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Title: Exploring the impact of a therapy dog in a group for young people aged 11 to 14 experiencing anxiety

Abstract

Research suggests that the inclusion of dogs in the delivery of psychotherapy for adolescents might have a positive effect on outcomes. This evaluation explores the impact of introducing a dog to CBT based anxiety management groups for young people aged 11 to 14. 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 peoples' anxiety ratings in 5 out of 6 sessions and contributed to a higher discharge rate after completing the group therapy (44% with vs 28% without the dog). Qualitative feedback indicates that the presence of a therapy dog improved the young people's experiences by reporting feeling more relaxed and more confident in the group. Findings suggest that a therapy dog can

enhance young people's experiences in group therapy, especially at early stages, and increase discharge rates.

Keywords Animal Assisted Therapy, Young People's Mental Health, Anxiety, Engagement, Therapeutic Outcomes

Introduction

Animal-assisted intervention (AAI) 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 & Serpell, 2010, p.37). Under this umbrella falls the more specific approach of animal-assisted therapy (AAT) in which a trained professional delivers an individualised, goal-focussed and documented therapy which incorporates an animal (Jones et al., 2019). The most commonly utilised animals in AAT research are dogs and horses with both demonstrating promise in improving psychological outcomes for adolescents (Jones et al., 2019; Kendall et al., 2015). Due to the practical issues of delivering equine assisted therapy in a National Health Service (NHS) setting this paper will focus on canine assisted therapy.

A recent review of canine assisted psychotherapy (CAP) for adolescents (Jones et al., 2019) found that CAP, in comparison to standard treatment, may improve outcomes for posttraumatic stress disorder (PTSD) and give equivalent outcomes for anxiety and anger. CAP was also found to improve a number of secondary factors which support the therapeutic process such as attendance, engagement and socialisation, and reduced disruptive behaviour during therapy. The review authors suggest 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 elsewhere as the mechanism underlying human-animal bonding, and the physiological process exploited by AAT for therapeutic effect (Cirulli et al., 2011). The review by Jones et al. (2019) includes interventions which were delivered in both an individual and group format and reports that in general the interventions were found to have good tolerability and acceptability. The interventions included in the review varied in the methods through which the dog was incorporated into the therapy with the dog-client interaction being either a structured part of therapy, a semi-structured part, or the dog simply being present and all interactions being spontaneous. Due to limited reporting about the interventions themselves the authors were unable to draw conclusions about which method of incorporation provided the best outcomes and noted that this was an area requiring further investigation.

Previous research in group-based CAP for young people has noted improvements in both outcomes, and secondary factors which support the therapeutic process. Group CAP for young people who had been sexually abused found that groups with a therapy dog had a greater improvement in trauma related symptoms (Dietz et al., 2012) and that a therapy dog helped to ease tension, reflect on anxiety and support young people emotionally (Riechert, 1994). A group CAP intervention for adolescent girls who had experienced physical or sexual abuse also found a decrease in PTSD symptoms and the risk of a PTSD diagnosis (Hamama, 2011). Group anger counselling for adolescents which included a dog have demonstrated a significant reduction in emotional and behavioural anger, along with a significant increase in animal bonding amongst participants (Hanselman, 2001). It has also been 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, experiences of empathy, and motivation for attending each session (Lange et al., 2007).

To date there has been no evaluation of the impact of introducing a therapy dog to a group CBT programme for young people with anxiety. Such a programme is recommended by the UK National Institute for Health and Care Excellence (NICE). NICE (2013) recommends Cognitive-Behavioural Therapy (CBT), delivered either in group or individual format, as one of the first approaches for children with anxiety. A recent Cochrane review (James et al., 2022) found that group delivered CBT for anxiety disorders in children and adolescents was more effective than waiting lists/no treatment and as effective as individual CBT. The site of this evaluation, an NHS trust in the Southeast of England, delivers group CBT for young people with anxiety as part of standard practice.

