



Puppies and Behaviour: Helping Owners to get it Right Mini Series

Session Two: Applied Canine Behaviour and Learning

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CPD Solutions Puppies Session 2
Delegate Notes
Applied Canine Behaviour and Learning

Associational learning

These are processes that are used for training purposes but they also occur with every interaction an animal has with its social and non-social environment. Giving owners the tools to understand how their puppy learns allows them to adapt every situation to ensure their puppy is learning desirable and appropriate behaviours.

Classical conditioning

The association between two stimuli, based on instinctive response, with the purpose of creating predictive cues. An example is a dog learning that their lead predicts a walk. Learning such as this helps make the world more predictable and therefore less stressful. However it can also result in the learning of predictable cues which predict a bad experience and cause anxiety to build before the fear inducing stimulus is present. This is common in dogs who are worried about visiting the veterinary surgery where there are numerous predictive cues which trigger anxiety.

- conditioned stimulus (bell) → unconditioned stimulus (food) → unconditioned response (salivation)
- conditioned stimulus (bell) → conditioned response (salivation)

Operant conditioning

This type of conditioning is related to consequences of behaviour. There is an increase in the behaviour if it has positive consequences and a decrease in the behaviour if the consequences are negative or neutral. If the behaviour is reinforced through reward then it is more likely to occur again and if the behaviour has a negative or neutral consequence it is less likely to recur. A behaviour can be reinforced either by providing a positive reward such as food, praise or play or it can be reinforced by removing something bad such as the pressure from a choke chain. Negative reinforcement is the basis of most old-fashioned dog trainers for example teaching a dog to 'sit' they would put physical pressure on the rump of the dog and remove that pressure when the dog sits. It is far more appropriate to use positive rewards both in terms of efficacy and in relation the trust and bond between the owner and their pet. Negative punishment can be extremely useful and this basically means that the reward is withheld until the dog shows a more desirable response. For example for a dog pulling on the lead, the reward would be for the dog to reach where he is trying to get to. The dog is prevented from reaching this reward whilst the lead is tight and is only allowed to move forward once the lead is loose. Positive punishment should be used with caution and owners should be made aware of the risks of using aversive techniques.

Adverse effects of punishment

Aversive techniques can be effective at inhibiting the behavioural expression of an emotion in the short-term. However this does not alter the dog's underlying motivation for why she was showing that behaviour in the first place. It is essential to be addressing the underlying motivations in order to have long term success in altering behavioural responses.

- Inhibition of behavioural expression of an emotion in the short-term.
 - But does not alter the dog's underlying motivations.
- Only effective in the short-term
 - start to ignore the punishment or
 - start a new coping strategy
- Risk that the dog might associate the bad experience with the stimulus
 - May create a new behaviour problem
 - Increases fear
- Risk that the dog might associate the aversive experience with the punisher.
- Prediction of punishment.
 - Increased anxiety prior to the situation
- Misinterpretation that owner also scared and joining in.
 - Reinforcement rather than the intended interruption.
- Serious risk of the dogs responding with defensive aggression to punishing techniques. Punishment should never be used in a situation where a dog is showing signs of aggression or there is a serious risk of escalation.

General principles on desirable and undesirable behaviour

- Good behaviour must be rewarded rather than ignored – the prevalence will increase if the behaviour has beneficial consequences.
- If good behaviour is ignored it will decline in frequency and the dog will start to look for other ways to obtain rewards.
- Interrupt unwanted behaviour appropriately
 - Risk of accidental reinforcement if a dog is given attention when showing an unwanted behaviour.
 - A houseline can be a very useful tool. The line is used to set the puppy up to respond in a desirable way, for which he is then rewarded.
- Offer appropriate alternatives. If a dog is only told what not to do he will keep trying alternatives by himself which may or may not be appropriate.
- Timing is crucial for both conditioned responses and operant conditioning. Associations will be made if the stimuli or consequences occur close together in time.

Balancing vaccination and socialisation

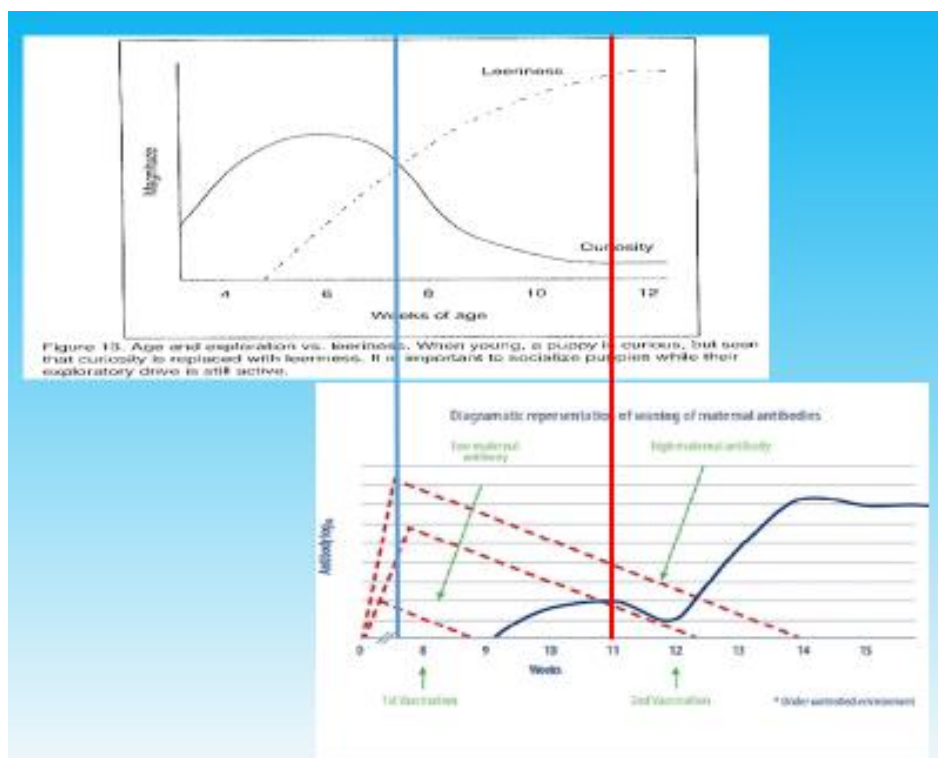
How is the timing of vaccination schedules compatible with getting puppies out and about for appropriate experience for behavioural development during the early sensitive period of 3-12 weeks of age? Vaccination and socialisation are not mutually exclusive.

