



Veterinarians' perceptions of behaviour support in small-animal practice

A. L. Roshier, E. A. McBride

Veterinarians are professionals considered to be at the forefront of animal welfare, including behaviour medicine. However, concerns raised, both within the profession and without, highlight that the support offered is not optimal, due to deficiencies in veterinary training, which focuses on physical aspects and overlooks psychological aspects. This preliminary study explored the experiences and perceptions of six veterinarians (three male, three female, age range: 23–55 years) in two UK small-animal practices. Seventeen annual booster consultations were videoed and conversations thematically analysed for welfare topics discussed. Both veterinarians and clients completed questionnaires to gather demographic information and perspectives. All veterinarians recognised behaviour as a component of their caseload, and acknowledged that clients expected them to provide behaviour support. Veterinarians varied in their experiences of and confidence in providing behaviour support. Five felt unable to meet client expectations; four did not feel their training had prepared them sufficiently. Only one provided dedicated behaviour consultations, the others referred cases. All provided suggestions for behaviour skills needed for new veterinary graduates. The study has afforded an insight into the experiences of a small opportunistic sample of veterinarians. The data indicated important limitations regarding time available in general consultations to discuss behaviour concerns, and practitioner knowledge and skill in detection, anamnesis, assessment and provision of appropriate behaviour information. Suggestions for veterinary training in behaviour are provided.

Background

Legislation, in the form of the Veterinary Surgeons Act of 1966 (HMSO 1966), exists to regulate the treatment of animals wherein only a veterinary surgeon may perform surgery, provide medical treatment and diagnose a condition. By contrast, there is no legislation regarding qualifications or practise requirements for those involved either in directly training animals, giving advice on training or addressing problem behaviours (Wickens 2007). The Companion Animal Welfare Council's (2008) report investigating who should provide behaviour services and how this field should be regulated (CAWC 2008) drew on submissions from the industry. It concluded that the best approach would be the setting of industry standards and self-regulation, and led to the formation of the Animal Behaviour and Training Council (McBride 2010). The council comprises government, veterinary, welfare, training and behaviour organisations, and discussions have defined specialist educational standards for trainers and behaviourists (ABTC 2012).

Due to its specialism, it is generally agreed that it would be a mistake to change the Veterinary Surgeons Act of 1966 to include behaviour so that veterinarians would exclusively oversee behaviour, as this would dismiss a wealth of experience and skills that may be harnessed if veterinarians, trainers and behaviour counsellors work as a team (Turner 1997, McBride 2010). As part of that expert team, the general practice veterinarian is in an excellent position to identify the presence of problem behaviour and advise or refer owners to sources of appropriate help. However, the adequacy of basic veterinary behaviour education and consequent support for clients has been challenged both in terms of ability to assess and address issues themselves, and the ability to assess sources of appropriate help.

The veterinary profession and associated education curricula, in the UK and elsewhere, has been criticised for equating good welfare with good physical health and overlooking behaviour aspects (Hettis and others 2004, Wojciechowska and others 2005, Christiansen and Forkman 2007, Wickens 2007, Gazzano and others 2008, Koch 2009). This risks making an incomplete assessment of the animal's welfare (Wojciechowska and Hewson 2005). Where veterinarians have been involved in welfare research, their recognition of animal behaviour has been questioned. Christiansen and Forkman (2007) performed a meta-analysis of 32 papers detailing follow-up studies of veterinary treatments given to cats and dogs as assessed by veterinarians. They found that evaluation of animal welfare was restricted to clinical aspects and overlooked behaviour aspects, and suggested this was due to a deficiency of teaching behaviour and ethology in veterinary curricula. Wickens (2007, p29) states that '*the teaching of behavioural medicine is still very limited in United Kingdom veterinary schools. . .*'. When veterinarians have been asked directly, few routinely felt confident in knowing how to treat behaviour problems (Patronek and Dodman 1999).

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In the past four years, the veterinary profession has given greater consideration to the lack of behaviour education and awareness. The British Veterinary Association Ethics and Welfare Group agreed on a working definition of welfare that includes both physical and psychological aspects, and this states: 'Animal welfare relates to both the physical health and mental well-being of the animal' (Anon 2007), thereby more closely reflecting the Five Freedoms (Brambell 1965) which form the underlying premise of the UK Animal Welfare Act 2006 (HMSO 2006). More recently, the Federation of Veterinarians of Europe and the American Veterinary Medical Association have jointly issued statements pertaining to veterinary education and the role of veterinarians in promoting good animal welfare (FVE and AVMA 2011). These include that welfare should be informed by ethological considerations, and that veterinary education must ensure that new graduates have sufficient day one competences in the following area: 'adequate clinical experience to diagnose, treat, and prevent mental or physical disease, injury, pain or defect in an animal'. These statements are intended to be a vision for the veterinary profession, however, currently it appears that behaviour is not fully integrated in the knowledge base of all its members but is championed by a small number of interested individuals.