Therapy dogs, registered in England as 'Pets as Therapy' (PAT) dogs are friendly, temperament tested and vaccinated dogs, covered by public liability insurance, that visit a range of inpatient and outpatient NHS settings to provide service users with the opportunity to interact with them. Despite the ubiquity of PAT dogs across the NHS there has been limited, although positive, evaluation of their impact. Service users attending an NHS adult psychiatry clinic where a PAT dog was present reported reduced anxiety, improved mood and wanting a PAT dog to be present during consultations in the future (Crease et al., 2017).

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

Methods

Participants

35 young people aged 11 to 14, experiencing moderate anxiety, were assessed and placed on a waiting list for anxiety management groups called the Calm Forum (CF), as per routine clinical practice within an NHS emotional well-being and mental health service for children and adolescents in the South East of England.

This evaluation includes data from two cohorts collected over two years. Due to size restrictions on the groups, those on the waiting list were divided and two Calm Forums were run simultaneously for each cohort. The first cohort consisted of 21 young people, 10 were placed in the group with the PAT dog and the remaining 11 in the group without the PAT dog. The second cohort consisted of 14 young people with seven in the PAT dog group and seven in the non-PAT group. For those in the PAT groups the practitioners delivering the groups contacted the young peoples' parents/carers to inform them of the presence of a PAT dog and service volunteer (the PAT dog's handler). This gave the parents/carers the opportunity to have the young person allocated to a non-PAT group.

Intervention

The Calm Forums consisted of six one-hour group CBT sessions followed by a group review session. They were delivered by two mental health workers: a mental health nurse and an assistant psychologist. The first introductory session covered the aims of the group, individual goals, and an understanding of CBT in relation to anxiety. The second session focused on psychoeducation about anxiety relating to physical sensations and the function of anxiety in relation to survival. Session three addressed panic attacks, understanding the cycle of panic, graded exposure, and avoidance and

safety behaviours. The fourth and the fifth sessions dealt with negative automatic thinking, thinking errors and how to challenge these. The sixth 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 seven was used to collect feedback and review progress on individual goals. Parent/carer groups also ran simultaneously and focused on supporting their child in implementing the strategies learnt in the group.

Consistent with treatment-as-usual processes within the service, if a participant missed two consecutive group sessions and were not contactable by text or telephone they would be discharged from the group. A total of 16 participants across two cohorts dropped out at various points (seven dropped out from the groups with the PAT Dog and nine from the group without). However, the last session and the group review for the second cohort were cancelled due to COVID-19 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 and how much they interacted with the dog.

Data collection and measures

The young people attending the groups completed the service's routine outcome measures (ROMs) before the first session and after the last session of the group. These included Goodman, Meltzer and Bailey's (1998) Strengths and Difficulties Questionnaire (SDQ) self-report version, and Chorpita et al.'s (2000) Revised Child Anxiety and Depression Scale (RCADS). The SDQ self-report version is a 25 item behavioural screening questionnaire for young people aged 11-16. The 25 items are

divided into five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviours. The first four subscales are scored such that higher scores indicate more difficulties, whilst the prosocial scale is scored such that a higher score indicates more positive prosocial behaviours. The RCADS is a 47-item self-report measure of anxiety and depression symptoms for 8-18 year olds. The measure consists of five subscales for anxiety (separation anxiety disorder, social phobia, generalized anxiety disorder, panic disorder and obsessive-compulsive disorder) and one for depression. Due to COVID-19, post-group ROMs were sent by post for the second cohort, but only two were returned despite attempts to follow up with the young people.

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 those young people in the PAT dog 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 due to not being able to attend the final session whether this be due to sickness, or holidays. Only five young people provided brief feedback and therefore these were simply reviewed to identify common topics rather than formally analysed.

After completing group therapy, young people attended an individual review with their mental health worker who carried out their initial mental health assessment. During this session it was 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 the young person had any 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 preference of attending a non-PAT group. Consent 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 for evaluations: permission was gained from the lead for the clinical service and the evaluation was registered with the audit department (registration number 3931) and a final report provided.

Results

Weekly Anxiety Measure

These 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 ($p > 0.05$) for any of the sessions.

There was a significant decrease in anxiety scores for those in the PAT group in all sessions but the last, 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 pre-session/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).

Strengths and Difficulties Questionnaire (SDQ) and Revised Child Anxiety and Depression Scale (RCADS)

In the second cohort these measures were only completed by two young people following the end of the groups. Therefore, only data from the first cohort is reported and inferential statistics are not presented as only seven young people completed pre and post measures in the first cohort (three in the PAT group and four in the non-PAT group).

