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	A pilot study demonstrating that a dog trainer in a non- clinical setting can effectively treat children with a fear of dogs (cynophobia)
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ABSTRACT Aims	and Method: The Essex Dog Training Centre developed a program to help children with a fear of dogs. Our pilot sought to describe this method and to investigate whether an unqualified dog trainer in a non-clinical setting.

is able to help children overcome their cynophobia. A self-selected sample of 28 children participated in a repeated measures study design. Participants completed a Dog Phobia Questionnaire, which we adapted for children, at the start and end of the intervention.

Results: The repeated measure t-tests on aggregate scores of start (mean 30.25, SD 16.98) and end points (mean 60.29, SD 11.8) showed that the difference was highly significant (p<0.001). Multiple regression analyses confirmed that the intervention accounted for at least 64% of the change in scores.

Clinical implications: This is the first study to show that children with cynophobia can be treated successfully in a dog training centre by non-therapists.

KEYWORDS : Cynophobia, fear of dogs, children, dog training centre

INTRODUCTION:

The development and emotional growth of children involves experiencing fear and anxiety: this is both normal and healthy. However, when an intense fear causes marked distress or interferes with dayto-day routines, it becomes pathological (1). Specific phobias are common, with typical onset in childhood, affecting up to 5% of the general population (2). A fear of dogs can be very debilitating for children since dogs are common in the UK. Many children with cynophobia avoid being outdoors or visiting friends with dogs. This can have a significant impact on the whole family's quality of life (3).

Even though behavioural treatments have empirical support, these are often not accessed due to stigma and high thresholds of traditional Child and Adolescent Mental Health Services. Many children are left untreated. This has serious consequences, as specific phobias often last for 20 or more years (1,4). The Essex Dog Training Centre (EDTC) has developed an intervention to help children with a fear of dogs. This is a unique intervention, as it does not involve a therapist and occurs in a non-clinical setting. Also, children are treated in a group, which allows for social learning, especially modeling and peer pressure. At the centre, children have easy access to a variety of well-trained dogs. This approach has never been tried in a mental health setting, where one-to-one sessions are the norm. Our aim was to describe the EDTC intervention and to determine if it was successful in helping children overcome their fear of dogs.

METHOD:

With the permission of the developer of the program, Roy Dyer, we attended several sessions at the EDTCas observers. A summary of the method used is given in Table 1. The principles of the treatment are in line with cognitive-behavioural models of the treatment of phobias, specifically using the technique of graded exposure (1,5).

Table 1. Summary of the common core content for the EDTC intervention

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Key stages	Intervention at the centre and homework task appropriate for each stage
Making the decision to come to the centre.	Although a child may want to overcome their fear of dogs, they often take up to a month or two to agree to come to the centre.
Panic kicks in when entering the centre, even when there are no dogs there; children often want to leave as soon as possible.	In the preliminary meeting phase, the trainer talks to the child in a separate room, where there are no dogs in sight. He initially talks to them about things unrelated to dogs, eg football, school, TV programmes etc. He then begins to steer the conversation towards dogs. He asks children whether they know how useful dogs are to people - for example, that they help rescue people in dangerous situations, guide the blind, help push buttons for the physically disabled and some even have the ability to detect cancer.
Children do not want to go near the dogs but are comfortable looking at them from another room.	The trainer explains to the children that throughout his sessions they are their own decision-makers, and that they don't have to do anything they don't want to do. He explains that he is going to leave the room soon to play games with the children and dogs next door. However, the children don't have to join him until they feel ready. There is a window looking into the adjacent room where children can see the trainer and other children play with dogs.
Children join the room with dogs and children.	After children have watched other children playing games for a while, they eventually become keen to join in themselves. Children usually go into the other room, and sit next to caregivers, watching from the sidelines as other children play games. This generally always happens within the first half hour of the session. Parents are requested to not join in games unless asked. <i>Homework tasks: drawing pictures of dogs and bringing them back the following week. Keep a diary of the different dogs they see during their week.</i>
Children start separating themselves from caregivers and beginning to play games.	After 5-10 mins, children and caregivers are asked if they want to play games with the group. Those children who accept to do so, begin to play games such as 'training' dogs with instructions:"sit", "lie down", "go", "stop". These are the children's first steps towards becoming 'dog handlers'. With time and practice, children learn more about how to handle dogs and are encouraged to play independently of parents.
Physical contact with dogs.	When introducing children to a new stage, parent/child participation in games helps ease children into the stage. The trainer continues "training dog handlers" by showing children and caregivers how to pet a dog in the correct way (under the chin). Children are encouraged to reward the dogs for good behaviour by petting them correctly throughout the remaining course. Homework: Asking the owners of dogs they meet outside the centre the name, age and other details of a dogs they meet.

