0.01$ ] and non-aggressive [ $t(870) = -2.67, P = 0.008$ ] while men preferred a dog which is energetic/faithful/protective [ $t(870) = 3.09, P = 0.002$ ]. Overall, however there were also many commonalities. Breeding animals able to tolerate the stresses and demands of today’s requirements, training them to behave appropriately, and educating pet dog owners about the characteristics of different dogs and the need for realistic expectations about dog behaviour is likely to help reduce the incidence of problem behaviours, such as separation anxiety, destructiveness and aggression. It is also likely to increase owner satisfaction and reduce the number of dogs relinquished to shelters.

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## 1. Introduction

Dogs are the most popular pets in the western world (Hart, 1995) and are present in almost every human society worldwide (Serpell, 2003). It is thought that around

3000–4000 years ago distinctive breeds came into existence as a result of artificial selection by humans (Clutton-Brock, 1995). Dog breeders selected for particular physical characteristics, such as colour, coat length, height, and facial appearance, as well as for certain behaviours, such as guarding, pulling goods, herding livestock, hunting and retrieving. As a result around 350 different breeds of dog are recognised by Kennel Clubs around the world today (Spady and Ostrander, 2008). These vary enormously

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in their physical appearance and temperament, most retaining the original characteristics for which they were bred.

In the modern world most dogs rarely, if ever, undertake the role that their ancestors were selectively bred to perform. More often than not, dogs are obtained purely as companion animals (Bennett et al., 2007). That most perform this role exceptionally well is indicated by the fact that dogs remain our most popular pet, with nearly 40% of Australian (Headey, 2006) and North American (42%) (American Pet Products Association, 2008) households owning a dog. It is also well established that dog ownership is associated with many benefits. For example, people who live with dogs are at lower risk of cardio vascular disease and depression, petting your dog lowers stress, and dogs facilitate social contact (Anderson et al., 1992; Patronek and Glickman, 1993). As a result, it is estimated pets save the Australian economy between AUD\$790 million and AUD\$ 1.5 billion in health expenditure annually (Miller and Howell, 2008).

Despite these benefits, dog ownership is decreasing (Headey, 2006). This is likely to reflect various factors, such as urban consolidation, busier lifestyles and government legislation restricting pet ownership. Increasing urban populations often mean higher density living, smaller back yards and an increased number of people living in rental accommodation. These factors tend to prevent or discourage people from obtaining a dog (McHarg et al., 1995). It is becoming increasingly difficult to find a place to reside which will allow dog (Australian Companion Animal Council, 2008), and owners may also be reluctant to obtain a dog if they are unable to locate adequate services, including nearby off-leash exercising areas.

Another factor contributing to a decline in dog ownership may be that some canine behaviours that were once valued and selected for are now considered objectionable and unwanted by dogs owners (Haupt et al., 2007). Changing lifestyles mean that the traditional dog-owner relationship has altered. Whereas many working dogs traditionally stayed with their owner during the whole day, today these same dogs are often left alone, confined in a backyard or house for extended periods where they are expected to be calm, quiet and well behaved. Some socially isolated dogs develop behavioural problems such as excessive barking, digging, destructiveness, escaping and aggression (Kobelt et al., 2003). When dogs exhibit behaviour that is unacceptable to their owners, the relationship between dog and owner can break down (Serpell, 1996). This can cause significant distress to owners and result in dogs being relinquished to pounds or shelters, where their problematic behaviour often escalates (Hewson et al., 2007) and where about 30% will be euthanased (Marston et al., 2004).

Given that humans are unlikely to revert to more traditional lifestyles, it is appropriate to ask whether the dogs available today are ideal in terms of performing their modern roles as companions and family members. If the benefits of dog ownership are to be maintained and the welfare of dogs protected it is critically important that dogs live harmoniously in our present community. This requires identifying the traits people consider an “ideal dog” should

possess and then focussing our efforts on producing dogs with these traits. Physical characteristics are highly heritable and evidence exists that behaviours are controlled, at least in part, by genetic components (Spady and Ostrander, 2008). Hence, if desirable characteristics can be identified, it should be possible for breeders to select for these attributes in breeding programs. Of course many dog breeders already strive to produce perfect companion dogs and, undoubtedly, there will be some traits where individual owners desire different levels of certain attributes, such as activity level, size and coat length. In the absence of scientific evidence regarding owner requirements, however, it is difficult to establish standards against which breeding dogs can be judged for their suitability as pet dogs. Many breeders are guided in their breeding choices by breed standards that relate to specific appearances and historic functionality that are not necessarily relevant to today’s urban dog owner (McGreevy, 2007). Currently, no studies have identified what people want from an “ideal dog” and the degree to which people vary in their preferences. This project was designed to address this issue, using Australian residents as participants.