For both the PAT and non-PAT group there was a decrease in the mean scores of each of the RCADS subscales except a slight mean increase of 0.5 for obsessive-compulsive symptoms in the PAT group (Figure 2). The largest decrease in mean score for both groups was the panic disorder subscale.

In the non-PAT group there was a decrease in mean score in each of the first four subscales of the SDQ (emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems) and an increase in the pro-social behaviours mean score. In the PAT group there was a decrease in mean score in the emotional symptoms and peer relationship 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 pro-social behaviours. (Figure 3).

Discharge Rate

In the PAT groups across both cohorts 44% of participants did not complete the therapy, 44% were discharged and 12% remained open (Figure 4). In the non-PAT

groups across both cohorts 55% of participants did not complete the therapy, 28% were discharged and 17% remained open (Figure 5). There were no significant differences in discharge rate between the two groups, however, the PAT-groups indicated both higher completion and higher discharge rate.

Feedback

Feedback appeared mostly positive, suggesting that the PAT dog made children feel more relaxed, confident to talk and less awkward attending the group, as exemplified by some of the quotes: *'it would have taken longer to get used to'*, *'the group wouldn't have been as relaxed'*, *'she made me feel more comfortable'*, *'she made the group better and more relaxed than other groups I have been in'*. Most of the children suggested that the PAT dog was a positive distraction when it became awkward; however, two children commented that she was too distracting at times. The children generally commented that they wanted to come back each week due to having the PAT dog present.

Informal observations from the clinicians facilitating the groups (authors of this paper) were that the engagement and interaction levels were greater between the young people in the group with the PAT dog, and the young people seemed to more easily build rapport with the facilitators and showed more willingness to contribute to the group. In some of the group activities, the young people would all get off their chairs and sit on the floor to collectively complete an activity. This was not observed in either of the 2 groups delivered without the PAT dog.

Discussion

This is 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 anxiety within each therapy session and may also result in improved levels of discharge from the service. Furthermore, the lack of evidence of any deleterious effect of the dog's presence on ROMs or attendance rates, and positive feedback provided by both 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. p667).

Significant reduction in anxiety during sessions with the PAT dog across 5 of the 6 sessions reflects the findings of previous CAP research with adolescents which suggest that the presence of a dog in the therapeutic session can create a warm, accepting and secure space 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 coherent with clinicians' reporting that the young people engaged more in the group activities and discussions when the PAT dog was present, which are also in line with previous findings that the presence of a dog can improve secondary factors which support the therapeutic process such as engagement and socialisation (Jones et al., 2019). It is of note that during the first session (when anxiety at the start was highest across both groups) only the group with the PAT dog showed a significant decrease in anxiety. With positive peer relationships being 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 of particular relevance.

A higher proportion of young people were discharged from the service following the PAT groups rather than the non-PAT groups. This might suggest that (whilst not reflected in the RCADS and SDQ scores) the presence of a dog not only improves group cohesion and creates a more therapy conducive environment but that this in turn might lead to improved overall outcomes.

Positive feedback from the young people reflects previous feedback from an NHS psychiatric setting that the dog can make sessions more relaxed and comfortable (Crease et al., 2017) and findings from previous research that CAP for adolescents is generally well tolerated and acceptable (Jones et al., 2019) and improves motivation for group attendance (Lange et al., 2007). However, some comments in this evaluation indicate that the dog could be 'too distracting'. This might be due to the fact that the inclusion of the dog in the groups was unstructured and all interactions were spontaneous, as opposed to a structured/semi-structured inclusion. Previous findings have been mixed regarding which method of inclusion gives better results (Jones et al., 2019) but these comments suggest that adaptations to the approach might be required for this age group.

