Acceptability and effectiveness of cognitive analytic therapy (CAT) for depression for treatment returners to NHS Talking Therapies: A pilot evaluation.

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Objectives: There is evidence that over one quarter of patients return to National Health Service (NHS) Talking Therapies (TT) services, and the needs of these patients are poorly understood and catered for. This project investigated the acceptability and effectiveness of delivering cognitive analytic therapy (CAT) for patients with depression returning to a TT service with childhood trauma and associated relational difficulties. *Methods:* A case-controlled pilot study using TT sessional outcome measures. 16-session CAT was offered to N=76 patients who had previously received a high-intensity intervention (mainly cognitive behavioural therapy; CBT) in the same TT service. Dropout rates, recovery rates and when recovery occurred during the CAT treatment episode were calculated. CAT outcomes were compared against the previous treatment episodes (n=47) and also benchmarked against the evidence base. Patients were followed up after receiving CAT (n=16) to assess the durability of change. The number returning to the TT service after receiving CAT was tracked. *Results:* The dropout rate for CAT was 16.9% and the reliable recovery rate was 40%. Reliable and/or clinically significant reductions in depression tended to occur during early CAT sessions. At a group level, there were significant reductions in depression during CAT. There was no evidence of relapse at follow-up. The return rate to the service following CAT was 28.94%. *Conclusions:* CAT appears useful to consider in the offer for patients returning to TT services. Clinical trials now need to focus on the treatment return patient group in TT services.

Practitioner Points

- CAT appears to be a useful approach for patients returning for psychological help for depression, particularly in context of relational difficulties, adverse childhood experiences and/or emotional dysregulation.
- The integrative and relational approach of CAT clearly differentiates it from CBT.
- CAT therapists should emphasise the early reformulation of depression as this appears to be a key enabler of change.

Introduction

Talking Therapies (TT) services[1] in the National Health Service (NHS) are commissioned to provide evidence-based psychotherapies for depression (Gyani et al., 2023). In the TT stepped-care organisational model, step 1 contains assessment and watchful waiting in general practice and then at step 2, brief and low intensity interventions are delivered to reduce depressive symptoms. When such psychoeducational interventions are ineffective or where there are concerns about risk, patients are then 'stepped-up' to step 3 to receive traditional high intensity interventions (Bower & Gilbody, 2005). At step 4, patients pass from primary to secondary care. In keeping with NICE (2011) guidance, the primary offer in NHS TT services at step 3 is cognitive behavioural therapy (CBT), but some treatment plurality is also now offered with interventions such as counselling for depression (CfD), eye movement desensitization and reprocessing therapy (EMDR) and interpersonal psychotherapy (IPT) being made available (Martin et al., 2022). TT services all work to achieve key performance indicators (KPIs; Department of Health, 2015) and these mostly pertain to enabling rapid access to interventions and facilitating effective psychological

[1] Formerly called Improving Access to Psychological Therapies; IAPT.

interventions (e.g., services are expected to enable a 48% recovery rate). The Wakefield et al., (2021) meta-analysis of outcomes achieved by TT services reported a large uncontrolled pre-post treatment effect size for depression symptoms (d = 0.87, 95% CI [0.78–0.96], p < .0001).

However, recent evidence suggests that 'treatment return' occurs in TT services, where patients are seeking a further psychological intervention. Lorimer et al., (2023) found that 27% of TT patients were re-referred and then 14% went onto receive an additional episode of treatment, and the likelihood of recovery reduced on each resultant return treatment episode. This evidence supports the metaphor of the 'revolving door' of psychological services (Iverach, Menzies & Menzies, 2014). Combining pharmacology and psychotherapy is indicated for depression (Cuijpers et al., 2023), but the best combinations for depressed patients that have relapsed and are again seeking help is not yet known. There is a clear need to maximise outcomes during first treatment episodes to prevent relapse and also offer access to a range of acceptable and effective interventions for those returning to a service for more psychological help. It is questionable to offer the same intervention when there is evidence that the intervention did not help or did not have a durable effect the first time, but when services lack plurality, this repetition can be an inevitability.