## 2. Method

### 2.1. Participants

The participants were Australian residents aged at least 18 years of age who voluntarily completed a questionnaire first made available on-line on 7th May, 2008, and also distributed publicly in a paper format. Data were collected from 967 participants over a period of 8 weeks. Ninety participants’ data were discarded for a variety of reasons, primarily because they did not reside in Australia, or failed to confirm that they were 18 years of age or older. Of the 877 remaining participants, females represented a large majority (79.8%). The age of respondents ranged from 18 to 82 years (mean = 34.3, SD = 14.5) and most were born in Australia (78.8%). Nearly half (46.5%) had completed secondary school as their highest level of education, followed by those who had completed undergraduate (33.9%) and postgraduate degrees (13.2%). The majority of respondents lived in a house with a backyard (62.7%), others lived in a flat/apartment (12.3%), medium rural property (9.4%), small rural property, (7.2%), large rural property (4.0%) or house without a backyard (3.9%).

The largest percentage of households (38.7%) contained two people while 20.4% housed four people and 17.9% of participants lived in a household with three people. The majority of households (73.2%) did not have children living at home. Of those that did, 10.8% had two children and 10.0% had one child.

Dog owners made up 72.3% of the sample. While over half (64.2%) of the total participants owned between 1 and 3 dogs, others owned 4–6 dogs (6.3%), 7–9 dogs (1.1%) and 10 or more dogs (0.6%). Almost all of the dog-owning respondents (90.1%) were happy with their dogs’ behaviour and temperament. Some (36.6%) had owned between 3 and 5 dogs in their lifetime, while others had owned more than 8 dogs (24.3%), between 6 and 8 dogs (19.8%) or

between 0 and 2 dogs (18.8%). Over half (51.6%) of the people who did not own a dog were aged 30 years or under while only 18.8% of dog owners fell within this age range. Cat owners represented almost a third (33.1%) of the sample while 37.6% of participants indicated they owned other types of pets. Almost all of the respondents (99%) indicated that they thought dogs make good pets and agreed that owners are responsible for their dog's behaviour (90.7%).

## 2.2. Materials

A review of the literature and a focus group of dog experts (dog trainers, veterinarians, animal behaviourists and psychologists) informed development of a questionnaire with six sections.

Section A consisted of 10 questions relating to the physical characteristics (sex, de-sexing status, coat type, colour, size, type) the participant believed an "ideal dog" should possess, as well as questions pertaining to the "ideal" age at acquisition, cost to maintain and exercise and grooming requirements. Each question was followed by a number of possible responses. For each item the participant could endorse a particular phenotype or indicate that this aspect of the dog was unimportant. For example, 'my ideal dog would be: male; female; sex of dog is unimportant'.

Section B consisted of 44 statements relating to dog behaviour. For example, 'my ideal dog: is friendly towards strangers'. The participant was invited to rate the importance of each trait according to how their "ideal dog" would behave, using a five point Likert-type scale (extremely unimportant, unimportant, neither important nor unimportant, important, extremely important). Section C was an open-ended question which invited the participant to suggest five characteristics they considered to be most important in their ideal dog. Section D listed four statements relating to dog training and behaviour and asked respondents to rate the degree with which they agreed or disagreed with the statement on a five point Likert-type scale (strongly disagree through to strongly agree). Section E included 14 questions relating to participants' demographics. Section F was reserved only for participants who currently owned a dog and asked 11 questions about the physical characteristics of that dog. The questionnaire was eight, A4 pages in length and took an average of 9 min 38 s to complete.

## 2.3. Procedure

The project was approved by Monash University Standing Committee for Ethics for Research involving Humans. The questionnaire was uploaded onto a web page using Survey Methods software and was made available to first year psychology students at Monash University, Melbourne, who were invited to participate in return for course credit. Information about the survey was also emailed to various colleagues, family and friends who lived in Australia, and to public media outlets. Both dog owners and non-dog owners were invited to participate in the study and participants were encouraged to spread

information about the survey using their personal social contacts.

In addition, 250 paper copies of the questionnaire were printed and distributed with reply paid envelopes at a variety of locations; including shopping malls, busy city streets, dog shows and public events within Victoria, Australia. Upon receipt of a completed questionnaire the data were manually entered into SPSS for Windows (Version 16), which was also used to capture data downloaded from the Survey Methods website.