The following report forms part of a larger study which investigated discussions relating to welfare, in particular, behaviour aspects, during routine dog annual booster vaccinations in two small-animal veterinary practices. A general inductive approach (Thomas 2006) using mixed methods, combining observations with questionnaires, was used to explore the topics discussed and opinions of an opportunistic sample of veterinarians and clients. The purpose of the research was to capture a range of insights, rather than provide a representative view of the profession and its clients. Roshier and McBride (2012) reports in detail on discussion topics and client perceptions from data collected from 17 videoed dog annual booster consultations involving six veterinarians. This report explores the experiences, perceptions and reflections on veterinary training relating to behavioural medicine of the six veterinarians.

Materials and methods

The study was approved by the University of Southampton Ethics Committee and Research Governance Office.

Participants

Study invitations were sent to eight small-animal practices in the first author's (ALR) locality, within 40 miles of Nottingham, UK, and an opportunistic sample of two were recruited. Six veterinarians and 17 clients agreed to participate.

Data collection

Informed consent was obtained from all participants. Video-recorded conversations of consultations were transcribed (Roshier and McBride 2012). Two paper-based questionnaires were designed to collect demographic information and participant perspectives (see online supplementary files 1 and 2). The answer format consisted predominantly of closed questions, Likert scales, and free text opportunities. Visual Analogue Scales (VAS) consisted of a 10 cm horizontal line with descriptors written at the extremities; respondents marked a cross on the line to indicate their rating, this was measured with a ruler and converted into a percentage (1 cm=10 per cent). Questionnaires took approximately 10 minutes to complete.

Veterinarian questionnaire

The questionnaire was divided into two sections. The first section sought demographic information, including year of graduation, number of years in practice, Continued Professional Development (CPD) undertaken and veterinary interests (Table 1).

The second section explored the veterinarians' experience of behaviour problems, their view of their personal competence and their undergraduate education. The 5-point Likert scale items asked how frequently 17 behaviour-related issues (Table 2) were discussed in consultations. VAS were used to assess:

TABLE 1: Veterinarian qualifications and interests

Vet ID	Gender	Vet school	Qualified	Interests	CPD activities	Education prepared you for behaviour?	Behaviour consultation offered?	Behaviour CPD?
V1	Male	Bristol	1985	Dermatology, oncology, soft tissue and orthopaedic surgery	Medicine, surgery, diagnostic imaging, dermatology, behaviour, nutrition, exotics, business, communication	Yes	Yes	Yes
V2	Female	Glasgow	2002	Feline and rabbit medicine/surgery, ultrasonography	Medicine, surgery, diagnostic imaging, dermatology, behaviour, exotics	No	No	Yes
V3	Female	London	2009	Exotics, pathology/cytology	Medicine, large animal/equine	No	No	No
V4	Female	London	2009	Feline medicine and surgery	Medicine	No	No	No
V5	Male	Glasgow	2001	Surgery, animal welfare	Medicine, surgery, large animal/equine, nutrition	Yes	No	No
V6	Male	London	1992	Dermatology	Dermatology, nutrition, exotics, business	No	No	No

CPD Continued Professional Development

TABLE 2: Veterinarians' estimated frequency of discussion of dog behaviour topics in general practice

Topic	Frequency of discussion					
	Always	Usually	Sometimes	Rarely	Never	Don't know/NA
Socialisation		V3, V5	V1, V6	V2, V4		
Obedience training		V2	V1, V3, V5, V6	V4		
Toilet training		V2	V1, V3, V4, V6		V5	
Elimination problems			V2, V3, V4, V6			V1, V5
Marking		V6	V1, V2, V3, V4	V5		
Introduction (baby/new pet)			V2, V3, V5, V6	V1, V4		
Aggression towards people		V2	V1, V4, V5, V6	V3		
Aggression towards other animals		V2	V1, V3, V4, V5, V6			
Firework fear/phobias		V2, V3, V4	V1, V5, V6			
Other fear/phobias			V1, V2, V4, V5	V3, V6		
Pica		V2, V6	V1	V3, V5	V4	
Separation-related problems			V1, V2, V3, V4, V5, V6			
Acral lick granulomas			V1, V2, V3, V4, V5	V6		
Geriatric pet		V2, V3, V6	V1, V4, V5			
Barking		V2	V1, V6	V3, V5	V4	
Issues travelling pet by car		V4, V6	V1, V2, V3, V5			
Destructive behaviour (eg, chewing furniture)			V1, V2, V5, V6	V3, V4		
Other						

- ▶ Perception of their caseload that relates to behaviour problems and species prevalence.
- ▶ Their ability to assess and manage behaviour problems.
- ▶ Importance for them to provide behaviour support.
- ▶ Clients' expectations of behaviour support.
- ▶ Their view of the veterinary profession to provide behaviour support.