Cognitive analytic therapy (CAT) is an integrative, relational, structured and time-limited psychotherapy (Ryle & Kerr, 2020) that is a potential suitable candidate intervention for patients returning to TT services. CAT is delivered in 8, 16 or 24-session version formats with patients allocated according to patient complexity (Ryle et al., 2014), with the 24-session version being informed by the multiple self-states model (Ryle, 1997). Whilst the treatment duration of CAT is similar to CBT, CAT and CBT differ in terms of philosophy, approach, tools and the way in which the therapeutic relationship is used (Ryle, 2012). The 8, 16 and 24 session versions of CAT are all anchored theoretically in the same three-phase

approach. This is reformation (both narrative and diagrammatic), recognition (i.e., relational awareness work) and revision (i.e., change focussed work) of target problems (TPs; these are the issues bring the patient to therapy reformulated in relational terms) and associated target problem procedures (TPPs; the long-standing patterns underpinning the target problem). Follow-up offered as standard in CAT, with the 24-session version having a 3+1 follow-up approach and the 16 and 8-session versions having single follow-ups (Ryle & Kerr, 2020). Depression in CAT would be reformulated as a TP with an associated target problem procedure TPP maintaining the depression. In CAT, TPPs are called snags (self-sabotage procedures), traps (vicious circle procedures) and dilemmas (either-or procedures; Ryle & Kerr, 2020).

CAT has a range of clinical tools that support the three-phase approach (e.g., the psychotherapy file to aid reformulation, psychoeducation on the observing self to aid recognition and goodbye letters guidance to aid managing the ending). An app has been developed to aid in TP/TPP tracking and recognition and revision (Kellett et al., 2020). Because CAT places emphasis on identifying both the origins and maintainers of depression during reformulation, there is evidence that this then serves as a platform for change during the revision stage (Sandhu, Kellett & Hardy, 2017). The CAT competency framework (Parry et al., 2021) also emphasises that therapists be ready and able to spot and analyse 'enactments' in the therapeutic relationship that are an expression of the service user's long-standing relational styles. An enactment being when the patient relates to the therapist in a way that mirrors early relationships (Bennett, Parry & Fawkes, 2024); the narrative reformulation names these likely enactments (Kellett et al., 2018). Therefore, what relationally might have restricted progress during CBT could be effectively resolved during CAT. There is evidence that CAT is commonly used as an intervention when other psychological interventions have been ineffective (Kellett et al., 2022).

Critics would say that CAT is practised more widely than would be expected given the developing nature of the evidence base (Fozooni, 2010; Llewelyn, 2003) and this has been referred to as the *'uptake vs credibility'* dilemma (Marriott & Kellett, 2009). The lack of efficacy and effectiveness evidence with samples with a clinical depression diagnosis means that CAT was excluded from the NICE depression guidelines (NICE, 2011). The strongest evidence for CAT is in the treatment of personality disorders (Clarke et al., 2013; Calvert and Kellett, 2014). The Hallam et al., (2020) cross-disorder meta-analysis of CAT outcomes reported large reductions to depression severity (ES = 1.05, 95% CI 0.80–1.29, N = 586) and effects were maintained or had improved at follow-up. The style and approach of CAT appear acceptable, as there is meta-analytic evidence of CAT enabling differentially lower dropout rates compared to other psychotherapies, including CBT and dialectical behaviour therapy (Simmonds-Buckley et al., 2022). There has been a growing interest in delivering and evaluating CAT in TT services. A dismantling trial (Kellett et al., 2018) of 8-session CAT for depression found recovery rates of 44.2% and 34.6% for participants randomised to either CAT with or without narrative reformulation. There have been two non-randomised studies (NRS) conducted in TT services. Wakefield et al., (2021) used propensity score matching to compare CBT and CAT and found no differences in the outcomes between the two therapies. Owen et al., (2023) reported a recovery rate of 46.4% for CAT. The two NRS share the common caveats of uncontrolled evidence generated from routine clinical practice (Holmqvist, Philips & Barkham, 2015) of lack of randomisation, no checks on treatment fidelity and lack of blind assessment of outcomes. A low-intensity version of CAT for depression has been developed for step 2 of TT services (based on clinical trial evidence for this approach for anxiety; Kellett et al., 2023) and this has high acceptability rates and generates a recovery rate of 63% (Kelly et al., 2025). Outside of TT services, Garryfollos et al., (2004) evaluated CAT for depression in routine practice (16%

dropout rate) to show significant pre-post reductions in BDI scores that were maintained or improved upon at 1-year follow-up.