## 2.4. Statistical analyses

Descriptive data from the online and paper-based versions of the survey were compared visually. Because no marked differences were observed the data were combined for all further analyses. Descriptive statistical analyses were conducted for the majority of variables, with data collected using Likert-type scales being treated as ratio level as recommended by Maranell (1975). Principal component analysis followed by varimax rotation using Kaiser normalisation was carried out on the data from Section B to identify common groupings of behavioural variables. As advised by SPSS Survival Manual 3rd Edition (Pallant, 2007), the initial solution was subjected to visual inspection of the eigenvalues and the screeplot, as well as parallel analysis. Five factors were identified that provided a good fit for the data and could be interpreted with relative ease. The items in each of the five factors were summed and the mean calculated for each participant to generate subscale scores. Pearson's correlation coefficients were used to ascertain if scores on the behaviour subscales were associated with each other and with demographic variables. Cross tabulation of the data and chi-squared tests were utilised to examine associations between the physical characteristics of the 'ideal dog' and the various groups such as dog owners and non-dog owners, households containing children and those that did not etc. Independent-sample *t*-tests were used to compare the behavioural subscales across demographic variables with two levels, one-way analyses of variance followed by Tukey's post hoc tests were used to examine group differences across variables with more than two levels.

## 3. Results

### 3.1. Physical characteristics of the ideal dog

The majority of respondents indicated that sex of the 'ideal' dog was unimportant (61.8%) but female dogs (21.3%) were slightly more preferred than males (16.5%). Most respondents (66.4%) wanted their ideal dog to be de-sexed, with 22.7% indicating that de-sexing status was unimportant and 10.5% preferring their ideal dog to be entire. Over three-quarters of the participants indicated that their ideal dog would be acquired as a puppy (75.8%). The type of dog, which included options of purebred, mixed breed or designer breed (a dog with purebred parents of different breeds), was unimportant to 42.9% of participants, although 40.6% indicated that their ideal dog would be purebred. Mixed breeds (12.8%) were preferred

Table 1

The frequency (%) with which people rated the importance of statements about their “ideal” dog’s behaviour.

Statement	Extremely unimportant	Unimportant	Neither important nor unimportant	Important	Extremely important
<b>Traits rated most often as being extremely important</b>					
My ideal dog is safe with children	0.5	0.5	4.1	27.2	67.7
My ideal dog is fully housetrained	0.8	1.7	4.0	29.9	63.5
My ideal dog is physically healthy	0.2	0.7	3.8	35.0	60.3
My ideal dog comes to me when he/she is called	0.2	0.9	3.8	37.5	57.6
My ideal dog does not escape from my property	0.3	0.7	4.9	38.8	55.2
My ideal dog shows affection toward me	0.3	1.1	5.8	41.4	51.3
My ideal dog lives until he/she is at least 10 years old	1.6	3.3	20.4	35.9	38.8
My ideal dog does not eat its own faeces	2.4	6.4	22.5	33.6	35.1
My ideal dog does not eat other animals’ faeces	2.9	6.7	25.0	32.2	33.3
<b>Traits rated most often as being extremely unimportant</b>					
My ideal dog will bite people on command	61.0	17.3	12.9	6.0	2.9
My ideal dog has hunting capabilities	34.7	26.8	30.6	6.2	1.7

by more participants than were designer breeds (3.0%). Overall the most popular hair type was short and straight (29.0%), but 23.0% of participants indicated that hair type and length was unimportant. Most people (64.7%) also indicated that colour was unimportant. Most participants (39.7%) wanted a medium sized dog (10–20 kg); the next preferable was a large (20–40 kg) sized dog (27.3%), followed by a small (4–10 kg) dog (18.1%).

Participants were asked to indicate how much money they would prefer to spend on their ideal dog each week and how much time they would prefer to spend on exercise and grooming. The largest percentage of participants indicated that the cost to maintain their ideal dog was unimportant (35.1%) but almost as many (33.6%) indicated that their ideal dog would cost between AUD\$11–20 per week to maintain. The vast majority of participants (78.9%) indicated they would prefer to spend between 16 and 60 min exercising their dog per day. In contrast, 75.5% of respondents preferred spending between 1 and 30 min grooming their ideal dog per week. A small percentage of people did not want to spend any time grooming (12.4%) or exercising (1.1%) their dog.

### 3.2. Behavioural characteristics of the ideal dog

#### 3.2.1. Behaviour ratings

Table 1 presents a selection of items from this section and the frequency with which each response option was endorsed. These variables were selected for presentation as they received the highest percentage of either ‘extremely important’ or ‘extremely unimportant’ responses from the list of 44 statements.

From Table 1 it can be seen that almost all participants strongly agreed that an ideal dog should be safe with children, affectionate, obedient and healthy. Traits rated as extremely unimportant to most participants included biting on command and having hunting capabilities.

The 44 statements assessing the importance of behaviours exhibited by the ideal dog were reduced using principal component analysis (PCA). Prior to performing the PCA, the suitability of the data for factor analysis was assessed using criteria outlined by Pallant (2007). Inspection of the correlation matrix revealed the presence of

many coefficients of 0.4 and above. PCA revealed the presence of nine components with an eigenvalue exceeding 1, explaining 56.3% of the variance. After a parallel analysis, which showed five components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (44 variables  $\times$  877 respondents) and inspection of the screeplot it was decided to retain five components (Table 2). These explained 45.7% of the total variance and included 41 out of the 44 items. An additional item (my ideal dog allows the vet to examine him/her) was omitted from further analysis because it cross loaded on two factors.