Puppies must get out before vaccine courses end, whatever age they are when they have the vaccine. Waiting until vaccine courses are over is not compatible with adequate socialisation. Practices who want to serve their puppies and clients as well as possible **MUST** advise active socialisation before the vaccine course finishes. If owners are sensible and given appropriate guidelines disease risks are far outweighed by the enormous benefits of socialisation. Lack of early socialisation plays an important role in the high numbers of dogs in rescue centres or healthy dogs being euthanased and it is our responsibility to prevent that.

Details of socialisation period

- 3-5 weeks of age is a crucial period for priming parasympathetic and sympathetic nervous systems. This is the most important phase for emotional development with rapid brain development. The eyes and ears become open and puppies are stimulated to actively explore their environment.
- During this time puppies experience a period of parasympathetic dominance. This results in them showing active approach towards strangers and other novelty due being in a generally relaxed and positive emotional state. They are pre-disposed to make positive associations with stimuli that they encounter so this is the optimum stage for puppies to learn about many different novel stimuli so they are better adapted to cope with disruption or unfamiliar contexts later in life. Also at this time puppies start to show search behaviour for missing social or non-social maintenance stimuli. Breeders should be actively encouraged to introduce novelty during this time and purchasers should be encouraged to visit their new puppies during this time too.
- So the 3-5 week period is all about puppies being curious and exploring their world then after this, at 5-6 weeks of age, we start to see a period of sympathetic dominance where the fear response starts to develop and avoidance of unfamiliar stimuli begins. This slowly increases and by 8-9 weeks the fear response is starting to be more significant than their desire to be curious. This continues to increase with a peak at around 12-14 weeks, depending on breed and individual, by which time the fear response is fully active.
- At around 8-9 weeks is the onset of stable learning and this makes it a very sensitive time for fear responses. ***Between 8 and 10 weeks this is known as the first 'fear period' where puppies are hypersensitive to aversive stimulation.*** We need to be especially careful during this time to protect them from any adverse experiences because they may have a far greater effect than at any other time.
- Up to 12 weeks of age is a crucial time for species identification

- Looking at these developmental changes in puppies we can consider when is the best timing for re-homing. This is dependent on many factors but there are two especially important factors to consider.
 - It is best to avoid the fear period where puppies have heightened sensitivity of the fear response which occurs around 8-9 weeks of age. It is best to ensure that puppies are either settled into their new home prior to this or travel to their new home afterwards.
 - The other consideration is the quality of social and environmental experience that will be available in the breeding environment compared to the new home.
 - Dog-dog social communication skills are vital learning. If a puppy is re-homed early to a household with another dog or has sufficient opportunity to meet the dogs belonging to family and friends this would be fine. However if he is likely to have less opportunity to practice dog-dog social skills he may be better staying with his mother and litter mates a little longer.
 - If the breeding environment does not offer opportunities for meeting unfamiliar visitors or experiencing novelty then moving to the new home as soon as possible would be best.



Low-risk examples of opportunities to socialise a puppy prior to the vaccination course being completed. Puppies must get out to experience the world before their vaccine course is finished. Owners should be encouraged to be pro-active during the early weeks.

- Take puppy to other houses.

- Car trips.
- Walks in the countryside.
- Check current local disease status.
- Sounds CDs for habituation.
- Wear silly costumes at home and have visitors.
- Take care carrying puppy – limits avoidance response and risk of over-whelming.
- Experience different surfaces underfoot.
- Varied diet.

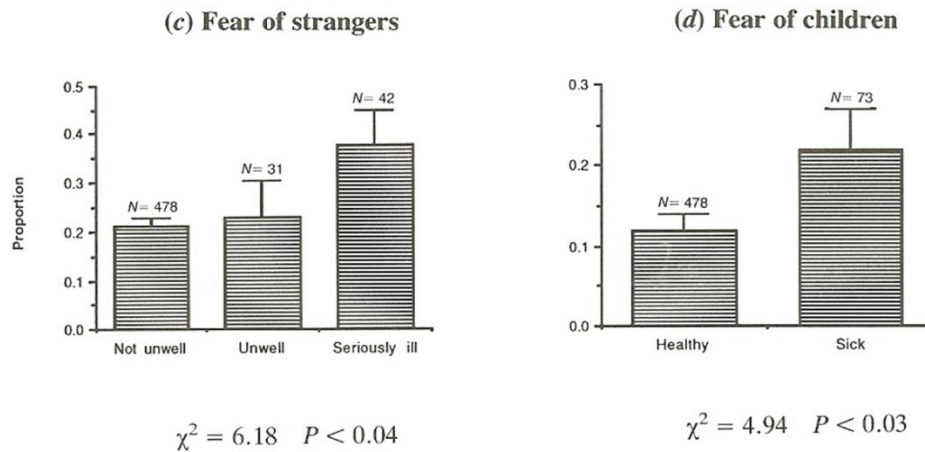
Potential interruptions of the socialisation process.

