Why you should read this article:

- To enhance your knowledge of the use of canine-assisted therapy in healthcare settings
- To learn about a project that involved introducing a therapy dog to anxiety management groups for young people
- To consider the effects that the presence of a therapy dog may have on young people

Exploring the effect of a therapy dog in a group for young people experiencing anxiety

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Abstract

Research suggests that the inclusion of dogs in the delivery of psychotherapy for adolescents may have a positive effect on outcomes. This article details an evaluation that explored the effect of introducing a dog to cognitive behavioural therapy-based anxiety management groups for young people aged between 11 years and 14 years. A total of 35 young people attended these groups, which ran either with or without a dog present. The results suggest that the presence of a therapy dog significantly reduced young people's anxiety ratings in five of the six sessions and contributed to a higher discharge rate after completing the group therapy (44% in the groups with the dog versus 28% in the groups without the dog). Qualitative feedback indicates that the presence of a therapy dog improved the young people's experiences by enabling them to feel increasingly relaxed and confident in the group. These findings suggest that a therapy dog can enhance young people's experiences in group therapy, particularly in the early stages, and increase discharge rates.

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Keywords

adolescents, anxiety, child and adolescent mental health, child health, mental health, mental health therapies, patient engagement, patients, professional, psychological interventions

Background

Animal-assisted intervention is an umbrella term describing 'any intervention that intentionally includes or incorporates animals as a part of a therapeutic or ameliorative process or milieu' (Kruger and Serpell 2010). One specific approach that comes under this umbrella is animal-assisted therapy, in which a trained professional delivers an individualised, goal-focused and documented therapy that incorporates an animal (Jones et al 2019). The most commonly used animals in research on this form of therapy are dogs and horses, with both demonstrating promise in terms of improving psychological outcomes for adolescents (Kendall et al 2015, Jones et al 2019). Due to the practical issues of delivering equine-assisted therapy in an NHS setting, the evaluation detailed in this article focuses on canine-assisted therapy.

Jones et al's (2019) review of canine-assisted psychotherapy for adolescents found that, compared with standard treatment, it can reduce post-traumatic stress disorder (PTSD) symptoms and may have similar outcomes for anxiety and anger. Canine-assisted psychotherapy was also found to improve several secondary factors that support the therapeutic process – such as attendance, engagement and socialisation – and reduced disruptive behaviour during therapy. Jones et al (2019) suggested that these improvements support the oxytocin hypothesis that, in the presence of a dog, humans release the hormone oxytocin, which promotes attachment and reduces anxiety. This has been discussed

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elsewhere in the literature as the mechanism underlying human-animal bonding and is the physiological process through which animal-assisted therapy achieves therapeutic effect (Cirulli et al 2011).

The review by Jones et al (2019) included interventions that were delivered in individual and group formats, and reported that in general the interventions were found to have satisfactory tolerability and acceptability. The interventions included in the review varied in terms of the methods through which the dog was incorporated into the therapy, with interactions either as a structured or semi-structured part of therapy, or the dog simply being present and all interactions being spontaneous. Due to limited reporting about the interventions themselves, Jones et al (2019) were unable to draw conclusions about which method provided the best outcomes and noted that this was an area requiring further investigation.

Previous research in group-based canine-assisted psychotherapy for young people has noted improvements in outcomes and the secondary factors that support the therapeutic process. For example, Dietz et al's (2012) US study of group canine-assisted psychotherapy for children aged 7-17 years who had been sexually abused found that groups with a therapy dog had a greater improvement in trauma-related symptoms compared with groups without a therapy dog, while Reichert (1994) identified that a therapy dog helped to ease tension and anxiety, and supported young people emotionally. Similarly, Hamama et al (2011) investigated a group canine-assisted psychotherapy intervention for adolescent girls who had experienced physical or sexual abuse and found there was a decrease in PTSD symptoms and diagnoses. In addition, Hanselman (2001) identified that group anger counselling for adolescents that included a dog demonstrated a significant reduction in emotional and behavioural anger, along with a significant increase in animal bonding among participants. Lange et al (2007) also found that the presence of a dog in anger management groups demonstrated a calming effect, provided humour relief and increased feelings of safety in disclosing personal information, alongside higher empathy and motivation for attending each session.