Information was gathered on provision of behaviour consultations and referral processes using 5-point Likert questions. The final question asked veterinarians to evaluate their experience of behaviour teaching in their undergraduate degree, and to state what they considered to be the skills/knowledge required of a recently qualified veterinarian.

Owner questionnaire

In addition to owner's demographic information and perceptions of their dog's behaviour (see Roshier and McBride 2012), owners were asked how long they had been visiting the practice and their acquaintance with the participating veterinarian. Owners were asked to evaluate their experience of the consultation using the client satisfaction questionnaire developed by (Coe and others 2010), consisting of a 15-item Likert scale where the modal response indicates overall satisfaction rating. Owners were also asked to identify any issues not discussed and why, and where they accessed information on eight different areas relevant to their dog's welfare, including breeding, diet and behaviour problems.

Data analyses

Questionnaire responses were entered in a standard spreadsheet (Microsoft Office Excel 2007). Data were entered twice to identify data entry errors. Responses were analysed using descriptive statistics and qualitative methods (for open-ended questions). Questionnaire responses were considered in respect to consultation observations.

Conversations were transcribed in a text document (Microsoft Office Word 2007) for coding and thematic analysis (Boyatzis 1998). Thematic analysis was guided by the following research questions:

- ▶ What welfare issues are discussed?
- ▶ Who instigates these welfare conversations?

Following coding, the participant who instigated discussion of the topic was noted. Thematic and instigation data were analysed using descriptive statistics and qualitative methods.

Results

Topics discussed during the consultation

The mean duration of the 17 consultation appointments was nine minutes (range: 5–15 minutes). Thematic analysis of transcripts identified 53 subthemes which were categorised into five main themes representing topics of discussion: (i) navigation, (ii) medical, (iii) husbandry, (iv) behaviour and (v) cost. Veterinarians led instigation of

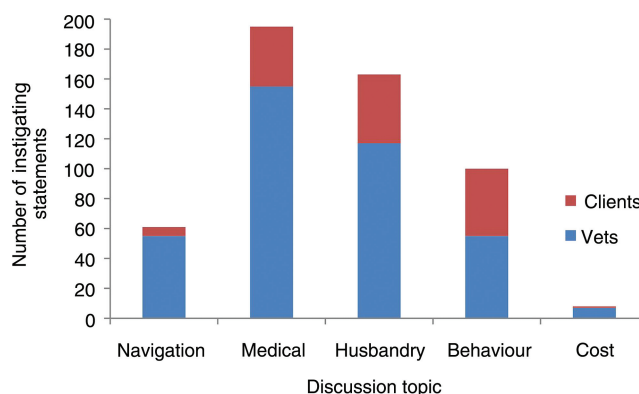


FIG 1: Topic instigation by participating groups

topics in all areas with the exception of behaviour which was as frequently instigated by clients (Fig 1).

The frequency of topic instigation by veterinarians was compared across participants by calculating an individual's average proportion of instigations across all their observed consultations (Fig 2). Frequency of topic instigation was comparable for navigation, medical and husbandry, although V3 instigated fewer husbandry discussions. The greatest variation occurred for behaviour and cost.

Clients' evaluation of the consultation

Client satisfaction ratings were comparable across all consultations irrespective of the client's acquaintance with the veterinarian or whether behaviour problems were discussed. Only two clients rated satisfaction below excellent (C6-very good, C7-good). All clients indicated that they did not have any unstated concerns.

Accessing information related to welfare

Clients accessed information from a variety of sources outside of talking to the veterinary surgeon (Fig 3). There was variation in individual responses across different topics, with some not always utilising their veterinary practice, or using several sources including the veterinary practice. Regarding behaviour support, 5 (29 per cent) clients would not ask their veterinarian or veterinary practice. Information for issues relating to mental wellbeing, including purchase, training and behaviour problems, were as or more likely to be sought external to a trained veterinary professional from sources such as: dog breeders, dog trainers, animal behaviourists, another dog owner, pet shops, animal rescue/welfare organisations, the internet, books/magazines and newspapers.

Veterinarians' perceptions of incidence of behaviour in general practice

On average, veterinarians indicated on a VAS that behaviour contributed to 9.7 per cent (range: 4–20 per cent) of their caseload and included a range of species (Fig 4). Veterinarians predominantly provided behaviour support to dogs.