Illness. There may be reasons why a puppy cannot be taken out for exercise, so missing vital experiences of meeting unfamiliar people, dogs and environmental stimuli. In this situation it is vital that clients are advised with what experiences are suitable and appropriate to help ensure their puppy has as good a start in life as possible. Hospitalised puppies can be provided with novelty by asking their owners to bring in new toys for them, getting different staff members to interact with them, playing the radio, taking them out for a short walk, either out of the surgery or just within the surgery itself. Don't forget that, due to on-going brain development, this type of stimulation is important in older puppies and adolescents who are hospitalised for longer periods as well.

Aversive experience. Although we can explain to owners how important it is for puppies to have positive experiences and build good associations, in the real world there is always a risk of negative exposures and experiences because we do not have control over those around us. A car might suddenly backfire when you are out walking, a bus might pull up next to you with its air brakes hissing, another socially inept dog might inadvertently frighten a puppy and so on. Any of these experiences will be significantly diluted if the puppy has already had ample positive experience but if this happens early on or is particularly aversive then some basic counter-conditioning training may be in order. This will be covered in session 3 and should be part of the information included in puppy pre-school sessions.

Relationship between puppyhood illness and behaviour problems

These two graphs are taken from the book 'The Domestic Dog', edited by James Serpell (1995) and show the findings of some research into the relationship between behaviour problems and puppyhood illness. As you can see puppies that experienced severe illness were far more likely to show fear of unfamiliar people and those that were classed as sick rather than healthy were more likely to be fearful of children.



It seems likely that the ill health of these puppies restricted their socialisation experiences hence resulting in this fear issues. Depending on their experiences during treatment there may also have been an influence of aversive experiences with unfamiliar staff in the hospital resulting in generalisation to other unfamiliar people. So this is an aspect where the role of the veterinary surgery in preventing problems is vital – both in terms of the experiences we provide to our young hospitalised patients and also in terms of educating owners of ill puppies to make a really conscious effort in creating beneficial socialisation opportunities. It is also important to warn owners that an ill puppy may well be more at risk of feeling overwhelmed than a healthy one so they need to be very well versed in spotting signs of fear or anxiety to ensure their puppy is protected from sensitisation.

Puppy experiences at the surgery – our role in learning

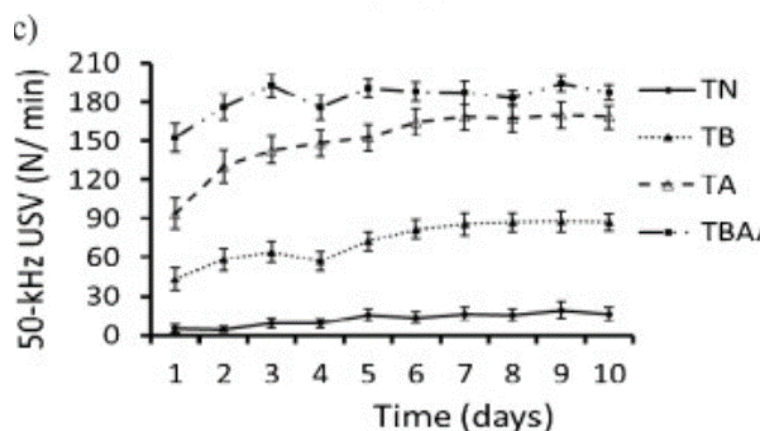
In relation to the timing of vaccinations occurring during the socialisation period we must remember that all the experiences a puppy has at the surgery during this time will play a role in shaping his future behaviour. Puppy visits must all be considered as part of the socialisation experience, bearing in mind all the learning theory processes we have discussed. It is likely that veterinary staff will be of the first unfamiliar people that the puppy meets after leaving the breeding environment. This means in addition to any contextual learning about veterinary surgeries, their experience is likely to affect their long term perceptions of unfamiliar people. It is therefore crucial that they are made to feel safe and learn that unfamiliar people are friendly and that we protect them from aversive experiences.

- Depending on the confidence of the puppy, don't always rush to put the puppy up on the table.
- Ideally puppy vaccinations should be run as a separate clinic so that the floor can be clean, allowing less confident puppies time to explore and get used to the environment before any handling.
- Make sure to interact with the puppy in a positive manner, using food and/or play before doing any examination or procedures.
- If a puppy is too worried to engage in play or eating treats this is a cause for concern and follow-up visits for helping him to relax in the surgery are essential.

- Vaccines must be allowed time to reach room temperature and a small gauge (preferably orange) needle should be used.
- Use food to distract the puppy from the injection – scatter enough treats to allow the puppy to eat before, during and after the injection. This is to protect them from any aversive learning.

Evidence for creating a positive emotional state in animals prior to an aversive experience.