To date, there has been no evaluation of the effect of introducing a therapy dog to a group cognitive behavioural therapy (CBT) programme for young people with anxiety. The National Institute for Health and Care Excellence (NICE) (2013) recommends CBT programmes, delivered either in group or individual format, as one of the first approaches for treating children with social anxiety disorder. A Cochrane review by James et al (2020) found that group CBT for anxiety disorders in children and adolescents was more effective than waiting lists or no treatment and as effective as individual CBT. The site of the evaluation detailed in this article, an NHS trust in south east England, delivers group CBT for young people with anxiety as standard practice.

Therapy dogs – registered in England as Pets as Therapy (PAT) dogs – are friendly, temperament-tested and vaccinated animals that are covered by public liability insurance. They visit a range of inpatient and outpatient NHS settings to provide service users with the opportunity to interact with them. Despite the common use of PAT dogs across the NHS, there has been limited evaluation of their effect, although the findings of such evaluations have been positive. For example, in a study by Crease et al (2017), service users who attended an NHS adult psychiatry outpatient clinic where a PAT dog was present reported reduced anxiety, improved mood and wanting a PAT dog to be present during future consultations.

This article reports on an evaluation of the effect of introducing a PAT dog to a routinely offered group CBT programme for young people with anxiety.

Aim

To evaluate the effect of introducing a PAT dog to a group CBT programme for young people with anxiety.

Method

Participants

A total of 35 young people aged 11-14 years experiencing moderate anxiety were assessed and placed on a waiting list for anxiety management groups called the Calm Forum, in accordance with routine clinical practice in an NHS emotional well-being and mental health service for children and adolescents in south east England.

This evaluation includes data from two cohorts who attended groups which ran in September-December 2019 and January-March 2020. Due to group size restrictions, those on the waiting list were divided in two and Calm Forums were run simultaneously for each cohort. Cohort one consisted of 21 young people, ten of whom were placed in the PAT group and 11 in the non-PAT group. Cohort two consisted of 14 young people, seven of

Key points

- A Pets as Therapy (PAT) dog can be used in child and adolescent mental health services to encourage engagement in, and motivation to attend, anxiety management groups
- The presence of a PAT dog may decrease young people's anxiety during group sessions, improve discharge rates and increase engagement with tasks and between group members
- Further research is required to establish the efficacy of groups that include a dog compared with those that do not
- Due to some service users' preferences, as well as issues related to allergies and animal phobias, therapy that does not involve an animal should be offered alongside any animal-assisted therapy

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whom were placed in the PAT group and seven in the non-PAT group. For those in the PAT groups, the group facilitators contacted the young people's parents and carers to inform them of the presence of a PAT dog and service volunteer (the PAT dog's handler). This gave the parents and carers the opportunity to have the young person allocated to a non-PAT group where preferred.

Intervention

The Calm Forum consists of six one-hour group CBT sessions followed by a group review session. These were delivered by two of the authors, a mental health nurse (CJ) and an assistant psychologist (SvH). The sessions entailed:

- Week 1 – an introductory session that covered the aims of the group, individual goals and an understanding of CBT in relation to anxiety.
- Week 2 – this session focused on psychoeducation about anxiety relating to physical sensations and the function of anxiety in relation to survival.
- Week 3 – this session addressed panic attacks, understanding the cycle of panic, graded exposure, avoidance and safety behaviours.
- Weeks 4 and 5 – these sessions dealt with negative automatic thinking, thinking errors and how to challenge these.
- Week 6 – this session focused on managing worry, comparing it to anxiety and developing strategies to manage and problem-solve, including relaxation and self-care.

A review session in week 7 was used to collect feedback and review progress on individual goals. Parent and carer groups ran simultaneously and focused on supporting their child to implement the strategies learned in the group.

Consistent with treatment-as-usual processes in the service, if a participant missed two consecutive group sessions and was not contactable by text or telephone they were discharged from the group. A total of 16 participants across two cohorts dropped out at various points – seven dropped out from the PAT groups and nine from the non-PAT groups. The last session and the group review for cohort two were cancelled due to the coronavirus disease 2019 (COVID-19) pandemic-related lockdown restrictions.

In the groups with the PAT dog, the dog was present for the full duration of each session. During the sessions, the dog was simply present and freely interacted with the young people without prompting. The young people could choose whether they interacted with the dog and how much they did so.

