

13. A Review of Behavioural Assessment Protocols Used to Determine the Adoption Suitability of Australian Shelter Dogs

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Abstract

Thousands of dogs are relinquished to Australian animal shelters each year. Prior to being made available for adoption, dogs undergo a behavioural assessment to determine their suitability as companions. Dogs that pass the assessment are made available for adoption, whereas those that fail are usually euthanased. This is potentially problematic for several reasons; not only do current protocols used to assess adoption suitability lack standardisation in their content and methodology, very few have been presented in the peer reviewed literature. Accurate assessment of the behaviour of shelter dogs is imperative to protect the welfare of both the community and the dogs in the shelter system. This will ensure that potentially dangerous dogs are not adopted out and that suitable companions are not wrongly euthanased on the basis of invalid assessment protocols.

Keywords: Behavioural assessment; Dogs; Temperament; Behavioural individual differences (BIDs); Shelter

1. Introduction

Companion dogs are an integral part of the Australian lifestyle, such that 40 percent of households own one or more pet dogs (BIS Shrapnel Global Marketing Intelligence and Forecasting, 1999). Notwithstanding the popularity of dogs as companions, those that display undesirable behaviours, such as aggressive tendencies, are more likely to be surrendered to shelters (Miller et al. 1996). Indeed, thousands of dogs are relinquished to welfare shelters or admitted as strays each year in Australia (Marston & Bennett 2003; Marston et al. 2004). Reasons given for relinquishment include owner-related factors such as 'moving house', 'too much effort' and 'health problems' and dog-related factors such as 'behaviour problems' including escaping, hyperactivity/boisterousness and barking, although a proportion of owners decline to comment on why they are surrendering their dog (Marston et al. 2004). Prior to being made available for adoption, shelter dogs typically undergo a behavioural assessment or "temperament test". Theoretically, such tests should provide an efficient and relatively complete profile of the behavioural characteristics of a dog (van der Borg et al. 1991). The purpose of the assessment is to determine whether dogs would make suitable companions for potential adopters and, more recently, to help improve the match between adopter and dog. Dogs that pass the assessment are made available for adoption, whereas those that fail (generally because they display aggressive behaviour or have chronic health problems) are euthanased.

Approximately 30 percent of dogs that enter the shelter system in Australia are euthanased (Marston et al. 2005). Clearly, there is a strong imperative for behavioural assessments to be valid; deficiencies in assessment have the potential to be a significant welfare concern if dogs are wrongly euthanased or if potentially dangerous dogs are made available for adoption on the basis of an invalid

assessment. According to Martin and Bateson (1993), the quality of a behavioural test (whether a test is a good measure, the right measure and a useful measure) is determined by three specific measures: reliability; validity, and; feasibility. It is critical, therefore, that behavioural assessment protocols used to determine the adoptability of shelter dogs are supported by statistical evidence to show that they are accurate and meaningful. Of course, a valid behavioural assessment protocol may not always guarantee that adoption is successful. For this reason, other strategies such as basic obedience training and an adopter-dog matching programme should be used to increase the likelihood that adoption is successful.

The aim of this review is to investigate and review current behavioural assessment protocols used to assess the behaviour of dogs to determine whether they are suitable for adoption or whether euthanasia is required. The review comprises three parts: a literature review; observations of behavioural assessment protocols used in Australia, and; interviews with Australian assessment staff. First, the findings of the literature review will be discussed. The results of the shelter assessment observations and interviews with shelter staff directly involved with assessing dogs will then be described. Finally, strategies for improving the assessment of dogs in Australian shelters will be proposed.

2. Method

2.1 Literature review:

A review of the literature pertaining to the assessment of canine behaviour was conducted. Literature searches using keywords including 'behavioural assessment', 'behavioural evaluation', 'canine behaviour', 'shelter dog', 'temperament' and 'temperament test' were performed using the Monash University online library catalogue, electronic journal database and electronic resources (Current contents connect, Web of science and ScienceDirect) as well as the internet search wizards, Google and Google Scholar. Literature searches were conducted regularly between May 2006 and June 2007.