When rats play with conspecifics they thoroughly enjoy rough and tumble play and in the late 1990s Jaak Panksepp discovered that by mimicking this play using human hands, rats emit high frequency sounds of pleasure that is considered to be the rat equivalent of laughing. They show this same high frequency sounds during other apparently pleasurable activities and show low frequency sounds when they are upset. Panksepp and his colleagues designed an experiment to see if this finding could help to improve welfare in laboratory rats. As you can see in the graph below there were four groups in the experiment which are listed here. There was a group who were not tickled at all (TN), a group who were tickled prior to restraint for an injection (TB), a group tickled afterwards (TA) and a group who were tickled both before and after (TBA). The results very clearly show that this playful activity, resulting in a positive emotional state, significantly counteracted the aversive experience of being restrained and injected. We should extrapolate this data and anecdotal experience and use it in puppies visiting the surgery to ensure that protect them during their critical early developmental periods by ensuring they are in a positive emotional state before, during and after handling.



Advice for puppy owners during vaccination appointments.

- Advise owner about importance of positive handling experiences
 - practice handling ears, eyes, feet etc. in case of future treatment.
- Advise owner about behavioural expectations – the breed may be relevant in this case in terms of special advice about adolescent socialisation for guarding breeds or exercise needs if somebody has chosen a working strain of dog and so on.
- Advise owner about ensuring safe and effective socialisation in relation to vaccination status.
- Do not advise training classes unless you have first-hand, recent knowledge/experience of the classes and the trainers running the classes. Ideally puppy classes should be run by staff who have evidence of appropriate experience and knowledge such as these three below:

- Lincoln Life Skills for Puppies courses <http://www.lifeskillsforpuppies.co.uk/training>
- Puppy school <https://www.puppyschool.co.uk/>
- Dogs' Trust Dog School <https://www.dogstrustdogschool.org.uk/dog-school/>
- Most importantly if you come across a puppy who seems unusually shy/fearful for their age, given the developmental timing of the fear response, it is crucial this is addressed as a matter of urgency. The prognosis for a good future for that puppy will be vastly improved if they receive professional help from a behaviourist at the earliest opportunity.
- Book clients in for your puppy pre-school sessions. It is important to encourage all owners, whatever their background and experience, to attend these sessions. Dogs are amazingly adaptable to human incompetence and although many clients will have successfully reared puppies in the past, this is often down to luck, accident and the amazingness of dogs than due to the owner's skill and understanding. Many clients who experience problem behaviour with their dog have had vast experience with other dogs but do not have the knowledge or tools to recognise when things are starting to go wrong and how to address that. Providing information to all owners at the earliest opportunity can make a real difference to the future.

The simplest summary of advice!

Dogs are part of the family

- Eat with them
- Play with them
- Provide them with exercise and stimulation – involve them in family activities.
- Provide them with rules and boundaries as you would any other family member.
- Teach your puppy as you wish your adult dog to behave - just like children!
- REWARD THE GOOD, IGNORE THE BAD

Puppy Pre-School.

Terminology.

The aim when planning socialisation for a puppy is to consider how we want our adult dog to behave and we need to reflect this in the terminology we use for our clients. The term 'puppy pre-school' seems most appropriate in terms of what you should be aiming to achieve and gives clients an accurate representation of what to expect. It is preparing their puppies for future learning. The common term of a 'puppy party' is suggestive of over-excited chaos. In order to ensure that clients take these sessions seriously and realise how beneficial they are in terms of ensuring good attendance, it is important that they perceive them as a professionally run, educational experience for themselves and for their new puppy. Again in relation to terminology I feel the term 'class' is not really accurate as this word does imply some kind of obedience training. Although puppy pre-school should include the principles of training, the aim should be to educate the owners in the ways of training and how puppies learn rather than to be teaching specific exercises.

Planning Puppy Pre-School

- Do take time to sit down and think about what your sessions are aiming to achieve. Ensure they are structured so you cover what you feel is important.
- Always involve more than one staff member to ensure there is cover in the event of illness, holiday or the all too common unexpected emergencies turning up for evening surgery!
- Make other members of staff aware of the objectives of puppy pre-school so that they can sell the idea to clients and ensure that puppies are booked in and attendance numbers are good.
- How to provide clients with information?
 - Group sessions
 - One-off
 - A course of a session once weekly for a few weeks.
 - Consider including a session for owners without their puppies
 - One-to-one individually tailored appointment at the first vaccination and again at the second vaccination.
 - Ideally a puppy appointment for a single client and their family of around forty minutes.
 - Conducted with the humans seated on the floor so the puppy can relax and play
 - Behaviour advice provided and training for various examination procedures demonstrated.

Information to include

- Client education should be the single most important factor for these sessions
- Provide sufficient advice that they can educate their puppies themselves to bring them up to be well adjusted and well behaved adult dogs
 - Sensitive periods and the importance of timing of experiences
 - Explain the basics of learning
 - Habituation
 - Sensitisation
 - Classical Conditioning
 - Operant Conditioning
 - Risks of using punishment
 - Understanding dog body language
 - Understanding how human body language may be interpreted by dogs
 - Housetraining basics
 - Importance of environmental enrichment
 - Teaching puppies to cope with being alone
 - Social learning from other dogs in the household – benefits and risks
- In terms of socialisation, puppies must have a positive experience during the sessions and be set up to practice desirable behaviours but it must be made clear to owners that the bulk of socialisation experience will happen out of these sessions.

- Practice interacting in a positive manner with the other puppies
- Practice interacting with other owners
- Learn that the surgery is a relaxing place to be.
- Learn to be calm and be examined in this context so that future examinations and treatment are easier to perform.
- Practice behaviours that are consistent with the behaviour that will be expected of them out of the surgery, such as politely greeting people rather than jumping up.
- Also include information about adolescence – see session 3.