Data collection and routine outcome measures

The young people attending the groups completed the service's routine outcome measures before the first session and after the last session. These included Goodman et al's (1998) Strengths and Difficulties Questionnaire self-report version and Chorpita et al's (2000) Revised Child Anxiety and Depression Scale.

The Strengths and Difficulties Questionnaire self-report version is a 25-item behavioural screening questionnaire for young people aged 11-17 years. The 25 items are divided into five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour. The first four subscales are scored such that higher scores indicate greater difficulties, while the prosocial behaviour subscale is scored such that a higher score indicates more positive prosocial behaviours.

The Revised Child Anxiety and Depression Scale is a 47-item self-report measure of anxiety and depression symptoms for young people aged 8-18 years. The measure consists of five subscales for anxiety (social phobia, panic disorder, separation anxiety disorder, generalised anxiety disorder, and obsessive-compulsive disorder) and one for depression (major depressive disorder). Due to the COVID-19 pandemic, post-group routine outcome measures were sent by post for cohort two, but only two participants returned these, despite follow-up attempts.

An anxiety rating scale developed by the service was completed before and after each weekly session and consisted of a single question: 'Please rate your anxiety from 0 to 10, with 10 being the most anxious and 0 being most relaxed'.

During the final session, the young people in the PAT group of cohort one were asked to complete a written feedback form on their experience of having the PAT dog in the group. However, not all the young people were able to provide their feedback because they were unable to attend the final session, for example due to sickness or holidays. Only five young people provided brief feedback, so this was simply reviewed to identify common topics, rather than formally analysed.

After completing the group therapy programme, the young people attended an individual review with the mental health worker who carried out their initial mental health assessment. During this session it was

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decided whether the young person felt able to be discharged from the service or whether they needed further intervention.

Ethical considerations

Ethical considerations included ascertaining whether each young person had allergies or phobias relating to dogs and therefore needed to be reallocated to the non-PAT group and providing an opportunity for them to state if their preference was to attend a non-PAT group. Consent was obtained from each participant's parent or carer, along with the assent of the young person. This was documented on the young person's electronic health record and additional consent was sought for the publication of anonymised quotes. The evaluation followed local approval procedures, with permission gained from the clinical service lead. The evaluation was registered with the audit department and a final report was provided to them.

Results

Weekly anxiety measure

Anxiety scores were collected and analysed for all sessions across both cohorts. Pre-session anxiety scores were not significantly different between the PAT and non-PAT groups for any of the sessions ($P<0.05$).

There was a significant decrease in anxiety scores for those in the PAT group after all sessions except for week 6, which had a low attendance rate (Table 1). The non-PAT group recorded significant decreases in anxiety scores in weeks 2, 3 and 4 (Table 2).

There was a greater percentage decrease in post-session anxiety ratings for those in the PAT groups than the non-PAT groups for sessions 1, 3, 4, 5 and 6 (Figure 1).

Routine outcome measures

In cohort two the routine outcome measures were only completed by two young people following the end of the groups. Therefore, only data from cohort one is reported and inferential statistics are not presented as only seven young people completed pre-session and post-session measures in cohort one – three in the PAT group and four in the non-PAT group.

In both the PAT and non-PAT groups in cohort one there was a decrease in the mean scores of each of the Revised Child Anxiety and Depression Scale subscales, except for a slight mean increase of 0.5 for obsessive-compulsive disorder in the PAT group. The largest decrease in mean score for both groups was in the panic disorder subscale. Figure 2 shows the Revised Child Anxiety and Depression Scale scores before and after for the two therapy groups in cohort one.

In the non-PAT group, there was a decrease in mean score in each of the first four subscales of the Strengths and Difficulties Questionnaire (emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems) and an increase in the prosocial behaviours mean score. In the PAT group, there was a decrease in mean score in the emotional symptoms and peer relationship problems subscales and no change in the conduct problems and hyperactivity/inattention subscales. The largest change in mean score for the PAT group was an increase in prosocial behaviours. Figure 3 shows the Strengths and Difficulties Questionnaire scores before and after for the two therapy groups in cohort one.