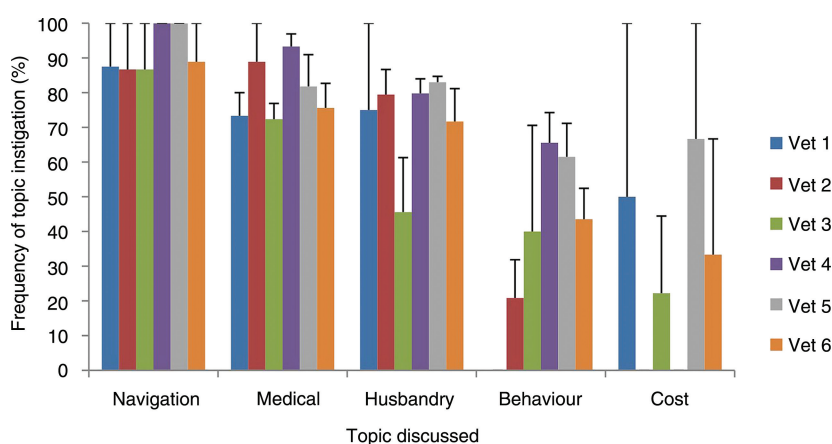


FIG 2: Average instigation of topic discussion by individual veterinarians

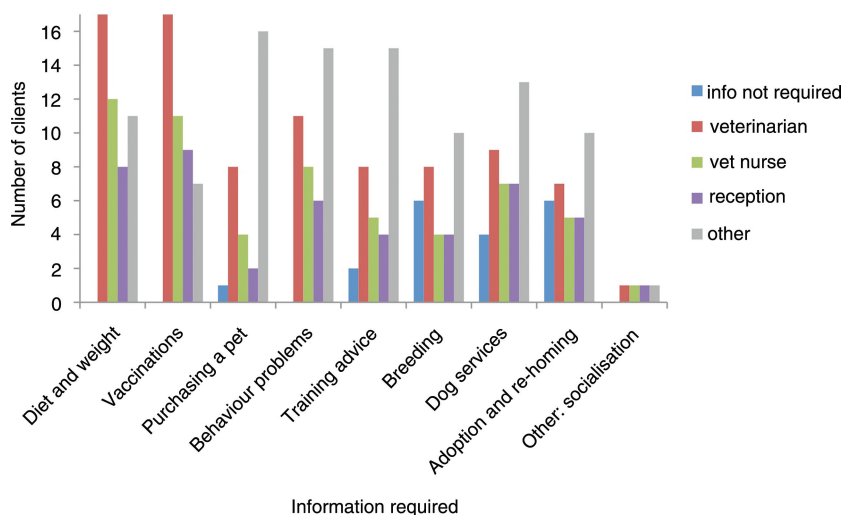
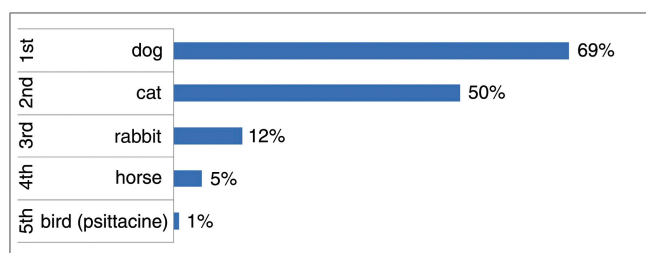


FIG 3: Information clients would request from their veterinary practice or other source



(percentages indicate prevalence where 0%=rarely, 100%=frequently)

FIG 4: Veterinarians' perception of proportion of caseload relating to behaviour by species

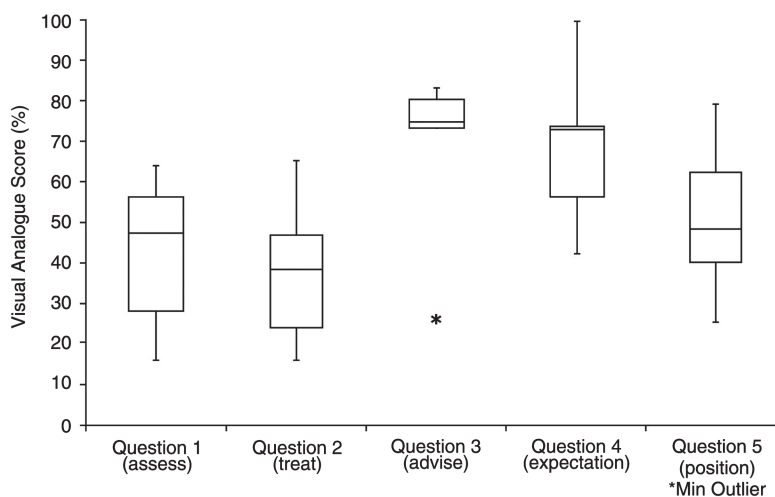
Veterinarians' perception of canine behaviour in general practice

Outside of this study, all veterinarians had discussed dog behaviour with clients (Table 2). Three veterinarians had discussed all 17 behav-

our topics. Four behaviour topics had not been discussed by all the veterinarians: V4 had never discussed pica or barking issues, V5 had never discussed toilet training. V1 and V5 did not know/indicated it was not applicable, if they had discussed elimination problems.