Practical aspects of puppy pre-school.

Group size. Decisions about group size depends on the number of staff available, the space available and the effects on the puppies with regard to not over-stimulating them.

- Ratio of 1 staff member per 3-4 puppies
- Not more than 6 puppies in one session.
- If the area is small limit the number of puppies to ensure each has space to show avoidance behaviour if they need to.

Age and size of puppies. This must be considered in relation to the developmental stages. Puppy behaviour changes dramatically as they grow up and it would be inappropriate to mix very young puppies with those that are entering the juvenile phase.

- Puppy pre-school must be limited to young puppies that are aged between 7 and 12 weeks. Puppies older than this should be advised to attend regular obedience training classes.
- The size of the puppies is important if you are including off-lead interactions to ensure that small puppies are not accidentally frightened by large ones.
- For owners that acquire a puppy at a later age, they could attend the pre-school sessions without their puppy so that they still get the benefits of the education but their puppy is not at risk of disrupting the younger ones.
- Take note that puppies who are acquired at a later age are more at risk for developing behaviour problems. They would benefit more from an individual one-to-one session where it is possible to tailor information more individually, rather than the group environment.

Off lead or on lead? It is vital that puppies have positive experiences whilst they are learning about the world and that we help them to learn appropriate social skills. There are three main risks with having off lead time.

1. Confident puppies may learn to play boisterously with each other and get over-excited and out of control. This is not beneficial learning as they may start to build unrealistic expectations of how they should interact with other unfamiliar dogs they meet in the future. They should be practising calm polite greeting behaviour.

2. Less confident puppies are at risk of being bullied or frightened by the livelier more boisterous puppies. This may lead to later dog-dog fear related behaviour with inappropriate incidents in a puppy class being an important factor in initiating dog-dog aggression problems in many of the referral cases seen by the author.
3. Puppies may learn to ignore their owners and highly value interaction with other dogs over their interactions with people.
 - a. Puppies should be taught to pay attention to their owners and respond well to cues words and signals.
 - b. They need to be able to concentrate on training or handling exercises without an expectation of off lead play.
 - c. This is good practice for those that will attend regular training classes in the future because they will not have developed a high expectation of running off to play with the other dogs in a group environment.

Using adult dogs in puppy pre-school. A well-adapted and well-behaved adult dog who is tolerant and friendly towards puppies can be an excellent teacher for puppies. Bringing a calm, friendly older dog into puppy pre-school can be very beneficial in terms of teaching the puppies appropriate greeting behaviour. It is important that this is set-up appropriately so that the puppies are learning what we want them to and it is essential that you have 100% trust in the responses of the adult dog.

No passing puppies around! Please do ensure that puppies remain with their owners.

Considerable research has been done on attachment relationships between puppies and owners and puppies show similar secure-base effects to their owner's presence as young animals do to their mothers. The presence of the owner gives the puppy confidence to go off and explore the world, in the knowledge that he has a secure base (i.e. the owner) to return to if something scary happens. Puppies should never be forced to move away from their owners during sessions or during any other visits to the surgery.

Resources for owners. Supplying clients with written information that they can take home to refer to is crucial because they will not remember everything you tell them and not all family members may be present at the sessions. There are excellent handouts available for download from the late Sophia Yin's website on body language, greeting behaviour and learning.

<https://drsophiayin.com/blog/entry/free-downloads-posters-handouts-and-more/>

Providing tools like this is invaluable for owners for understanding their puppy's emotional state and ensuring they can successfully implement individual tailored socialisation.

Potential exercises to include in Puppy Pre-School

- Teaching restraint. This is one of the most useful things your clients can teach their puppy and is an essential pre-requisite for them to be booked in for neutering.

- Owners must look closely for body language signals that indicate any anxiety or fear in the puppy.
- The vast majority of puppies become frustrated when restrained but a minority will be scared by this procedure. Owners should only teach this exercise in puppies that do not show signs of fear or anxiety.
- If a young puppy is scared in this situation then urgent referral should be considered.
- Use the learning principles of operant conditioning.
 - If a puppy wriggles and is released, the puppy learns that wriggling is really effective and they fail to learn to cope with frustration.
 - If the puppy is gently restrained until she stops wriggling, the relaxation can be rewarded by releasing the puppy.
- Handling of all areas of the puppy. The more practice puppies have at being handled, the better adapted they are for the future. Teaching puppies to enjoy being handled using classical conditioning, rather than simply learning to tolerate it is ideal. As with all associational learning, the timing of the food presentation is important. Handling should predict the arrival of the food so that the dog starts to look forward to being touched. Clients should be encouraged to label body parts so that the dog learns a predictable cue and knows which area of the body to expect to be touched when they hear that cue word.
- Self-control is a key life skill that we should be introducing owners to the concept of. Many puppy classes are based on teaching obedience and response to cue words. Alongside this a puppy needs to learn to inhibit his own impulsive responses and learn to be polite. Again this is about using the process of operant conditioning in various day to day scenarios such as passing through a door or being fed (see video examples).

Settling puppies in at home.