Discharge rate

In the PAT groups across both cohorts, 44% ($n=7$) of participants did not complete the therapy, 44% ($n=7$) were discharged and 12%

Table 1. Paired *t*-test comparison of anxiety scores pre-session and post-session for the Pets as Therapy groups

	Before session		After session		Degrees of freedom	*t*	Sig. (two-tailed)
	Mean	Standard deviation	Mean	Standard deviation			
Week 1	5.45	2.58	3.27	2.41	10	6.197	<0.001
Week 2	5.18	2.52	3.55	2.62	10	3.212	<0.01
Week 3	5.44	3.24	3.22	2.33	8	6.100	<0.001
Week 4	4.75	3.01	2.63	2.83	7	6.065	<0.001
Week 5	4.20	3.11	2.20	2.05	4	3.651	<0.05
Week 6	4.33	0.36	2.00	2.00	2	3.500	0.073

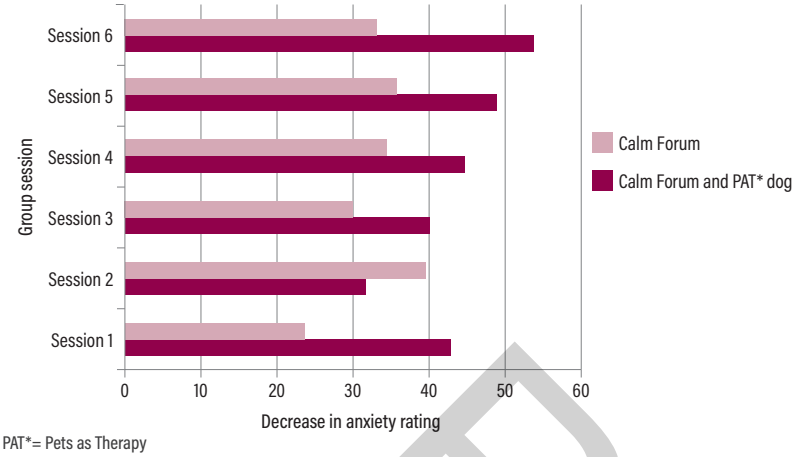
Table 2. Paired *t*-test comparison of anxiety scores pre-session and post-session for the non-Pets as Therapy groups

	Before session		After session		Degrees of freedom	*t*	Sig. (two-tailed)
	Mean	Standard deviation	Mean	Standard deviation			
Week 1	5.55	2.30	4.36	2.42	10	2.137	0.0583
Week 2	4.45	2.5	3.00	2.32	10	4.276	<0.01
Week 3	3.67	3.00	2.56	2.60	8	3.592	<0.01
Week 4	4.10	3.25	2.60	2.80	9	4.025	<0.01
Week 5	3.50	3.42	2.25	2.92	7	1.852	0.1064
Week 6	1.50	3.00	1.00	2.00	3	1.000	0.3910

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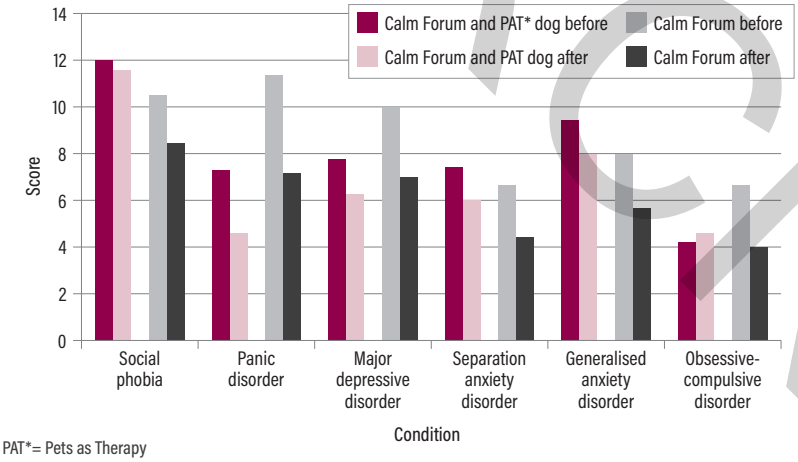
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Figure 1. Combined average percentage decrease in anxiety rating scores across both cohorts of each group