The clinicians facilitating the groups were also aware of the impact the presence of the PAT dog had upon them. The clinicians have considered that their own facilitation skills may have been positively impacted by the PAT dog by: increasing their excitement about delivering the groups; increasing energy levels during the group sessions; allowing them to more easily build rapport with the young people; and needing to prompt and encourage the young people less to ensure their engagement

with the group activities and discussions. Therefore, it is possible that the presence of the PAT dog might have an indirect impact on outcomes through its effect on the facilitators as well as a more direct impact through its effect 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 delivered CBT itself. Group CBT places emphasis on 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 might address an issue which has traditionally been de-emphasised in group CBT. Conversely, that some of the young people found the dog to be distracting might negatively impact the core educational aspect of group CBT. Another issue identified with group CBT is that changes in mental state and affect can be more difficult to attend to than in an individual setting (Whitfield, 2010). That the young people could spontaneously interact with the dog might have allowed them to attend to these changes themselves. Furthermore, children with high levels of social anxiety may prefer individual CBT (Menassis et al., 2002) and therefore attending group CBT might increase anxiety further and it might be this anxiety that is observed to be reduced by the presence of the PAT dog in this evaluation.

Limitations

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

Whilst the facilitators aimed to ensure that the groups were carried out as similarly as possible, there are potential issues of bias, contamination and differences in the groups beyond the mere presence of the PAT dog. Reports of engagement levels were based entirely on informal subjective observations by the facilitators of the groups, as there was limited scope and time for arranging video recordings of each group session and subsequent analysis and coding of behaviours and interactions to measure engagement. The facilitators of all the groups were two of the authors of this paper with a particular interest in AAT 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 (i.e. changes in delivery in the PAT groups in response to the dog might have been 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 impacted the group; having an additional adult in the room could have contributed towards feelings of safety and security in the group environment. This is speculative as there was no feedback requested regarding the handler's presence.

As noted by Jones et al. (2019) there is a significant need for further robust research in the area of CAP in order to: identify the key components of the process which are most effective; develop manualised/standardised interventions; and establish their efficacy through randomised controlled trials.

Implications

This evaluation could have implications for clinical practice in child and adolescent mental health services. A PAT dog could be utilised to encourage engagement with, and motivation for, group treatment and provide a more positive experience of mental

health services, as demonstrated by the feedback provided by the participants and the reduction in anxiety ratings during sessions. However, as the results indicated that the PAT dog could at times be distracting, we would recommend that future groups offer an introductory workshop so that young people can see how they feel about the PAT dog before committing to the group. Due to this aspect of service user preference (along with issues such as allergies and animal phobias) it would be important that any AAT is offered alongside treatments which do not involve an animal.

There is also a cost saving implication to this evaluation with higher discharge rates observed from young people in the PAT groups who therefore require no further input from the clinical service.

For clinicians interested in exploring the use of dogs in their work we would recommend consulting the Royal College of Nursing (2019) protocol for supporting organisations considering their use. This document sets out the types of dogs that might visit health care settings, guidance for decision making as to whether the presence of a dog is appropriate and guidelines concerning major areas of risk such as allergies and infection control. Furthermore, the document provides the details of the key national organisations which provide therapy dogs and handlers.

Conclusion

This evaluation has indicated that the inclusion of a dog in group CBT sessions for young people experiencing anxiety has no impact (positive or negative) on routine outcome measures and might decrease anxiety during the groups and increase discharge rates. It is suggested that the presence of the dog might effect these

changes by: increasing engagement with tasks and between group members; creating a more relaxed environment more conducive to disclosure; increasing motivation to attend the groups; and impacting facilitator delivery of groups.

This evaluation suggests that having the offer available of a CBT group for anxiety which includes a dog would be acceptable to both clients and clinicians. However, robust research is still required to establish the efficacy of such groups which include a dog in comparison to those which do not, particularly in the NHS setting.