Most puppies will have not have been taught to be alone at the breeding environment. It is important to remember that puppies are entirely dependent on caregivers for survival so it can be extremely stressful for them to be out of contact with their caregiver for a significant period of time. Research by Scott and Fuller showed how puppies' responses to being left alone changes with age and with environment. Puppies that were left alone at 3 weeks of age in their home pen showed moderate yelping which decreased with increasing age. When they were left alone in a novel pen

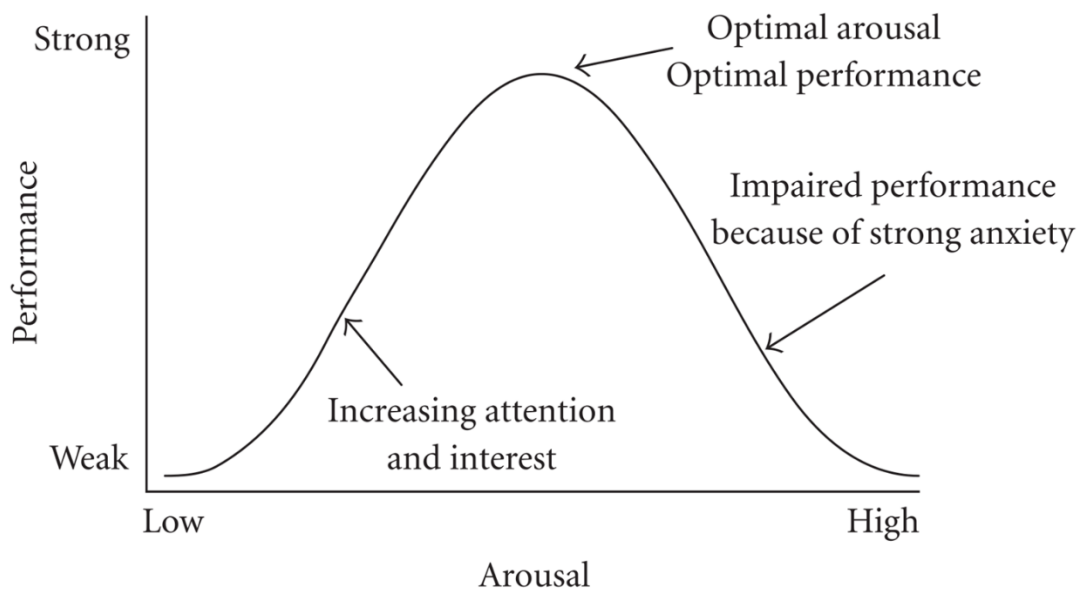
they showed loud continuous yelping with maximum reaction at 6-7 weeks old. By the age of 12 weeks old they showed little vocalisation in strange place when they were alone. This is thought to be due to maturation rather habituation and is the same age that puppies start to investigate further afield. It is therefore really important for owners to be made aware of this developmental change and in particular with reference to puppies being taken to a novel environment of a new home and not have too high expectations of leaving their puppies at a young age. Teaching puppies to be alone must be done gradually and must be tailored to the puppy's individual response and ability to cope.

Efforts to make the environment more familiar for the puppy can be very beneficial, such as taking some bedding along to the breeder to gain the scent of the dam and litter mates to bring home with the puppy. The company of another dog has been shown to reduce vocalisation and distress to almost zero so if the owner does have another dog already then keeping the puppy and older dog together should definitely be advised. For owners who do not have another dog and are crate training their puppy, keeping the crate in their own bedroom for the first night or two can help the puppy to settle. The crate can gradually be moved to the desired overnight sleeping area without stressing the puppy. A major risk factor for developing behaviour problems is a puppy being left alone for long periods of time so owners should be encouraged to get friends, family or a dog sitter to come in and visit the puppy frequently if they are unable to be present themselves.

Introducing other pets

- The puppy must be given space and time to get used to things and interact on his own terms.
- Other dogs in the household must have their desires respected too and their body language carefully observed.
- Give the puppy and older dog time apart if either one of them needs it – always set them up to succeed.
- Chase behaviour is learned in puppyhood and specific targets can be learned as appropriate or not.
 - If a puppy is to be introduced to a household cat that there must be no opportunity provided for chase behaviour.
 - Chase is extremely self-reinforcing and will be difficult to stop once it becomes learned.
 - The puppy can be introduced on a lead or houseline or can be contained in a crate if he has been crate-trained.
 - He can be rewarded for calm and appropriate behaviour.
 - Keep introductions brief to avoid the development of frustration or fear and gradually extend the time that the animals spend together.

Impact of stress on learning - Yerkes Dodson.



The graph above shows how the arousal level of the individual affects the ability to learn and to concentrate. If the arousal level is too low there is not an opportunity for learning. As the arousal level increases the animal becomes increasingly attentive to their environment and is receptive to learning. This reaches an optimum level where the arousal level is perfectly suited to learning. If the puppy becomes too aroused, either through excitement or through anxiety or fear, their ability to learn positive associations is reduced. However learning from aversive experiences can be enhanced if the animal is experiencing a stress response and puppies must be protected from this.

Observational learning.

Puppies have the opportunity for beneficial learning from observing their mums and other dogs in the household provided these dogs are good role models. However observational learning can also prove detrimental in terms of puppies learning undesirable responses such as reactivity to unfamiliar people.

Effects of owner arousal level.

Dogs are very sensitive to our emotional states and arousal levels. If an owner becomes highly aroused, the puppy is likely to be affected by this and when we are looking at behaviours we wish to reinforce or eliminate, the owner's arousal level is a key factor in teaching the dog. Owners should aim to be calm and relaxed role models for appropriate socialisation but for training such as recall an excited higher arousal level to encourage the puppy to approach may be beneficial.

Dog Appeasing Pheromone - Adaptil.