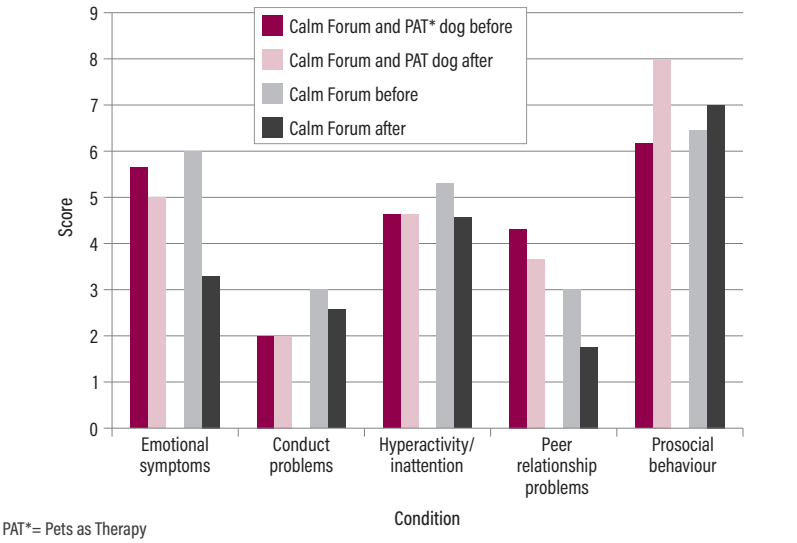
PAT*= Pets as Therapy

Figure 2. Revised Child Anxiety and Depression Scale scores before and after for the two therapy groups in cohort one



PAT*= Pets as Therapy

Figure 3. Strengths and Difficulties Questionnaire scores before and after for the two therapy groups in cohort one



PAT*= Pets as Therapy

(*n*=2) remained under the care of the emotional well-being and mental health service. One young person assigned to a PAT group was discharged from the service before the group commenced.

In the non-PAT groups across both cohorts, 55% (*n*=10) of participants did not complete the therapy, 28% (*n*=5) were discharged and 17% (*n*=3) remained under the care of the emotional well-being and mental health service. There were no significant differences in discharge rate between the two groups, but the PAT groups indicated both higher completion and higher discharge rates.

Feedback

Most of the feedback received from the participants was positive, suggesting that the PAT dog made them feel more relaxed, confident to talk and less awkward when attending the group. This was exemplified by some of the quotes from participants: 'It would have taken longer to get used to', 'The group wouldn't have been as relaxed', 'She made me feel more comfortable' and 'She made the group better and more relaxed than other groups I have been in'. Most of the young people suggested that the PAT dog was a positive distraction when the group became awkward; however, two participants commented that she was too distracting at times. The young people generally commented that they wanted to attend the group each week due to the presence of the PAT dog.

Informal observations by the group facilitators were that the engagement and interaction levels were greater between the young people in the group with the PAT dog and that they seemed to develop rapport more easily with the facilitators and showed more willingness to contribute to the group compared with the non-PAT group. In some of the group activities, the young people in the PAT groups would all get off their chairs and sit on the floor to complete an activity collectively. This was not observed in either of the two groups delivered without the PAT dog.

Discussion

This is believed to be the first evaluation of the innovative practice of including a therapy dog in a pre-existing child and adolescent group therapy setting in the NHS. The results suggest that the presence of a dog can reduce young people's anxiety in therapy sessions and may also result in higher discharge rates from the service. Furthermore, the lack of evidence of any deleterious effect of the dog's presence on routine outcome measures or attendance

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rates, and positive feedback provided by young people and clinicians, suggests that this is an acceptable adjunct to therapy and supports the notion that 'animals should enhance the therapy process rather than create a distraction from the goals of therapy' (Dietz et al 2012).

There was a significant reduction in anxiety during sessions with the PAT dog across five of the six sessions. This reflects the findings of previous canine-assisted psychotherapy research with adolescents, which suggested that the presence of a dog in the therapeutic session can create a warm, accepting and secure environment that is more conducive to therapy (Dietz et al 2012) and that the presence of a dog can have a calming effect in these settings (Lange et al 2007). These findings are consistent with the group facilitators' observations that the young people engaged more in the group activities and discussions when the PAT dog was present. This is also in line with previous findings that the presence of a dog can improve the secondary factors that support the therapeutic process, such as engagement and socialisation (Jones et al 2019). It is notable that during the first session, when anxiety was highest across both groups, only the group with the PAT dog showed a significant decrease in anxiety. With positive peer relationships known to mediate outcomes from group CBT (Silverman et al 2019), a less anxious environment during the initial stages when these relationships are being formed might be particularly relevant.

A higher proportion of young people were discharged from the service following the PAT groups than the non-PAT groups. These higher discharge rates, together with the volunteer nature of the PAT dog and handler, implies that this approach might also result in cost savings for the service.