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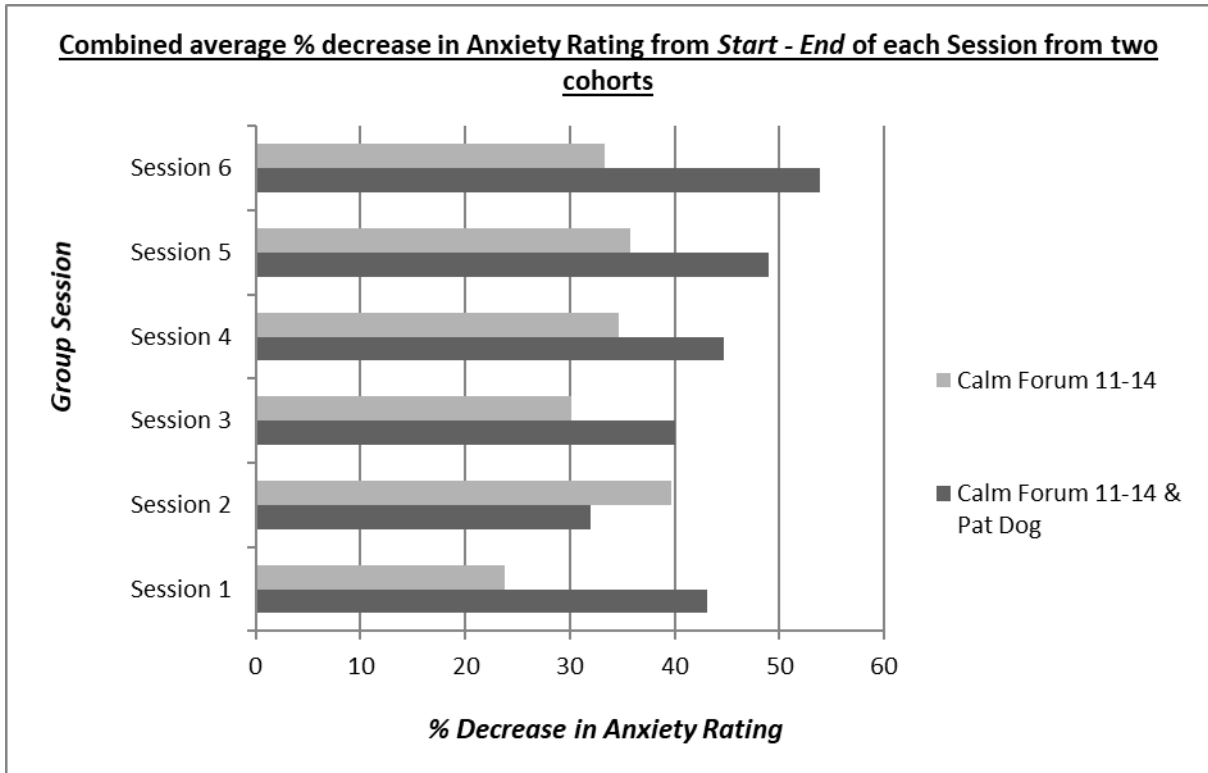


Figure 1: Combined average percentage decrease in Anxiety Rating across both cohorts of each group