These products contain a synthetic version of a pheromone that is secreted from lactating bitches and has been shown to have a calming effect and provide a safe atmosphere for the puppies.

Results of research in puppies are generally suggestive of beneficial effects but more rigorous trials with larger groups of puppies are required.

- Denenberg and Landsberg (2008) studied 45 puppies aged between 12 and 15 weeks who were signed up to an 8 week training class. They were split into 4 groups – firstly into large breeds and small breeds and then within these groups into DAP collar and placebo groups. The owners responded to a questionnaire at the start of the first session and then at the end of each following session. This examined the amount of learning and also signs of fear and anxiety. They were also followed up by phone 1, 3, 6 and 12 months after the classes finished to find out about their further socialisation. They found significant differences with the DAP puppies being much better socialised and better able to adapt to new situations and environments.
- Gaultier et al have published two papers from the same experiment, one published in 2008 concerning isolation in puppies and the second in 2009 concerning fear of unfamiliar people and surroundings in newly adopted puppies. 66 puppies were recruited at a pet shop in France, 32 were assigned to the DAP group and 34 to the placebo group. Owners were phoned at days 3 and 15 for responses to various questions.
 - In the 2008 paper Gaultier et al reported a significant effect of DAP on puppy's responses to isolation. These two graphs below show their findings.

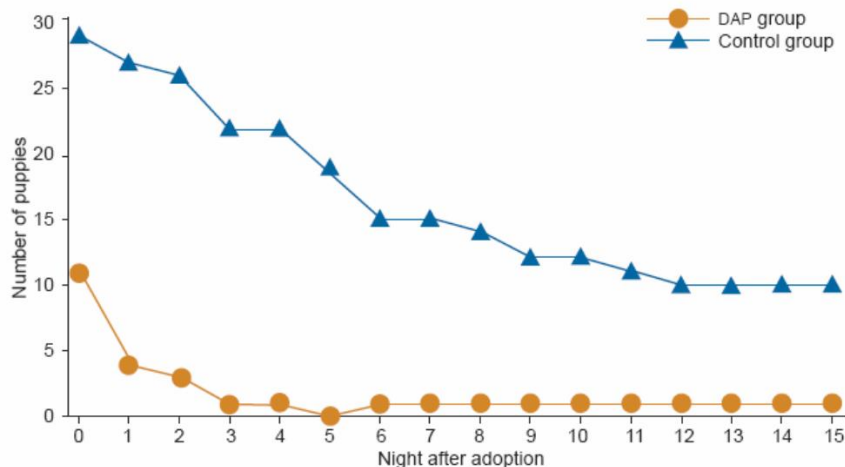


FIG 2: Numbers of the 34 control puppies and 32 puppies wearing a dog-appeasing pheromone (DAP)-impregnated collar that caused disturbances at night on successive nights after they were adopted

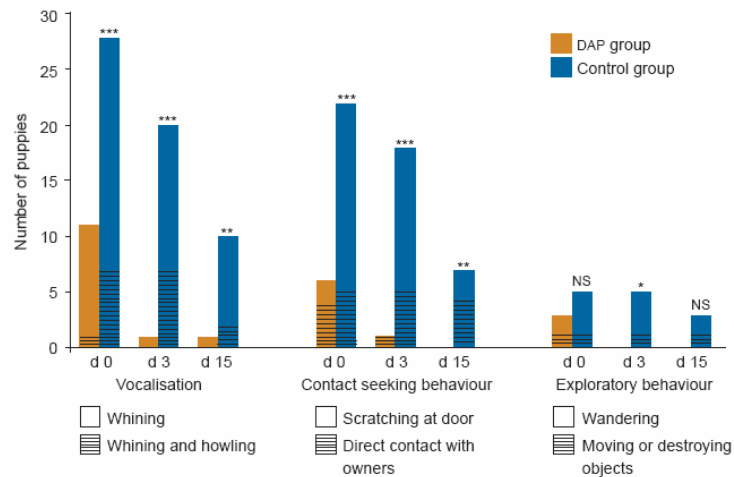


FIG 3: Numbers of the 34 control puppies and 32 puppies wearing a dog-appeasing pheromone (DAP)-impregnated collar that caused different types of disturbances when left alone at night on days (d) 0, 3 and 15. NS $P > 0.01$, * $0.05 < P < 0.01$, ** $0.01 < P < 0.001$, *** $P \leq 0.001$

This graph below is from the 2009 paper and shows some of the effects found with DAP reducing reactions in potentially fearful situations.

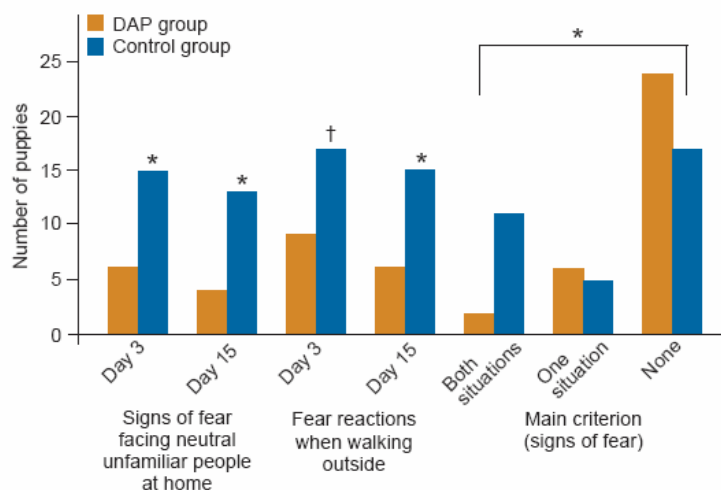


FIG 1: Numbers of dog-appeasing pheromone (DAP)-treated and control puppies reacting to the main criterion and to the two fear-eliciting situations that composed it, on days 3 and 15 after adoption. * $0.05 < P < 0.01$, † $0.1 > P > 0.05$

- Taylor and Mills (2006) was less convincing about the benefits of Adaptil. They found that....
 - Sleeping with another dog overnight reduced tendency to disturb at night to almost zero
 - Significant benefit of Adaptil diffuser only seen in gundog breeds
 - Significantly less housesoiling if puppies came from a domestic environment and/or were crated overnight

Common problems in young puppies.