Positive feedback from the young people reflects the finding that in an NHS psychiatric setting a dog can make sessions more relaxed and reduce anxiety (Crease et al 2017), as well as findings from previous research that canine-assisted psychotherapy for adolescents was generally well tolerated and acceptable (Jones et al 2019) and improved motivation to attend groups (Lange et al 2007). However, some of the participants' comments in the present evaluation indicated that the dog could be 'too distracting'. This might be because the inclusion of the dog in the groups was unstructured and interactions were spontaneous, as opposed to structured or semi-structured inclusion. Previous findings have been mixed regarding which method of inclusion leads to better outcomes (Jones et al 2019), but these comments suggest that adaptations to the approach might be required for this age group.

The practitioners facilitating the groups were also aware of the effect of the presence of the PAT dog on them. The practitioners considered that their own facilitation skills may have been positively affected by the PAT dog, through increasing their excitement about delivering the groups, increasing energy levels during the group sessions, enabling them to develop rapport more easily with the young people, and not having to prompt and encourage the young people as much to ensure their engagement with the group activities and discussions. Therefore, it is possible that the presence of a PAT dog might have an indirect effect on outcomes through its influence on the facilitators as well as a direct effect through its influence on the young people.

The positive outcomes observed in this evaluation might also be the result of the PAT dog ameliorating issues inherent in group CBT. Group CBT emphasises education about the CBT model itself, rather than participant interactions, as the primary 'active ingredient' of the sessions (Whitfield 2010). By increasing interaction levels between group members, as observed by the facilitators, the presence of the dog could address an issue which has traditionally been de-emphasised in group CBT. Conversely, the fact that some of the young people found the dog distracting might negatively affect the core educational aspect of group CBT. Another issue identified with group CBT is that changes in service users' mental state and affect can be more challenging to attend to than in an individual setting (Whitfield 2010). Spontaneous interactions with the dog might have enabled them to attend to these changes themselves. Furthermore, children with high levels of social anxiety may prefer individual CBT (Manassis et al 2002) and therefore attending group CBT might increase their anxiety further; it might be this anxiety that was found to be reduced by the presence of the PAT dog in this evaluation.

Limitations

While the findings of this evaluation are promising, they need to be interpreted with caution. Due to the small sample size, low group attendance and lack of robust methodology (necessitated by the evaluation taking place in an existing clinical pathway), the results cannot be generalised.

The facilitators aimed to ensure that the groups were delivered as similarly as possible, however there are potential issues of bias,

FURTHER RESOURCES

RCN (2019) Working with Dogs in Health Care Settings: A Protocol to Support Organisations Considering Working with Dogs in Health Care Settings and Allied Health Environments
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contamination and differences in the groups beyond the presence of the PAT dog. Reports of participants' engagement levels were based entirely on informal subjective observations by the facilitators, as there was limited scope and time for arranging video recordings of each session and subsequent analysis and coding of behaviours and interactions to measure engagement. The facilitators had a particular interest in animal-assisted therapy, which could result in confirmation bias and potentially preferential delivery of the PAT groups. This also gives rise to the possibility of contamination between the groups; for example, changes in delivery of the PAT groups in response to the dog might have carried through to the non-PAT groups. Furthermore, the PAT dog was always present with its handler, and it should be considered that this may have positively affected the group since having an additional adult in the room could have contributed towards feelings of safety and security. However, this is speculative, as no feedback was requested regarding the handler's presence.

As Jones et al (2019) noted, there is a significant need for further robust research in the area of canine-assisted psychotherapy to identify the most effective components of the process, develop standardised interventions and establish the effectiveness of such interventions through randomised controlled trials.

Conclusion

This evaluation indicates that the inclusion of a dog in group CBT sessions for young people experiencing anxiety has no significant effect (positive or negative) on routine outcome measures, but may decrease anxiety during the group sessions and improve discharge rates. The authors suggest that the presence of the dog might lead to these changes by increasing engagement with tasks and between group members, creating a more relaxed environment that is conducive to disclosure, increasing motivation to attend the groups and influencing the facilitators' delivery of the groups.

This evaluation suggests that having the option available of a CBT group for anxiety that includes a dog would be acceptable to service users and practitioners. However, robust research is required to establish the efficacy of groups that include a dog compared with those that do not, particularly in the NHS.

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