2.2 Behavioural assessment review:

Data were collected from 11 shelters and pounds across six Australian states (VIC, NSW, WA, ACT, SA, QLD). Following approval from Monash University's Standing Committee on Ethics in Research Involving Humans (SCERH), shelter managers were contacted by phone or email and invited to participate. Those establishments that expressed interest in the study were sent an explanatory statement which provided further detail. They were then asked to sign a consent form to confirm their participation. Once the signed consent form was returned, either a visit to the establishment was organised (if convenient) or a time was scheduled to conduct a telephone interview with staff members (or volunteers) who assess the dogs.

2.2.1 *Observation of shelter assessment protocol:*

Assessment protocols were observed at eight shelters located in VIC, NSW, SA, ACT and QLD. The assessments were video taped using a hand-held Panasonic Mini DV digital camcorder (Model no: NV-GS230) for the purpose of further analysis. Additional information was collected during these visits including copies of the paperwork used during the assessment as well as the intake information for dogs that were relinquished by their owners. This provided various details about the dog

and its behavioural history including age, breed, sexual status, if the dog was obedience and toilet trained and whether it had any behavioural problems.

2.2.2 Interviews with shelter staff:

Interviews were conducted with shelter staff (directly involved with assessing dogs) either personally (during shelter visits) or by telephone. Private interviews were conducted in a room or area away from other staff members and members of the public. Twelve questions were asked during the interview. The majority of questions related to the assessors' attitudes and beliefs about behavioural assessment in general and details about the appropriateness of the protocol they currently used to assess dogs for adoption suitability. Other questions related to the most common breeds/breed types received by the shelter and the behavioural problems exhibited by those dogs (see Table 1 for a list of the interview questions).

Table 1: Interview questions

1	Are the dogs in your shelter housed singly or with another/other dogs?
2a)	Does your organisation currently use a behavioural assessment protocol for assessing adoption suitability?
2b)	How long does the assessment take (minutes)?
2c)	What behaviours are assessed?
2d)	Did you receive any training on assessing behaviour in shelter dogs?
2f)	On average, how many days are dogs held in your shelter prior to assessment?
3	What do you think are the <i>three</i> most important behaviours to assess?
4	Does your existing protocol include the assessment of those three behaviours you just identified as important?
5a)	How much time do you allocate for each assessment?
5b)	Do you believe this is enough time to accurately assess a dog?
5c)	In a perfect world, how much time do you believe is required to accurately assess a dog?
6	On a scale from 1 to 7, where 1 = 'not at all confident' and 7 = 'extremely confident' how confident are you that the current assessment protocol is the best protocol to use in terms of maximising successful adoptions?
7	What suggestions would you make, if any, to improve the protocol?
8	How much experience have you had assessing the behaviour of dogs in shelters? (months/years)
9	On a scale of 1 to 7, where 1 equals 'not at all confident' and 7 equals 'extremely confident', how confident are you in your ability to accurately assess dogs in the shelter environment ?
10	Do you think that having a scientifically validated and standardised dog behaviour assessment protocol available for use by animal shelters and pounds Australia wide would be beneficial?
11	What are the main dog breeds or breed types received by your pound/shelter? (List top three)
12	What are the most common behavioural problems exhibited by dogs received by your pound/shelter? (list top three)

3. Results

3.1 Literature review:

The literature review revealed a lack of standardisation in both the content and methodology of the assessment of canine behaviour to determine adoption suitability. Additionally, very few such protocols appear in the peer reviewed literature. Those that have been published in the scientific literature are incomplete in their reports of reliability and validity.

3.2 Behavioural assessment review:

3.2.1 *Observation of shelter assessment protocols:*

More than 50 shelter dog assessments were observed during visits to eight Australian animal shelters. Initially, the observed assessments were video taped for further analysis, however, due to the high variability between the assessment protocols used, statistical analyses could not be carried out on the content of the video tapes. For this reason, recording of assessments was abandoned after the third shelter visit. While there were no statistical analyses conducted for this part of the review, the observations of assessments were beneficial for the purpose of learning how shelters assess their dogs and the constraints under which they do so. These constraints, which were verbally communicated to the researcher, included limited availability of time and resources. The most common constraints were limited staff numbers available to conduct the assessments, insufficient staff training in assessing canine behaviour and the lack of an appropriate area to conduct assessments.