Using the results of the PCA, five behavioural subscales were created by calculating the mean from the relevant items. These subscales were named ‘calm/compliant’, ‘sociable/healthy’, ‘energetic/faithful/protective’, ‘socially acceptable’ and ‘non-aggressive’. Descriptive statistics for the five subscales are included in Table 2. From these data it can be seen that the highest mean score obtained was for the ‘sociable/healthy’ subscale. This indicates that participants rated behaviours within this subscale as more important than behaviours from the other subscales. It suggests overall that participants prefer dogs which exhibit friendly behaviour and live long healthy lives. The lowest mean score obtained was for the ‘energetic/faithful/protective’ subscale. This suggests that people do not generally rate the behaviours within this subscale as being as important in an “ideal dog” as some of the traits in other subscales.

#### 3.2.2. Relationships between variables

Each of the behavioural subscales was correlated with appropriate demographic variables, the results being presented in Table 3.

Scores on the ‘calm/compliant’ subscale were positively associated with participants’ age and how many dogs they had owned in their lifetime, while being negatively associated with the number of people in the respondent’s household. The subscale ‘sociable/healthy’ was positively associated with the number of dogs respondents had owned in their lifetime and negatively associated with the number of children and the number of people in the respondents’ household. The third subscale ‘energetic/

**Table 2**

Factor loadings and descriptive statistics for the behavioural subscales derived from a principal component analysis of survey items probing the importance of particular behaviours in the “ideal dog”.

Item	Factor				
	Calm/compliant	Sociable/ healthy	Energetic/ faithful/ protective	Socially acceptable	Non-aggressive
My ideal dog never jumps on people	0.670				
My ideal dog walks calmly on leash	0.648				
My ideal dog comes to me when called	0.684				
My ideal dog walks calmly without pulling on the leash	0.599				
My ideal dog travels calmly and quietly in the car	0.594				
My ideal dog is not overly excitable	0.589				
My ideal dog behaves calmly most of the time	0.578				
My ideal dog does not dig inappropriately	0.553				
My ideal dog lets me groom him/her easily	0.547				
My ideal dog does not chase wildlife or farm animals	0.488				
My ideal dog is not destructive when left alone for long periods	0.485				
My ideal dog is fully housetrained	0.459				
My ideal dog remains calm during thunderstorms and fireworks	0.447				
My ideal dog shows affection toward me		0.774			
My ideal dog enjoys being cuddled and hugged		0.748			
My ideal dog enjoys being petted		0.742			
My ideal dog is physically healthy		0.534			
My ideal dog lives until he/she is at least 10 years old		0.525			
My ideal dog does not escape from my property		0.433			
My ideal dog is friendly with other dogs		0.417			
My ideal dog is safe with children		0.415			
My ideal dog has a high energy level			0.675		
My ideal dog enjoys large amounts of exercise			0.665		
My ideal dog has hunting capabilities			0.619		
My ideal dog is physically impressive to look at			0.575		
My ideal dog enjoys obedience training			0.569		
My ideal dog is constantly attentive to me			0.519		
My ideal dog is protective of myself and my family			0.461		
My ideal dog likes to play rough and tumble games			0.444		
My ideal dog will bite people on command			0.424		
My ideal dog is confident in new surroundings			0.423		
My ideal dog learns new tasks quickly			0.406		
My ideal dog does not eat other animals faeces				0.864	
My ideal dog does not eat its own faeces				0.826	
My ideal dog does not scavenge things found on the street				0.687	
My ideal dog does not exhibit inappropriate sexual behaviours				0.526	
My ideal dog does not beg for food				0.406	
My ideal dog does not growl at strangers in public areas					0.666
My ideal dog does not bark at strangers in public areas					0.629
My ideal dog is friendly toward strangers					0.559
My ideal dog does not fight with other dogs					0.466
% variance explained	22.97	8.82	6.22	4.27	3.42
Minimum score <sup>a</sup>	1.38	1.38	1	1	1.75
Maximum score <sup>a</sup>	5	5	4.82	5	5
Mean score	4.00	4.36	3.14	3.68	4.10
Standard deviation	0.49	0.47	0.54	0.73	0.63
Percentiles					
25	3.69	4.00	2.82	3.20	3.75
50	4.00	4.38	3.09	3.80	4.25
75	4.31	4.75	3.45	4.20	4.50

<sup>a</sup> Scoring based on rating importance of behaviours on a scale of 1–5.

Table 3

Correlations between behavioural subscale scores<sup>a</sup> derived from participants' questionnaire ratings regarding their 'ideal dog' and self reported demographic details.