Veterinarians' evaluation of behaviour support

Veterinarians provided VAS scores to five questions relating to veterinary provision of behaviour support (Fig 5). There was wide variation in individual confidence in ability to assess (range: 16–64 per cent) and treat (range: 16–65 per cent) behaviour problems. While one veterinarian (V6) did not feel it was important for them to provide behavioural advice (26 per cent), the others felt it was very important for veterinarians to provide behavioural advice (range: 73–83 per cent). Veterinarians varied in what level of expectation they believed their clients had of them in this respect (range: 42–100 per cent). Veterinarians' opinions varied on the sufficiency of behaviour support they felt the profession was able to offer clients (range: 25–79 per cent).



Question 1: Your ability to assess a behaviour problem (0%=not at all confident 100%=extremely confident)
Question 2: Your ability to treat a behaviour problem (0%=not at all confident 100%=extremely confident)
Question 3: The importance for vets to provide behaviour advice (0%=not at all important 100%=extremely important)
Question 4: Client's expectation of their vet to provide behaviour advice (0%=not at all important 100%=extremely important)
Question 5: Do you think vets are in a position to offer sufficient support to clients wanting help with their pet's behaviour problems? (0%=no, not at all 100%=yes, very supportive)

FIG 5: Veterinarians' perceptions of behaviour support

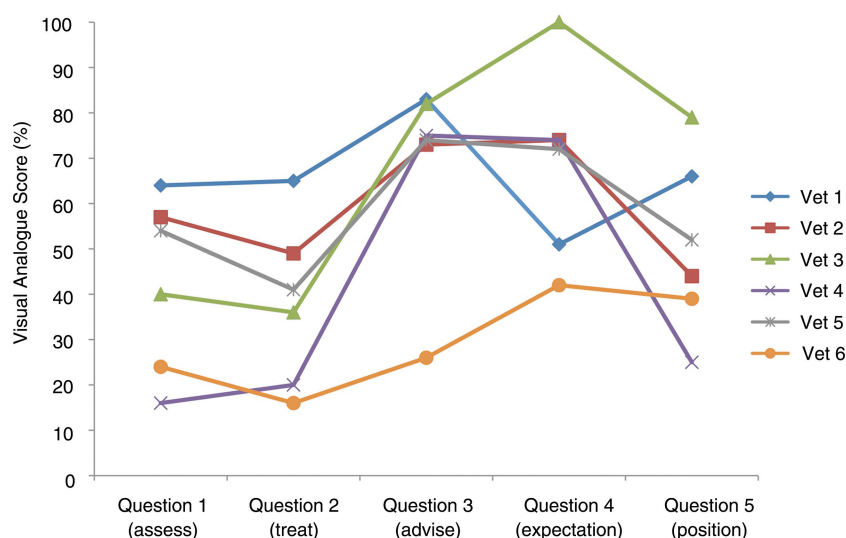


FIG 6: Individual veterinarian's scores on perceptions of behaviour support

Three veterinarians (V2, V3, V5) identified that behaviour support differed between the practices they had worked in. Differences included expertise and interests of staff, services available such as puppy classes, and provision of longer appointment times for behaviour cases.

With the exception of V1, the majority of veterinarians (n=5), scored their ability to manage (assess, treat, advise) a behaviour problem below the level of support they perceived clients expect from their veterinarian (Fig 6).

Undergraduate training in behavioural medicine

Veterinarians graduated from three UK veterinary schools between the years 1985 and 2009; the median time qualified was 9.5 years (range: 2–26 years) (Table 1).

Veterinarians provided mixed feedback on their experiences of behaviour teaching during their undergraduate training (Box 1). Two veterinarians (V1, V5) believed their undergraduate training had prepared them to support behaviour cases, yet differed in perception of own ability (Fig 6). The other four veterinarians indicated that their undergraduate training did not prepare them to support behaviour cases.

Veterinarians suggested behaviour skills they believed a new veterinary graduate needs (Box 2).

Continued professional development (CPD)

All veterinarians had undertaken CPD, most in medicine (n=5), two in behaviour (V1, V2) (Table 1). Of the four (V2, V3, V4, V6) who

Box 1: Evaluation of veterinary training in behaviour Did you feel your veterinary education prepared you to deal with behaviour cases?

Yes (n=2)

"[Understanding of] basic behaviour: normal animals, pathological behaviour, differential diagnosis, behaviour treatment, pharmacology" – V1 male, Bristol 1985

"[Veterinary education included] detailed supporting lecture notes but minimal opportunities to practise" – V5 male, Glasgow 2001

No (n=4)

"Minimal training on animal behaviour" – V2 female, Glasgow 2002

"Other than when seeing practice, no real mention or discussion of behaviour issues" – V3 female, London 2009

*V4 and V6 did not provide an explanation.