During shelter visits, paperwork outlining the details of the assessment protocols used was collected. Shelters used a variety of assessment protocols (two published in the peer reviewed literature and the remaining developed in-house) to determine the adoption suitability of the dogs in their care. A comparison of these protocols and several peer reviewed protocols developed overseas is shown in Table 2. As can be seen from Table 2, the protocols vary considerably in terms of the behaviours they assess. All eleven protocols assess aggression towards people and only one protocol fails to assess aggression towards other dogs. All assess a dogs' reaction to handling. Six of the eleven protocols assess dominant/submissive behaviour, cage behaviour, obedience and reaction to novelty. The majority of the protocols assess resource guarding, fear, sociability and excitability/arousal whereas only three protocols assess separation anxiety. As can be seen from Table 2, only two of the protocols have been presented in the peer reviewed literature, one of which (Ethotest) requires one hour for completion.

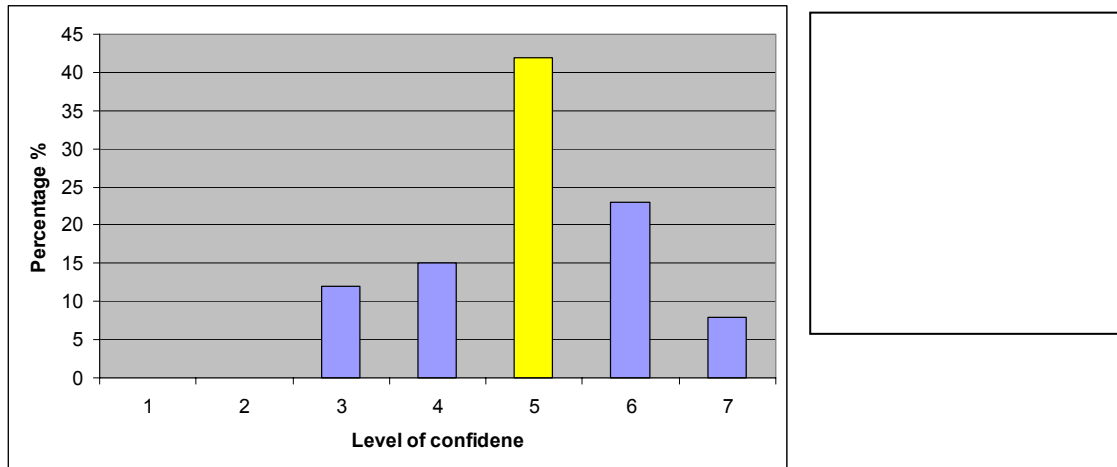
3.2.2 *Interviews with assessment staff:*

A total of 26 shelter staff directly involved with assessing dogs were interviewed. Staff experience in assessing the behaviour of shelter dogs ranged from six months to 16 years (Mean = 2.5 years, SD¹ = 3.3 years). Two thirds (77%) of respondents reported that they had received training in the assessment of shelter dogs whereas one third (33%) reported that they had not received training. The most common form of training was 'on the job' training (59%) followed by 'attended a seminar/completed a course' (33%). The duration of assessment protocols ranged from five to 40 minutes (Mean = 24 mins, SD = 12 mins).

¹ SD = Standard Deviation

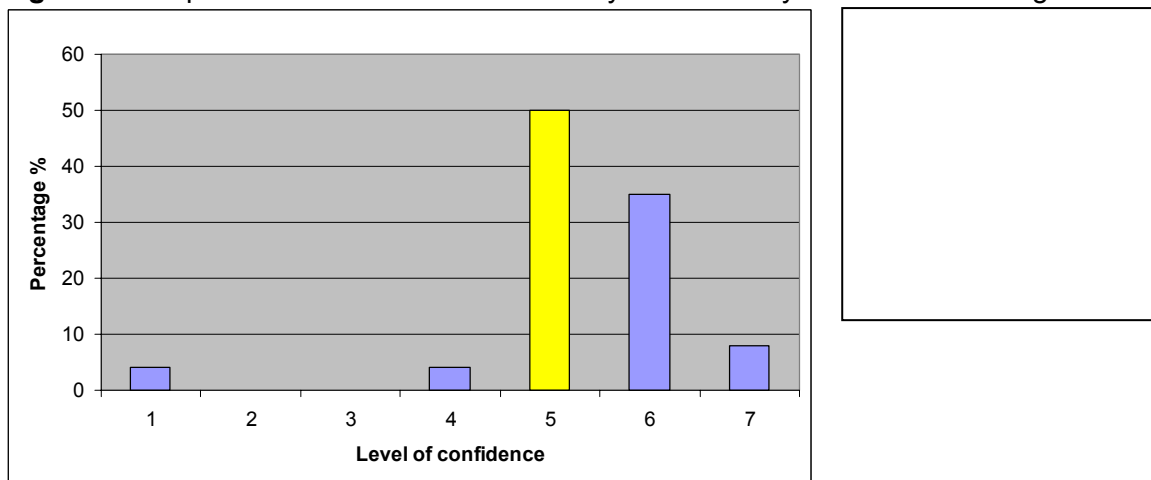
When asked to rate their confidence, on a 7-point Likert-type scale, that the current assessment protocol was the best one to use to maximise successful adoptions, the greatest proportion (42%) of the assessment staff reported they were “somewhat confident,” followed by “very confident” (23%), “neither unconfident nor confident” (15%), “somewhat unconfident” (12%) and “extremely confident” (8%) (see Figure 1).