	Calm/compliant	Sociable/healthy	Energetic/faithful/protective	Socially acceptable	Non-aggressive
Participants' age	0.278** (874)	0.030 (874)	-0.117** (874)	0.107** (874)	0.255** (874)
Participants' education level	0.039 (877)	-0.053 (877)	-0.178** (877)	-0.086* (877)	0.057 (877)
People per household	-0.086* (876)	-0.367** (874)	0.058 (876)	-0.007 (876)	-0.102** (876)
Children per household	-0.011 (876)	-0.081* (877)	-0.081 (877)	0.013 (877)	-0.063 (877)
Number of dogs currently owned	0.070* (876)	0.090** (876)	0.085* (876)	-0.072* (876)	0.159* (876)
Number of cats currently owned	0.061 (876)	-0.015 (876)	-0.037 (876)	-0.069* (876)	0.072* (876)
Number of dogs owned in lifetime	0.117** (876)	-0.056 (876)	-0.110** (876)	-0.032 (876)	0.121** (876)

<sup>a</sup> Higher scores on all subscales are indicative of greater perceived importance of 'ideal dog' behaviour.

\* Significant at  $\alpha = 0.05$ .

\*\* Significant at  $\alpha = 0.01$ .

faithful/protective' was positively associated with the number of dogs that the respondent currently owned and negatively associated with participants' age, education level, the number of dogs owned in the participants' lifetime and number of children in the household. The fourth subscale 'socially acceptable' was positively correlated with participants' age and negatively associated with the number of dogs currently owned, the number of cats currently owned and participants education level. The fifth subscale, 'non-aggressive' was positively associated with a range of demographic variables, such as participants' age, number of dogs and cats currently owned and number of dog owned over the participants' lifetime. A negative association existed with the number of people in the respondents' household.

### 3.2.3. Important behavioural characteristics

Participants were asked to list five characteristics that they considered most important in their ideal dog. Many different characteristics were listed but those identified most frequently were obedient (40.7%), friendly (28.5%), affectionate (25.6%), healthy (20.8%) and loyal (11.4%). Interestingly, although participants wanted an obedient dog, very few of them listed trainability (3.6%) when suggesting important characteristics.

### 3.3. Characteristics of participants' actual dog

Participants who were dog owners (72.3% of the sample) were asked a series of questions about their current dog. If they owned more than one dog they were asked to answer these questions with their oldest dog in mind. Male and female dogs were equally represented (1:1) and the majority of dogs (76.8%) were de-sexed. Over three-quarters (77.9%) of the respondents acquired their dog as a puppy and, of these dogs, 62% were pure breed, 30% mixed breed and 3.2% designer dogs. The most common hair type was straight short hair (41.2%) followed by straight medium hair (18.5%) and medium thick hair (12.8%). Large (20–40 kg) dogs were the most highly represented with 30.6% of participants owning this size of dog, followed by medium (10–20 kg) (27.9%) then small (5–10 kg) (20.5%) dogs. Nearly half (47.5%) of owners estimated that their dog cost them between AUD\$11–20

per week to maintain while 22.4% spend between AUD\$21–30 and 16.2% spend AUD\$0–10 per week on their dog. Owners indicated that they spent much more time exercising their dog than grooming it, with the majority of participants (70.2%) indicating they exercise their dog between 16 and 60 min per day. Most (74.1%) participants claimed they spend between 1 and 30 min per week grooming their pet. A number of dog owners reported they do not groom their dog at all (13.6%).

### 3.4. Differences between men and women

Significant differences existed between what men and women considered important in an "ideal dog". Women preferred smaller dogs and men larger dogs ( $X^2 = 14.56$ ,  $df = 5$ ,  $P < 0.05$ ), women preferred male dogs and men, female dogs ( $X^2 = 10.18$ ,  $df = 3$ ,  $P < 0.05$ ), and men preferred purebred dogs ( $X^2 = 20.32$ ,  $df = 4$ ,  $P < 0.05$ ). Men are likely to spend more money per week to maintain their ideal dog ( $X^2 = 11.05$ ,  $df = 4$ ,  $P < 0.05$ ) while women are willing to spend more time grooming their ideal dog per week ( $X^2 = 11.05$ ,  $df = 4$ ,  $P < 0.05$ ). Women preferred a dog who is calm/compliant [ $t(870) = -2.33$ ,  $P = 0.02$ ], sociable/healthy [ $t(870) = -2.57$ ,  $P = 0.01$ ] and non-aggressive [ $t(870) = -2.67$ ,  $P = 0.008$ ] while men preferred a dog which is energetic/faithful/protective [ $t(870) = 3.09$ ,  $P = 0.002$ ].