Volume-4, Issue-10, Oct-2015 • ISSN No 2277 - 8160

Dogs walking in front, behind and in between children.	This stage is one of the hardest for most cynophobic children to go through. Children have to walk towards and past dogs in order to get to their parents on the other side of the room. Gradually, more challenging games are introduced. Children are asked to stand still while dogs walk in front of them, behind them and in between them. The trainer teaches children how to behave when they are in a park playing with a ball and a dog approaches. They have to leave the ball, stand still and cross their arms looking down and away from the dog. This is practiced while the dogs at the centre approach children. <i>Homework: Asking the owners of dogs information about their dogs and asking permission to pet their dogs.</i> If so, they are encouraged to stroke the dog under its chin.
Off lead, on lead.	Because parents often want to reassure cynophobic children, they often point out "It's ok, he's on a lead"- indicating that a dog on a lead is safe and off a lead is not – unwittingly reaffirming the children are right to be cautious of dogs off leads. To counteract these thought processes, children are encouraged to play games with dogs off their leads.
Interacting with dogs that have their mouths open.	Children often fear a dog's mouth. It is therefore important for children to understand that dogs use their mouths to replace many of the things humans use our hands and arms for. Children are encouraged to throw balls to dogs, which catch the ball with their mouth.
Encountering dogs outside the centre.	Group walks and picnics outside the centre where there is an opportunity to encounter dogs. Caregivers are advised to continue exposing their children to outside encounters with dogs unknown to the children. The more encounters throughout their daily lives, the better reinforcement of the intervention.

A cohort study was employed with before and after measurements using consecutive sampling. A self–selected sample of 28 participants (18 females and 10 males) aged between 4 and 10 years (M=7.14, SD=2.78) voluntarily participated in the pilot study with caregivers. Participants, all of whom were white British children, voluntarily attended the EDTC cynophobia intervention. Classes were offered free of charge.

We designed the Child Adapted Dog Phobia Questionnaire (CADPQ) for children (see Fig.1) by modifying the 27-item Dog Phobia Questionnaire (DPQ) for adults (6). Items that tapped into three separate dimensions of fear (hypervigilance, avoidance and anxiety) from the DPO were revised and simplified into 9 child-friendly statements in the CADPQ. For example, Items 21 and 22 from the DPQ ("I make plans to escape in case I come across a dog" and "I sometimes sense the presence of a dog without actually seeing it") were simplified and consolidated in the CADPQ to: "I sometimes worry about dogs, even when there is no dog around" (Item 3 in the CADPQ). Items 2, 5 and 8 were reversed key items: "I like dogs, because they are friendly"; "I don't worry about dogs when I am out and about"; and "When I see a dog, I want to play with it and stroke it." Other modifications included replacing the DPQ's Likert scale with a ten-point colour Visual Analogue Scale (VAS) featuring anchors of "1" (not at all true) to "10" (very true). The VAS was used because it has been shown to have validity amongst children (7,8). Respondents of reading age were encouraged to complete the CADPQ independently, though instructions to caregivers specified that they could help if needed.

Fig.1: Child adapted dog phobia questionnaire (CADPQ)



Following ethical approval (protocol no. LMS/PG/UH/00003) from the Institutional Review Board at the University of Hertfordshire, child participants and caregivers were recruited consecutively on a first come, first serve basis. The length of treatment and number of sessions attended consecutively per month depended on the child and their caregiver and averaged around 12 sessions. Participants received individualised care and personalised homework intended to reinforce what had been learned within the centre.