Box 2: Behaviour skills recommended by practising veterinarians for new graduates

"Basic behaviour: normal animals, pathological behaviour, differential diagnosis, behaviour treatment, pharmacology" – V1 male, Bristol 1985

"Knowledge to recognise and treat simple behaviour problems, e.g. toilet training, socialisation, separation anxiety" – V2 female, Glasgow 2002

"Client handling of cases, possible treatment used, time spent with behaviourist handling cases" – V3 female, London 2009

"How to advise upon aggressive and stressed behaviour in all species" – V4 female, London 2009

"Time to follow individual cases" – V5 male, Glasgow 2001

"This area needs commitment and time and is not suitable to be dealt with in a hurried fashion or a short consultation. Referral to someone with specific behaviour training and time is advisable" – V6 male, London 1992

believed their education had not prepared them for behaviour cases, one (V2) had undertaken CPD in this area. Special interests were typically related to veterinary medicine, only V5 identified an interest in animal welfare.

Referral of behaviour cases

Only V1 provided behaviour consultations himself; he had indicated the most confidence to manage behaviour cases and also perceived his ability was higher than client expectations (Fig 6). However, an indication that all veterinarians recognised limitations to support behaviour cases was that they all accessed additional support from other professionals. Four accessed support from within the practice, including veterinary nurses or another veterinarian. Two referred outside the practice, one to behaviour counsellors, the other to either a veterinary behaviour counsellor or a behaviour counsellor. None of the veterinarians referred to a trainer.

Discussion

All veterinarians in this study recognised that behaviour was a part of their caseload. V1 commented that his score for caseload frequency included dedicated behaviour cases and that most consultations had a behaviour component. Therefore, depending on how others interpreted this question, incidence may be under-reported. Clients requested behaviour support for a range of species, most commonly dogs and cats as previously identified by others (Overall 1997). However,

the current participants were based in predominantly small-animal practices, which may account for the lower incidence of exotic and equine behaviour support. It is also possible that behaviour concerns for cats and dogs are heightened because these species share the home, it is widely known that support is available and, with dogs, there are potential legal outcomes of problem behaviour. For other species, such as the rabbit that cannot be handled, it may be left in the hutch and basic care provided. Of course, this is unacceptable if either physical or psychological welfare needs are neglected, and therefore, veterinarians must be instrumental in raising awareness of behaviour support for all species.

Veterinarians' confidence varies on the behaviour support they feel able to provide, although five of them indicated that this area should be supported. Most felt their skills did not meet client expectation. This lack of confidence has been reported by others (Patronek and Dodman 1999), and clients have also reported that their expectations have not been met (Case 1988). These comparable results are of concern given the acceleration of knowledge that has occurred in this field in the last decade.

Lacking confidence to even assess behaviour, and then refer on to a specialist has welfare implications. It could result in behaviour issues being under-reported, particularly when comments by clients are not questioned more deeply, or the veterinarian's response may convey acceptance of behaviour so that clients do not discuss issues further. It was surprising that three veterinarians had not discussed pica and barking (V4), toilet training (V5) and elimination problems (V1, V5), as with the exception of pica, the others are common behaviour concerns (Overall 1997, Lindell 2002).

Only V1 provided behaviour consultations, he felt his undergraduate education had prepared him, and was confident in his ability to provide behaviour support. This was in contrast with V6 who believed he did not need to provide support, and that behaviour problems were not suited to general consultations and required a specialist with time, and appeared to recognise that behaviour problems are rarely 'simple', as suggested by V2. The view of V6 agrees with the limitations others have identified if behaviour was to be restricted to veterinarian intervention (CAWC 2008, McBride 2010). V1 graduated in 1985, when at this time, behaviour medicine as a discipline was young and perhaps viewed simplistically, in contrast with V6 who qualified in 1992 when the complexities and subtleties of behaviour were better understood. V1 had completed behaviour CPD and updated their understanding since graduation. However, no data were collected on recency of CPD or of its content or relevance.

Limitations to providing behavioural support were recognised as all veterinarians referred cases. If in-house support from veterinarians or nurses was not available, then paraprofessional help was sought, although none referred to dog trainers. Details of dog training classes were available in reception, and three clients who mentioned concerns related to training may have benefited from being directed to this resource. A limitation of the data was that no information was acquired on how veterinarians/veterinary surgeries assess where to refer, be that for training or other behavioural support.

Although four veterinarians did not feel they received sufficient behaviour training at veterinary school, only one had undertaken any behaviour CPD. It is a concern if confidence to support behaviour is not optimal and is coupled with a lack of engagement in behaviour CPD. Behaviour is a key component of welfare, and there is a growing body of evidence-based behaviour of medicine with practical applications that is vital to the veterinarian's armamentarium. At a minimum, veterinarians need to be able to assess that the client needs help, and where to refer to.