### 3.5. Differences between dog owners and non-dog owners

The data were analysed to determine if there was a difference between what characteristics dog owners and non-dog owners wanted in their ideal dog. Dog owners preferred pure breed dogs whereas non-dog owners preferred mixed breed or designer dogs ( $X^2 = 23.80$ ,  $df = 8$ ,  $P < 0.05$ ). Non-dog owners indicated that the cost to maintain their ideal dog is an important factor, with a significant proportion indicating they would spend less per week than dog owners ( $X^2 = 42.66$ ,  $df = 10$ ,  $P < 0.05$ ). Dog owners preferred larger dogs whereas non-dog owners preferred tiny or small dogs ( $X^2 = 32.63$ ,  $df = 10$ ,  $P < 0.05$ ). No significant differences existed for sex, age of acquisition or de-sexed status of the ideal dog between dog owners and non-dog owners. Nor were any differences apparent

for these groups between times spent exercising or grooming the ideal dog.

Independent-samples *t*-tests were performed to determine whether any differences existed between dog and non-dog owners regarding behavioural variables, using subscale scores derived from the five factors identified by the PCA. Dog owners rated calm/compliant [ $t(874) = -2.49$ ,  $P = 0.013$ ], sociable/healthy [ $t(874) = -3.39$ ,  $P = 0.001$ ] and non-aggressive [ $t(874) = -4.98$ ,  $P = 0.000$ ] as significantly more important than non-dog owners. By contrast, non-dog owners rated energetic/faithful/protective [ $t(874) = 2.65$ ,  $P = 0.008$ ] as more important than dog owners.

### 3.6. The effect of children in the household

There were no significant differences identified between what people with or without children wanted in regards to physical characteristics of their ideal dog. Behaviourally, people with no children rated an energetic/faithful/protective [ $t(874) = 2.18$ ,  $P = 0.03$ ] dog as more important than people with children.

### 3.7. Dog owners' ideal dog compared to their actual dog

Pearson's correlation co-efficient analysis was used to compare the characteristics of dog owners' ideal dog with those of their actual dog. Positive correlations were identified regarding the size ( $r = 0.47$ ,  $n = 634$ ,  $P < 0.01$ ) and age of acquisition ( $r = 0.20$ ,  $n = 634$ ,  $P < 0.01$ ) of participants' ideal and actual dogs. The cost to maintain an ideal dog was correlated with the cost of maintaining an actual dog per week ( $r = 0.29$ ,  $n = 634$ ,  $P < 0.01$ ). Positive correlations were apparent for the amount of time the ideal dog and actual dog was exercised per day ( $r = 0.52$ ,  $n = 634$ ,  $P < 0.01$ ) and groomed each week ( $r = 0.55$ ,  $n = 634$ ,  $P < 0.01$ ).

## 4. Discussion

The aim of this study was to identify the characteristics of the modern "ideal dog" by asking the Australian public a series of questions. The overall findings indicate that certain physical and behavioural characteristics are preferred by participants. In summary, the ideal dog in Australia is de-sexed, has short/straight hair, is of medium size (10–20 kg), is acquired as a puppy, and requires between 16 and 30 min exercise per day and between 1 and 15 min grooming per week. The "ideal dog" is also safe with children, housetrained, healthy, comes when called, does not escape the property, is not destructive when left alone, lives until at least 10 years old, and is obedient, friendly and affectionate.

Some of these findings are consistent with previous reports. For example, The National Pets and People Survey, 2006, indicated that medium sized dogs were the most popular sized dog and comprised 43% of the Australian dog population. Similar results were found in another Australian study, with 48.6% of owners indicating they owned a medium sized dog (Bennett and Rohlf, 2007). This also reflects dog breeds developed in Australia, such as the Kelpie and Australian Cattle Dog, who fall into this size

range and are amongst the top three most popular dog breeds (McHarg et al., 1995). These dogs also possess short, straight hair which was the preferable hair type for most participants. This hair length is very much suited to Australia's warm climate and reflects the minimal amount of grooming that people wish to undertake. Possibly, people are too busy with other commitments, such as work, family and social engagements, to spend more time grooming their dog.

Most people wanted their ideal dog to be de-sexed. This is not the case in other countries such as the Czech Republic (Haupt et al., 2007) where routine neutering is not widely practiced.

An important finding from this study is that there was a strong desire amongst participants to acquire an ideal dog as a puppy. This may reflect a number of factors; puppies generally are deemed much "cuter" in appearance than older dogs and tend to trigger peoples nurturing instincts. Their neonatal appearance, clumsiness, increased curiosity and sociability inspire most people to engage in caring and nurturing behaviours (Archer, 1997). Perhaps puppies are considered more trainable as they are seen to be a 'clean slate' to work with and have a known history with the chance of fewer behavioural problems. It would be interesting to determine why people have such a strong preference to acquire their dogs as puppies. Further research is required to clarify this. This finding may also mean that shelters need to find ways to actively market older dogs to facilitate their adoption.