Figure 1: Respondent confidence that the current protocol is the most appropriate one to use to maximise successful adoptions



When staff were asked to rate, on a 7-point Likert-type scale, their confidence in their ability to accurately assess dogs in shelters, half (50%) of the assessment staff reported that they were “somewhat confident” in their own ability to accurately assess shelter dogs, followed by “very confident” (35%), “extremely confident” (8%), “neither confident nor unconfident” (4%) and “extremely unconfident” (4%) (see Figure 2).

Figure 2: Respondent confidence in their ability to accurately assess shelter dogs



Interestingly, experience in assessing the behaviour of shelter dogs did not correlate with respondent confidence in the current protocol and showed a moderate, negative correlation which was close to significant ($r = -.37$, $n = 26$, $p = .064$). Similarly, experience did not correlate with respondent confidence in their ability to accurately assess shelter dogs ($r = -.19$, $n = 26$, $p > .05$).

When participants were asked whether their current assessment protocol could be improved, the majority (85%) replied “yes”. When asked how the protocol could be improved, the most common responses were: by expanding the protocol to assess more behaviours (19%); having more time available for assessment (16%); more staff training in assessing dogs (13%); having two people present during assessment (6%), and; by having a more standardised protocol (6%).

SEE APPENDIX 2 - Separate handout

When participants were asked if the time they had available was sufficient to obtain an accurate assessment of each dog’s behaviour, just over half (56%) responded “yes” and the remaining (44%) responded “no”. When asked if a standardised and scientifically validated assessment protocol would be beneficial for the assessment of shelter dogs for adoption suitability all 26 participants (100%) replied “yes”. The most common reasons why such a protocol would be beneficial were: to create standardisation across the shelter industry in the way dogs are assessed (44%); to improve public safety (15%); to obtain more reliable results (9%), and; to enable a better match between adopter and dog (9%).

With regard to the duration of time that dogs spent in the shelter prior to assessment, the findings showed that the number of days ranged from three to 14 days (Mean = 5 days, SD = 2.6 days). The three most common breeds/breed types entering participating shelters were Kelpie crosses (23%), Staffordshire bull terrier crosses (22%) and Blue Heeler crosses (17%). The most widely reported behavioural problems exhibited by dogs were intra-specific (dog-dog) aggression (14%), anxiety (10%), disobedience (9%) resource guarding (8%), escaping (8%) and hyperactivity (6%).

4. Discussion

The literature review revealed that current assessment protocols used in Australia and overseas to identify shelter dogs that would make suitable companions may be problematic in several respects. Most notably, many have not formally been presented in the scientific literature (Taylor & Mills 2006); of those that have been peer reviewed, many are deficient in their reports of reliability and validity which are key components that determine a worthwhile assessment of behaviour (Martin & Bateson 1993). Furthermore, they lack standardisation in their content, methodology (Taylor & Mills 2006) and focus.