Limitations of undergraduate training in behaviour identified by the veterinarians included not enough hands-on opportunities or teaching of basic knowledge. Veterinarians suggested that competences for a new graduate ranged from recognising that a problem exists to being able to advise on aggressive behaviour. The impact of behaviour in the veterinary clinic was heightened by the observation of two consultations where dogs were muzzled to enable a physical examination and vaccination. In both instances,

the veterinarians warned clients that this limited what could be achieved; for example, teeth could not be checked, and reliance was on the client's assessment.

Regarding implications of this behaviour outside of the consultation, only V6 asked the owner of a muzzled dog how the dog behaved with other people. The client acknowledged the dog could be aggressive towards his wife, though it was not clear from their answer if this extended to others. However, although the veterinarian prompted this disclosure, it was not explored further. The implications of this behaviour outside the clinic are manifold, for example, compromised welfare (dog and human), potential injury to owners and others, impact on the animal-owner and owner-owner bonds, criminal record for owner. The behaviour displayed by both these dogs indicated that they would benefit from behaviour support. However, not all issues will present in the clinic; for example, one client identified their dog was territorial at home and calm at the veterinary practice, and therefore, problems can go undetected unless the client is questioned. Further, behaviour changes may be the first sign of underlying clinical problems such as canine hypothyroidism (Dodman and others 1995, Hamilton-Andrews and others 1999).

The lack of initial questioning relating to behaviour concerns, and lack of probing if they exist, is of concern. It may indicate that veterinarians require further education in questioning and listening skills. This supports the findings of Dysart and colleagues (2011) whose study found that the median time before a client was interrupted by the veterinarian participants was 11 seconds.

The future of behavioural medicine

On September 14, 2011, several joint statements were issued from the Federation of Veterinarians of Europe and the American Veterinary Medical Association (FVE and AVMA 2011). These statements outlined a shared vision for the profession pertaining to veterinary education and the role of veterinarians in promoting good animal welfare. Included was the comment that veterinary education must ensure that new graduates have sufficient day one competences in the following area: *'adequate clinical experience to diagnose, treat, and prevent mental or physical disease, injury, pain or defect in an animal'*. Although acknowledgement of the need for the veterinary profession to provide behaviour support is a positive development, the expectations placed upon new graduates and practising veterinarians must be realistic, and veterinary curricula must provide appropriate training.

The nature of veterinary interventions, because experiences are novel or not routine, or there is an association of discomfort or pain, can invoke a negative emotional response from the animal, resulting in fear and potentially aggression. Therefore, the authors suggest that new graduates should demonstrate the following behaviour 'Day One Competences'.

'Do no harm'

By not creating a situation that causes an animal to be fearful of the veterinary clinic or of routine care procedures (eg, clipping nails), to advise and assist the client to take preventative measures to avoid an aversion to the veterinary practice and provide basic guidance to avoid development of behaviour problems.

Apply 'behavioural first aid'

Identify that a problem exists, take short-term measures to ensure the safety of people and animals, and if the veterinarian is not a behaviour specialist and, thus, unable to provide support, refer the animal to a suitably experienced person.

'Day One Competences' in behaviour are extremely important given the serious welfare issues that behaviour problems can cause for the individual animal, owner and others. The professional role of the veterinarian at the forefront of animal care is undermined if behaviour is not considered an essential and integral aspect of animal welfare. As with other areas of veterinary expertise, individual veterinarians need to recognise the specialism of this subject and their own limitations.

An additional supplementary file is published online only. To view this file please visit the journal online (<http://dx.doi.org/10.1136/vr-2012-101124>)