RESULTS:

The 28-participant sample consisted of approximately two-thirds (64%) girls to one-third (36%) boys. This substantial difference reflected the well-described preponderance of anxiety disorders in females (1).

Negatively keyed score items 2, 5 and 8 on the VAS of the CADPQ were reverse-scored. Each of the nine items thus had a score between 0 (extreme fear) to 10 (no fear at all). Adding these nine items together thus created a total score on a 90-point fear scale, where low scores indicated high fear and vice versa. Figure 2 demonstrates the scores in each of the 28 participants. The results of the nine-item CADPQ

pre-scores, post-scores and change in scores (post scores minus prescores) were analysed using SPSS Software.



Fig.2: Aggregate scores of each of the 28 participants on the CADPQ (y-axis).

The repeated measure t-tests on aggregate scores of pre-intervention (mean 30.25, s.d.16.98) and post-intervention points (mean 60.29, s.d.11.8) showed that the difference was highly significant (p<0.001). A large effect size in change in scores was observed (Cohen's d: -2.084). Multiple regression analysis suggested that the intervention accounted for 64% of variation in change in scores. Low pre-scores, longer length of intervention and younger age of child predicted a greater improvement in scores.

DISCUSSION:

This pilot study evaluated the effectiveness of the EDTC intervention in reducing the fear of dogs in children. The intervention is unique in that it is not delivered by a therapist but by a dog trainer in a non-clinical setting. Repeated measures t-tests indicated that there was a highly significant reduction in the reporting of fear of dogs on the CADPQ. In this pilot study, every one of the 28 participants benefted from the treatment, with the greatest improvements found in the most fearful children (see Fig.2).

Limitations of this study are that we were not able to include a control group. The reasons are twofold: first, there was no waiting list for the dog therapy training and we felt that making people wait just for the purpose of the research study was not ethically justifiable (1). Second, if we had tried to set up a separate control group of children with cynophobia, who were unwilling to undergo the intervention, the validity of this as a control group would have been criticized due to the difference between the groups in terms of motivation to face their fears. Even though our results were very encouraging, these may not be generalizable, as our numbers were small, they were all from the same ethnic group (White British) and were treated through the developer of the program - a highly experienced dog trainer with good insight into children's fears. A larger study with more statistical power would be needed to verify these results. This may become possible as a national roll-out of the program is currently being planned. In future, the CADPQ, which we modified from the DPQ for the purposes of this study, could be used again, as it proved to be an effective and user-friendly assessment tool.

It is worth pursuing the option of treating children in a dog training centre for four reasons pertaining to the trainer, the children, the setting and the cost respectively:

- First, experienced dog trainers could theoretically perform the intervention at other dog centres nationally - this has the advantage of easy access to a variety of well-trained dogs. Exposure to fear-inducing stimuli is the mainstay of successful treatment of nhobias (1).
- Second, the unique group setting of children overcoming their fears together gives this intervention an advantage over clinical settings, as it enables social learning, including modeling and peer pressure.
- Third, the fact that the sessions are held in a dog training centre bypasses the unfortunate stigma of mental health services, making caregivers more willing to attend, as classes take place in an "educational" setting rather than in a "therapy" setting.
- Last, this treatment is cost-effective as it does not require trained psychologists and treats children in a group setting. As the NHS is currently under pressure to cut costs, it might make economic sense to replace conventional treatments for cynophobia with interventions at specialist dog centres across the UK.

FUNDING:

We received no funding for this study. The Essex Dog Training Centre provided the classes to all children free of charge.

How do you feel towards dogs today? At the end of each statement, write the number on the scale that best represents how true each of the Items below are to you.

- When I see a dog, I think it will hurt me. 1.
- I like dogs, because they are friendly. 2.
- 3. I sometimes worry about dogs, even when there is no dog around
- I don't want to visit friends who have dogs. 4.
- I don't worry about dogs when I am out and about. 5.
- When I see a dog, I am scared. 6.
- 7. I am always on the look-out to see if there are dogs around.
- 8. When I see a dog, I want to play with it and stroke it.
- I don't want to play in the park because I am scared that a dog 9 may come.

Pre-intervention scores are in grey, post-intervention scores in black. Low scores indicate extreme cynophobia, high scores indicate no fear of dogs.



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