A second important finding is that characteristics considered unimportant by many of the participants included sex, colour, type and cost to maintain. These findings indicate, therefore, that the Australian public does not judge a dog primarily by its physical characteristics but that behavioural characteristics are important in determining how "ideal" a dog will be. The high number of correlations between dog owners' ideal dog and actual dog may indicate that generally people own a dog that matches their ideal dog. Conversely, the attachment people have with their current dog may influence how their 'ideal' dog is defined. Serpell (1996) found that discrepancies between an owners 'actual' and 'ideal' ratings directly related to their level of attachment to their dog. This is supported by research on relinquishment, where the most common reason for relinquishment is behavioural (Salman et al., 1998; New et al., 2000; Marston and Bennett, 2003) and reasons related to physical attributes are uncommon. People may find it relatively easy to select dogs which they find aesthetically appealing but much more difficult to select puppies or dogs that possess temperaments suited to their requirements and lifestyles. A number of puppy temperament tests exist but are unreliable in predicting a dogs' future behaviour or personality, whether it be for a police or military working role (Wilsson and Sundgren, 1998) or as a family pet (Beaudet et al., 1994). Inappropriate selection, coupled with an inadequate knowledge of dog training and behaviour, is likely to result in dogs developing behaviour problems.

Notably, almost all participants agreed that the ideal dog must be safe with children. Dogs that are aggressive to children are a liability to own and pose a considerable risk

to the public. In Australia, children are twice as likely as adults to get bitten by a dog and require hospital treatment (Thompson, 1997). Furthermore, the cost of health care for dog bites in Australia is around AUD\$7 million annually (Miller and Howell, 2008). It is important to highlight that the sample used in the present study contained a lower percentage of children per household than is reported in the Australian census data; most likely due to the large sample of younger people who participated. Therefore, the importance of a dog being safe with children may have been underestimated. To increase public safety and reduce the cost associated with dog bites it is necessary to implement ways to educate the public on dog behaviour as well as identifying suitable pet dogs for society.

The second most desirable behavioural characteristic was a fully housetrained dog. This may indicate that Australians want their dogs to spend time indoors within the family home rather than in a yard where housetraining is irrelevant. Another possible explanation for the importance of this characteristic may be associated with the prevalence of women in the study; it is possible that the traditional female role of cleaning the home is associated with the strong preference for a housetrained dog.

It is notable that “obedient” was suggested by many participants as the most important characteristic in an ideal dog yet “trainable” was not. This is surprising as a dog that is trainable will subsequently become obedient provided appropriate training is provided. Perhaps, people perceive these to be unrelated characteristics or alternatively unrealistically expect their dogs to be obedient without training. People also wanted ideal dogs to be friendly, affectionate, non-destructive and loyal. These characteristics would ensure that the dog causes minimal disruption and provides companionship to the owner.

In addition, participants reported that it was important that their ideal dog be physically healthy. Presumably people who purchase a dog do not want to incur more cost than necessary by treating an unhealthy animal. Furthermore, it could be expected that those who own “ideal dogs” which they have an attachment to, and which possess all the desired characteristics, would want their pets to live long, healthy lives, therefore enabling the owner to gain as much time and enjoyment from the relationship as possible. This has ramifications for the breeders of pedigree dogs where the incidence of heritable conditions, that negatively impact the health and well-being of dogs, is increasing (McGreevy, 2007).

The negative correlations that exist between age and education level and the behavioural subscale ‘energetic/faithful/protective’ suggest that older and more educated dog owners prefer less energetic/faithful/protective dogs. This may be because older people are less likely to engage in energetic activities, including dog training, and prefer dogs that simply adapt to their living conditions as family pets, or it may be that older people have more experience with dogs and are more realistic about those traits that are both desirable and obtainable. Younger people may be more likely to want a dog to participate in sports and exercise activities, or to expect that their dog will conform to an unrealistic ‘Lassie’ stereotype. This may mean that dog breeders need to cater for different requirements

based on these variables, or that education is required for young dog owners before their first dog is acquired.

Similarly, the differences between men’s and women’s “ideal dog” characteristics could assist breeders and shelters to match dogs with appropriate people. Significantly more women preferred a dog who exhibited calm, non-aggressive and sociable behaviours. Perhaps this is linked to the finding that the main carer of the pet in a household is typically female (McHarg et al., 1995) and such characteristics would make it easier to care for the animal. Men wanted larger dogs and preferred pure breed dogs that were physically impressive to look at. The majority (64%) of the men that contributed to the study were aged 35 years or under. Young men have the tendency to be more active and physically stronger than women so perhaps prefer dogs that they can play with physically. It has been suggested in dog–human companionship literature that dog companionship consists of a number of factors. One of these factors, labelled as “dog-oriented-self concept” describes the common tendency for people to use dogs as expressions of themselves (Durgee, 2008). Given the increased serious risk to public health that such animals could present, it would be interesting to explore the aspirations and self-concept of individuals who prefer larger sized, physically impressive dogs, especially those who bite on command.