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References

- ABTC (2012) The Animal Behaviour and Training Council. <http://www.abtcouncil.org.uk> Practitioner Standards: <http://www.abtcouncil.org.uk/practitioner-standards.html>. Accessed September 20, 2012
- ANON (2007) British Veterinary Association Council News in Brief: definition of 'animal welfare'. *Veterinary Record* **161**, 44
- BOYATZIS, R. E. (1998) Transforming Qualitative Information: Thematic Analysis and Code Development. USA: Sage Publications Inc.
- BRAMBELL, F. W. R. (1965) Report of the technical committee to enquire into the welfare of animals kept under intensive livestock husbandry systems. The Brambell Report, December 1965, Command Paper 2836. London: HMSO.
- CASE, D. B. (1988) Survey of expectations among clients of three small animal clinics. *Journal of the American Veterinary Medical Association* **192**, 498–502
- CAWC (2008) Companion Animal Welfare Council: The regulation of companion animal services in relation to training and behaviour modification of dogs. A report published by the Companion Animal Welfare Council (July 2008). <http://www.cawc.org.uk/080603.pdf>. Accessed September 20, 2012
- CHRISTIANSEN, S. B. & FORKMAN, B. (2007) Assessment of animal welfare in a veterinary context – A call for ethologists. *Applied Animal Behaviour Science* **106**, 203–220
- COE, J. B., ADAMS, C. L., EVA, K., DESMARAIS, S. & BONNETT, B. N. (2010) Development and validation of an instrument for measuring appointment-specific client satisfaction in companion-animal practice. *Preventive Veterinary Medicine* **93**, 201–210
- DODMAN, N. H., MERTENS, P. A. & ARONSON, L. P. (1995) Animal behavior case of the month: dogs were evaluated because of aggression. *Journal of the American Veterinary Medical Association* **207**, 1168–1171
- DYSART, L. M. A., COE, J. B. & ADAMS, C. L. (2011) Analysis of solicitation of client concerns in companion animal practice. *Journal of the American Veterinary Medical Association* **238**, 1609–1615
- FVE & AVMA (2011) The Federation of Veterinarians of Europe and the American Veterinary Medical Association: Pre-eminent veterinary groups in Europe and U.S. issue joint statements on animal care, treatment and veterinary education (14th September 2011). [http://www.fve.org/news/press_releases/docs/2011_09_fve_avma_press_release%20\(2\).pdf](http://www.fve.org/news/press_releases/docs/2011_09_fve_avma_press_release%20(2).pdf). Accessed September 20, 2012
- GAZZANO, A., MARITI, C., ALVARES, S., COZZI, A., TOGNETTI, R. & SIGHIERI, C. (2008) The prevention of undesirable behaviors in dogs: effectiveness of veterinary behaviorists' advice given to puppy owners. *Journal of Veterinary Behavior: Clinical Applications and Research* **3**, 125–133
- HAMILTON-ANDREWS, S., MCBRIDE, E. A. & BROWN, I. (1999) Hypothyroidism and aberrant behaviour in the Bearded Collie. Proceedings of the 2nd World Meeting on Ethology, Lyon, France, September 22, 1999. 133–138
- HETTS, S., HEINKE, M. L. & ESTEP, D. O. (2004) Behavior wellness concepts for general veterinary practice. *Journal of the American Veterinary Medical Association* **225**, 506–513
- HMSO (1966) Veterinary Surgeons Act 1966 (c.36), London: HMSO. <http://www.legislation.gov.uk/ukpga/1966/36>. Accessed September 20, 2012
- HMSO (2006) Animal Welfare Act 2006 (c.45), London: HMSO. http://www.legislation.gov.uk/ukpga/2006/45/pdfs/ukpga_20060045_en.pdf. Accessed September 20, 2012
- KOCH, V. W. (2009) American veterinarians' animal welfare limitations. *Journal of Veterinary Behavior: Clinical Applications and Research* **4**, 198–202
- LINDELL, E. (2002) Control problems in dogs. In British Small Animal Veterinary Association Manual of Canine and Feline Behavioural Medicine. 1st edn. Eds D. Horwitz, D. Mills and S. Heath. Gloucester, UK: British Small Animal Veterinary Association. pp 69–79
- MCBRIDE, E. A. (2010) It's a dog's life – the what and who of training and behaviour. In Proceedings of the Companion Animal Behaviour Therapy Study Group Study Day – Management of Repetitive Behaviours in Companion Animals and Regulation of Dog Trainers and Behaviourists in the UK. Ed C. Corridan. Birmingham, UK, April 7, 2010. pp 31–35
- OVERALL, K. L. (1997) Clinical Behavior Medicine for Small Animals. Missouri, USA: Mosby
- PATRONEK, G. J. & DODMAN, N. H. (1999) Attitudes, procedures, and delivery of behavior services by veterinarians in small animal practice. *Journal of the American Veterinary Medical Association* **215**, 1606–1611
- ROSHIER, A. L. & MCBRIDE, E. A. (2012) Canine behaviour problems: discussions between veterinarians and dog owners during annual booster consultations. *Vet Record*. Published Online First: 28 December 2012. doi: 10.1136/vr.101125.
- THOMAS, D. R. (2006) A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation* **27**, 237–246
- TURNER, D. C. (1997) Treating canine and feline behaviour problems and advising clients. *Applied Animal Behaviour Science* **52**, 199–204
- WICKENS, S. M. (2007) An overview of developments in the regulation of those treating behavioral disorders in animals in the United Kingdom. *Journal of Veterinary Behavior: Clinical Applications and Research* **2**, 29–34
- WOJCIECHOWSKA, J. I. & HEWSON, C. J. (2005) Quality-of-life assessment in pet dogs. *Journal of the American Veterinary Medical Association* **226**, 722–728
- WOJCIECHOWSKA, J. I., HEWSON, C. J., STRYHN, H., GUY, N. C., PATRONEK, G. J. & TIMMONS, V. (2005) Development of a discriminative questionnaire to assess nonphysical aspects of quality of life of dogs. *American Journal of Veterinary Research* **66**, 1453–1460