The observations of assessment protocols revealed that Australian shelters use a variety of protocols to assess adoption suitability and that these protocols assess a broad range of behaviours. The importance of assessing those behaviours is, however, not known in terms of whether they are predictive of future behaviour (in the adoptive home). Although many shelters operate under constraints, such as limited time, space and resources, the time they have available would be better utilized using a valid and reliable assessment protocol. Not only would this improve the welfare of the dogs in the shelter system, by ensuring that suitable companion dogs are not wrongly euthanased, moreover the welfare of the community would also be improved by preventing potentially dangerous dogs from mistakenly being adopted out. In addition, using a valid and reliable assessment may reduce the number of dogs returned to the shelter (due to an inappropriate match between adopted and dog). This may have the added benefit of freeing up resources to

accommodate more dogs. While it is not known if dogs in the shelter system are mistakenly euthanased, given the current lack of standardisation and poor reports of reliability and validity in the peer reviewed literature, it is possible that it does occur. Therefore a more rigorous scientific approach is needed in the development and evaluation of assessment protocols (Taylor & Mills 2006). This requires standardisation and statistical evidence supporting the reliability, validity and feasibility of the assessment protocol (Martin & Bateson 1993).

The interviews with shelter staff revealed some interesting findings. Most notably, experience was not correlated with confidence in the current assessment protocol or confidence in the respondent's ability to accurately assess dogs. Indeed, there was a non-significant trend for a negative relationship between experience and confidence which may have been significant had the sample size been greater. This finding was unanticipated; it had been expected that respondent's who were highly experienced would be more confident in their ability to accurately assess shelter dogs. It might be speculated that the more assessors learn about canine behaviour, the greater the appreciation of its complexity and of the deficits in current assessment protocols. Only two thirds of respondents received training in assessing the behaviour of shelter dogs. While training mainly comprised 'on the job' training, a third of the shelter staff reported that they were trained how to assess dogs at a seminar (presented by a behaviourist or trainer) or by attending a short course. Nearly half of the respondents reported that they did not have enough time available to obtain an accurate assessment of each dog.

The majority of respondents had suggestions for improving their existing protocol and the most common suggestions were to include more behaviours and to have more time available for assessment. Other suggestions included more staff training in assessing shelter dogs, having at least two people present and having a more standardised protocol. Respondents unanimously agreed that a scientifically validated and standardised assessment protocol would be beneficial. The reasons given were to create standardisation across the shelter industry, to promote public safety, to obtain reliable results and to enable a better match between adopter and dog. The most common breeds/breed types were working dog crosses and included Kelpie crosses, Staffordshire bull terriers and Australian Cattle Dog crosses. Since many of the shelters that participated in this research were located in suburban areas, these findings suggest that working breeds may not be suited to living in suburbia. The most common behavioural problems exhibited by dogs (as reported by shelter staff) were intra-specific aggression, anxiety, disobedience, resource guarding, escaping and hyperactivity.

These findings suggest that Australian assessment staff lack complete confidence in the protocol they currently use to assess dogs and in their own ability to accurately assess behaviour. Indeed, the more experience assessors had, the less confident they were that the current protocol was the most appropriate one to use. This situation could be improved by providing assessment staff with comprehensive training (which is ongoing) in the assessment of canine behaviour. Strategies, therefore, for improving the assessment of shelter dogs to determine their suitability for adoption should include the following: standardisation in the content and methodology of assessment protocols and statistical evidence to support their reliability, validity and feasibility (practicality), and; an ongoing training program for shelter staff to teach best practise in the assessment of canine behaviour.

Research currently underway aims to develop a standardised and scientifically validated behavioural assessment protocol to identify shelter dogs suitable for adoption with these strategies in mind. The Behavioural Assessment for Re-homing

K9s (B.A.R.K.) protocol will be developed with a vigorous scientific approach and will be evaluated for the key components outlined by Taylor and Mills (2006) and Martin and Bateson (1993).

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Having always been fascinated with animal behaviour, how animals learn and how an animal's environment influences its behaviour, I pursued an education in zoology. I completed a Bachelor of Science degree with honours in zoology in 2003. After a brief stint working in large pet shop I realised that many pet owners knew very little about the behaviour of their pets. I also realised that behavioural problems were quite common, often resulting in relinquishment or euthanasia. This inspired me to act and provide some much needed help to people and their pets. I began *Pets Behaving Badly* and have been consulting pet owners ever since. I am now undertaking my PhD at Monash University. My research aims to develop a validated and standardised behavioural assessment protocol to assess adoption suitability in shelter and pound dogs.