As a general rule with any problem that is presented to you go back to the first principles of learning theory, looking at what the puppy is aiming to achieve and how you can use learning theory to respond to this appropriately.

Mouthing

If an owner asks about mouthing or biting then the first thing to ascertain is whether this is play biting or whether it is aggressive biting. You need to question the contexts in which it is occurring. Play biting is exactly that – it occurs in conjunction with other playful behaviours when the puppy is aroused and excited. If the puppy is mouthing or biting when picked up or when the owner tries to pick up a toy or when he is stroked in his bed – this may actually be a sign of defensive aggression or frustration and this is extremely important to refer as soon as possible. Genuine play biting should respond extremely well to simple measures as long as the owners apply the rules consistently.

- In simple terms, mouthing of humans should result in the end of play and the cessation of mouthing must be rewarded.
- Games should centre around the puppy's toys – they should never be encouraged to bite at hands or arms.
- Initially the response of the owner to the puppy biting too hard should be 'ouch', withdraw the hand and end the game.
- The arms should be folded and the owner should stay still – any movement is likely to trigger further mouthing from the puppy!
- High pitched squealing or screaming from the owner is very likely to result in a more aroused puppy and should be avoided.
- When the puppy is behaving appropriately the game can restart but any biting must be consistently responded to with cessation of the game.
- If the puppy is biting at clothing such as trouser legs, it is vital for the person to stand still because movement is a trigger for continued fun! If that does not stop the puppy then the person should walk out the room or the puppy can be removed with a houseline.

Remember that puppies do need to bite and chew as part of their development and they should be provided with suitable outlets for this behaviour in addition to being taught not to do it to people.

If consistent appropriate responses fail to resolve the problem after 2 weeks, if the dog is a very large breed or if the dog is approaching the time when he is growing his adult teeth then this behaviour needs referral to a professional before it becomes out of hand and dangerous.

Housetraining.

Puppies learn both substrate and location preferences for toileting so if they learn to toilet on newspaper in the kitchen or those puppy pads it will be much harder to teach them to go outside than if you just take them outside from the start. Puppies under 12 weeks will need to toilet frequently – as often as every hour whilst they are awake.

They can last much longer than that whilst sleeping but may well still need to be let out overnight initially. Crate training for overnight is extremely beneficial for toilet training because it is unusual for a puppy to toilet the sleeping area unless he is really desperate or is really distressed.

Punishment must never be used in toilet training – telling a puppy off at the time it is caught weeing on the carpet is liable to make him scared of going to the toilet in front of his owner and this can make toilet training far more difficult.

Rewards are good but not essential and simple verbal rewards are fine – there is no need to use food rewards because toileting in itself is a relieving behaviour that makes the puppy feel better but giving verbal praise for the correct location can speed up the process.

Chewing and stealing.

Chewing in itself is very rewarding and the problem is that if puppies have access to chewable items that they get pleasure from this is self-reinforcing and encourages further stealing and chewing! So the first rule should be only allow the puppy access to suitable chew items – provide plenty of toys which he is allowed and keep other things out of harm's way until he has begun to show favouritism to his toys. Puppies should be taught a 'give' or 'drop' cue early on so as to prevent the risk of puppies enticing their owners into a chase game or developing a resource guarding issue. If the puppy learns 'drop' means a yummy food treat or a game with a toy then the object can be reclaimed with minimal fuss and he will soon learn that household objects are not nearly as fun as all those toys that his owners throw for him or play tug games with.

Jumping up.

Many owner make the mistake of not reinforcing polite greeting behaviour from the start and failing to consider the future size of their full grown adult dog. It is important not to accidentally reinforce jumping up by interacting in any way with the puppy. It is best to either ignore the puppy until all four feet are on the ground and then greet him calmly, or give an active signal of disapproval if he doesn't respond to being ignored – you might turn your head away or turn your head and body away. It is crucial to ensure that puppies are interacted with when they are showing appropriate non-jumping behaviour so that these responses are reinforced.

Lead walking.

Pulling on the lead can be self-reinforcing because the major reward for the puppy is to reach the destination he is trying to pull to. He needs to be taught that walking nicely results in the same reward but that if he pulls that reward is withheld. This is just a simple exercise that you can demonstrate during a puppy pre-school session or explain to owners for them to try at home.

- Stop pull exercise with food (or any other reward e.g. visitor to be greeted, toy to play with etc.)
 - Helper in the middle of the room with treats whilst owner and puppy walk around in circles.
 - Helper throws couple of treats on the floor.
 - Dog starts to pull towards the treats - stop.
 - Once the pulling ceases, continue towards the treats.

- Each time dog pulls - stop.
- Move forward only with no pulling until dog reaches and consumes the treats.