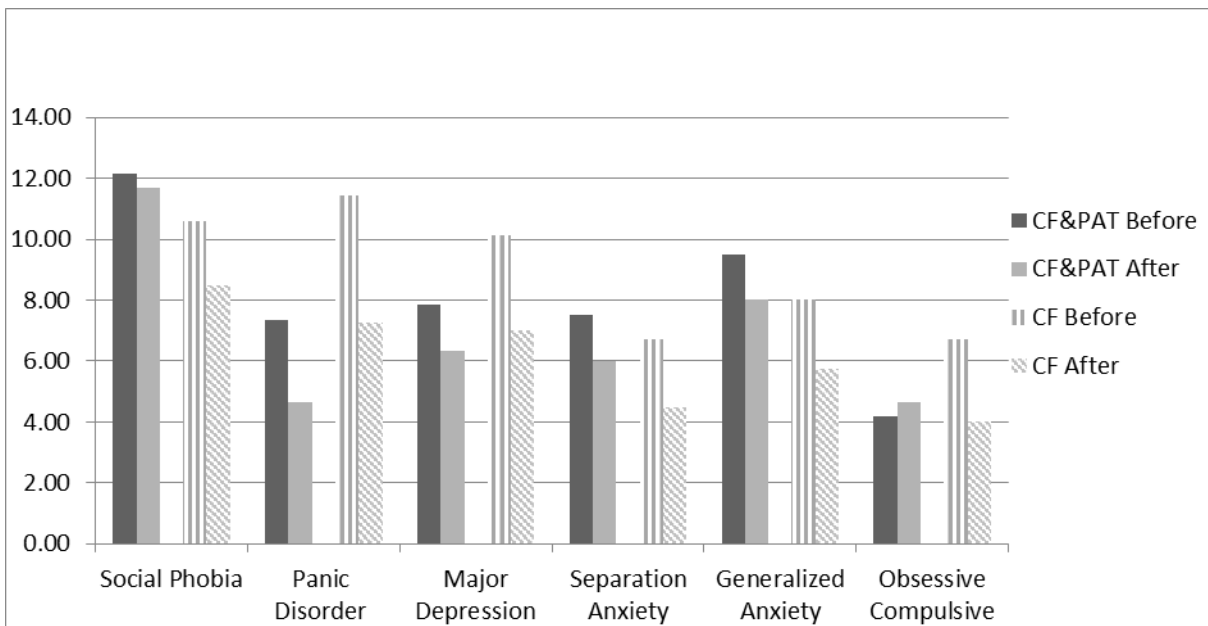


Figure 2: RCADS Scores before and after for the two therapy groups in cohort one

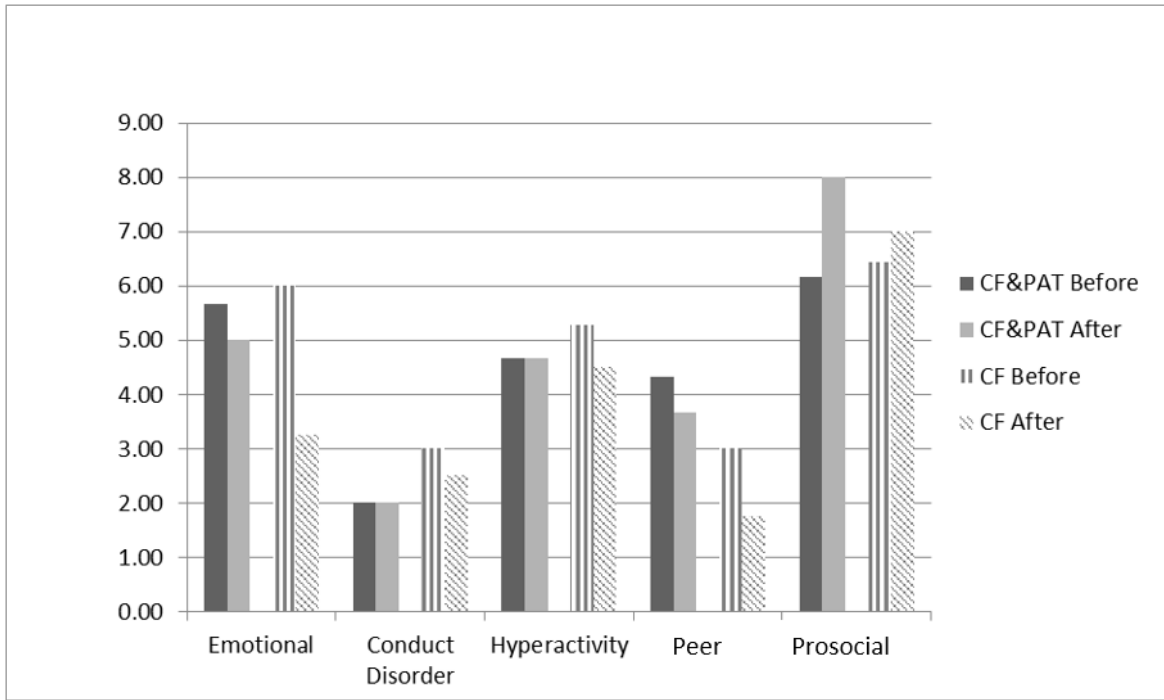


Figure 3: SDQ scores before and after for two therapy groups in cohort 1

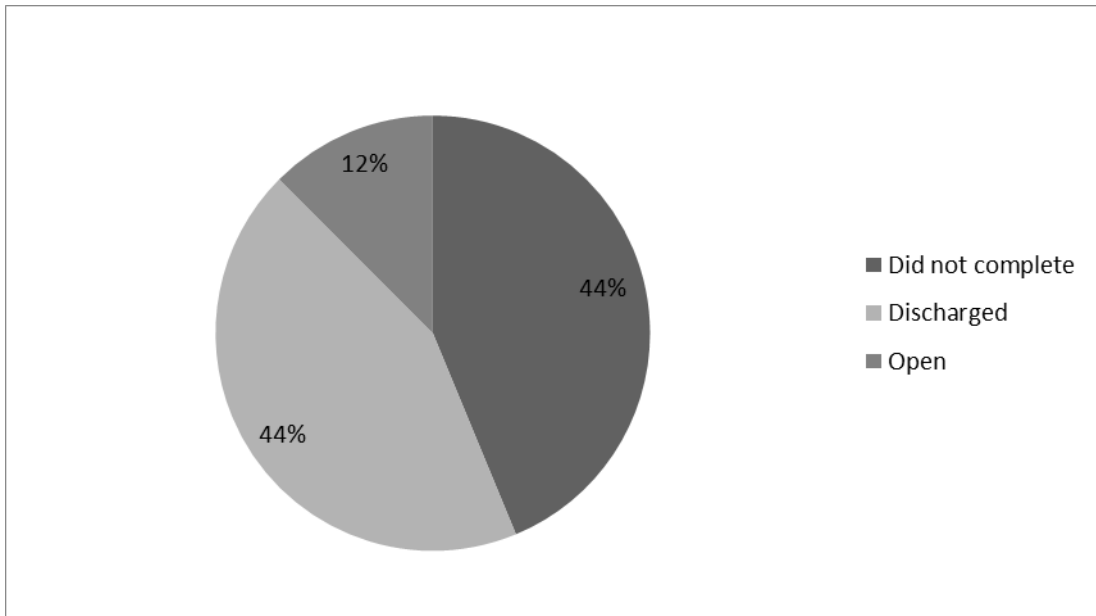


Figure 4: Discharge % for PAT group

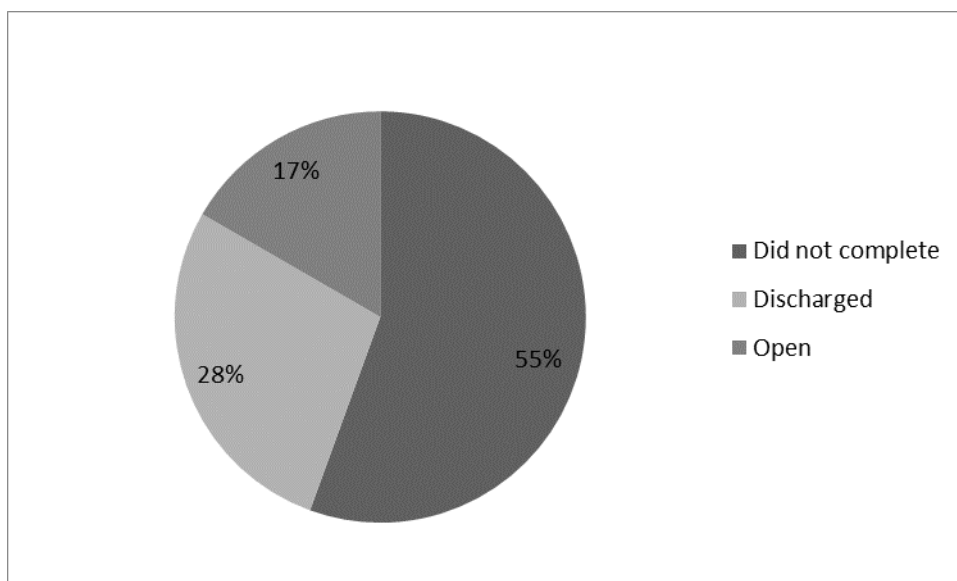


Figure 5: Discharge % for no dog group

	Before session		After session		<i>df</i>	<i>t</i>	<i>Sig. (two-tailed)</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
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 1: Paired t-test comparison of anxiety scores pre and post session for the Calm Forum plus PAT dog group

	Before session		After session		<i>df</i>	<i>t</i>	<i>Sig. (two-tailed)</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
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

Table 2: Paired t-test comparison of anxiety scores pre and post session for the Calm Forum group