The results also indicated significant differences between the characteristics that dog owners and non-dog owners considered an ideal dog to possess. Dog owners were likely to spend more money per week to maintain their ideal dog than non-dog owners. This may be a function of attachment; because once the dog and owner establish a positive relationship cost may no longer be such an important factor, or simply reflective of increased experience. Dog owners’ preference for a calm, compliant, sociable and non-aggressive dog may also be indicative of their past experience with dogs or reflect their wish to own a dog which suits their lifestyle. Dogs which possess these behavioural traits are much more likely to adapt and be of minimal nuisance to most owners than perhaps the types of dogs non-dog owners prefer, which would exhibit behaviours from the ‘energetic/faithful/protective’ component. Again, it is possible that the expectations of non-dog owners are unrealistic, being informed by manufactured cultural icons such as Lassie, Rin Tin Tin and Inspector Rex.

Many dog owners in this study were over 30 years of age. It is likely that people younger than this are not in a position whereby they can own and care for a dog. As outlined earlier, it is becoming increasingly difficult to own a dog. Possibly, people from the older age groups live in more permanent forms of accommodation which allow them to have a dog. They are also more likely to be in a family environment where more people can assist in caring for the dog.

It was found that people who did not have children living at home rated a dog who is ‘energetic/faithful/protective’ as more important than people with children. This could be because people who do not have children may be relying on their dog as more of a companion and spend more time engaging in activities together. In

contrast, people with children may not have enough time to dedicate to a high energy dog in addition to a busy family life. Furthermore, a boisterous dog is more likely to require extra supervision around children.

Over a third of participants believed that some dogs could not be trained. This is rather surprising as all dogs can be trained to a certain extent. Perhaps this is based on past experiences, lack of knowledge about dog training or possibly people answered in relation to a particular level of trainability. Further research would be required to clarify this.

Before concluding, it is necessary to raise two important issues which may limit how the results are generalised. First, the sample may not have been representative of the Australian public with, for example, women and young people being over represented compared with the general population (Australian Bureau of Statistics, 2008). This is unfortunate but common in these types of studies when similar recruitment methods have been used (Bennett and Rohlf, 2007; Ley et al., 2008). Not surprisingly, dog owners were also over represented, perhaps being more motivated to participate because they are interested in the topic. In order to capture data from as representative a sample of Australian adults as possible, the questionnaire was made available on-line and also distributed to the general public in a paper form. It was widely advertised in the popular press and psychology students were encouraged to complete the survey in exchange for course credit. Results from participants who completed online and paper versions were not significantly different so the data were combined prior to analysis, but further studies in this area should determine if these results can be generalised to the general Australian population. Perhaps a bias towards those most likely to own dogs in the future is appropriate given the research topic.

A second limitation concerns the extent to which the results can be generalised beyond Australia. There are important cultural differences in dog keeping behaviours that require additional exploration. For example, dogs living in urban areas within European countries are more likely to be kept in apartments and not have access to backyards like the majority of Australian dogs (Kobelt et al., 2003). This somewhat unique Australian practice of confining dogs to backyards could explain the preference we noted for a dog which does not escape the owners' property. This has been documented to be one of the reasons many dogs are relinquished to Australia shelters (Marston et al., 2004). Perhaps, European countries have a more intimate coexistence with dogs as they share living quarters and possibly their "ideal dog" would be different to people residing in Australia.

## 5. Conclusion

The information gathered in this study provides insight into what the Australian public believes constitutes an 'ideal dog'; what it looks like and how it should behave. As this study demonstrates, certain behavioural traits that were highly valued and selected for in the past (e.g. hunting capabilities), are not desirable for the average pet dog owner today. Owners perceive that a dog's health and

behaviour are much more important than its looks. This is important for two reasons. First, it may lead to disappointment and contribute to shelter euthanasia rates, particularly if expectations about dog behaviour are unrealistic, as seems likely given some of our data. The public may require additional education about dog behaviour and training to minimise the risk of people obtaining dogs with unrealistic expectations about how the dog will behave. Already there are a number of resources available which aim to teach people about dog behaviour and training, yet there are still many dog-owner relationships breaking down, resulting in dog relinquishment. Second, if the public are more concerned about health and behaviour than physical characteristics, then it may be wise for dog breeders to select for these attributes rather than placing undue emphasis on physical qualities. This may enable them to breed dogs who are best suited to be human companions. By educating the public and actively selecting breeding dogs from those who are proven most able to cope with today's urban environment, the welfare of pet dogs will be enhanced and the number of dogs relinquished to shelters for behavioural issues reduced. Pet owner satisfaction should also be improved.

## Acknowledgements

The authors would like to thank Petcare Information and Advisory Service and the Victorian Bureau of Animal Welfare for their financial support as well as the Australian residents who participated in the study. We also thank an anonymous reviewer for suggesting suitable names for the five behavioural factors revealed in the study.

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