In the three-phase approach of CAT, then 'change work' (or 'exits' in the language of CAT) occurs during the final revision phase (Ryle & Kerr, 2020). Whilst this approach is theoretically grounded, it does not reflect the evidence of the 'dose-effect relationship' (Barkham et al., 2006; Kopta et al., 1994; Stuz et al., 2013). The dose-effect relationship can be summarised as a negatively accelerating curve, in which most change occurs early on during treatment, with the likelihood of change then decelerating (Howard, Kopta, Krause, & Orlinsky, 1986). A systematic review of the 'dose-effect' evidence base in routine practice found that the optimal treatment length in high intensity psychotherapy was 4-24 sessions, but this was highly dependent on the setting/clinical population (Robinson et al., 2020). The 'dose-effect' relationship during CAT has not previously been studied. Evidencing where change occurs during CAT offers an opportunity to optimise the duration of the CAT treatment contract (Darzi, 2024).

To summarise, (a) whilst offering CAT for those returning to TT services may hold some promise and potential, evidencing outcomes achieved is an important task and (b) because of the three-phase approach of CAT, studies of the 'dose-effect' relationship are also important to identify where during CAT recovery occurs (i.e., if recovery occurs at all). This study of patients returning to treatment and being allocated to CAT therefore sought to answer the following six questions: (1) how many CAT sessions are attended and what is the dropout rate? (2) is CAT effective for treatment returners? (3) are CAT outcomes superior to the outcomes achieved in previous interventions? (4) at what point during CAT do patients reach recovery? (5) are gains maintained over the follow-up period? and (6) what is the return rate following CAT to the service?

Method

Design and approvals.

The study used an uncontrolled with follow-up case-controlled design utilising session-by-session outcome measures for current CAT treatment episodes and these were matched and compared against outcomes achieved during previous treatment episodes. Ethical approval was obtained (ref: 064637) and outcome data was received in a download on the 31st May 2024 from the service data manager.

Service setting and care pathway.

This study was conducted in a TT service in the NHS in the south of the United Kingdom. The CAT care pathway within this service is situated at Step 3 (i.e., CAT is part of a suite of 'high intensity' interventions). CAT is offered to patients presenting with depression who have had at least one prior treatment episode in the service at Step 3 (i.e., the prior treatment was either CBT or CfD, as per NICE guidance, 2011). The patients allocated to the CAT care pathway also typically presented with relational difficulties, problems with emotional dysregulation, and/or difficulties associated with adverse or traumatic childhood experiences. The three additional clinical features and difficulties triggered the returning patient to be considered for the CAT pathway, as without these difficulties patients would be allocated for another course of CBT or another high intensity intervention (e.g., CfD, or mindfulness-based CBT). Patients with these difficulties and histories more commonly receive psychological interventions in community mental health teams (CMHTS; NHS, 2025). The implementation guidance for psychological interventions for patients with complex emotional needs/personality disorder (NHS, 2024) includes CAT as an indicated brief intervention. Thomas, Schroder and Rickwood's (2021) review of how community services manage clinical demand showed five typical approaches: walk-in models, multi-disciplinary care, patient-led approaches, effective triage and service model changes. The current study would

be an example of a new service model of creating a CAT care pathway for treatment returners.

The CAT care pathway was developed to better support patient choice and preferences (i.e., for those patients stating a dislike of 'here and now CBT') and to widen the plurality of the service offer. The pathway was designed based on an assumption that when better matching of patients with complexity and/or strong preferences occurred, then CAT would contribute to meeting the recovery rate target for the service, reduce the treatment return rate and meet patient preferences. Four studies have evidenced that complex relational needs tend to impede outcomes in TT services: Goddard et al., 2015; Hepgul et al., 2016; Mars et al., 2021; Lamph et al., 2021). The pathway was staffed throughout the study by CAT psychotherapists, CAT practitioners and CAT trainees (under weekly group supervision). CAT therapists undertake a 2-year (8 closely supervised cases and associated academic work) training and CAT psychotherapy training tops this up with an additional 2-year training (i.e., another 8 closely supervised cases and associated academic work). All therapists were in CAT specific supervision, and the core professions of the CAT therapists included clinical psychologists, mental health nurses, counsellors and CBT therapists. The CAT service typically offered sixteen face-to-face sessions in a community clinic, and this was delivered via video conferencing when needed. Method of delivery was dictated both by resource availability (i.e., some therapists work remotely) and patient preference. Sessional outcome measures were completed by patients remotely via webforms before each CAT session.

Outcome Measures

The following two outcome measures were extracted from the routine outcome monitoring dataset that is a key feature of TT services (NHS Digital, 2021). Online supplementary

materials contain the definitions and parameters for clinically significant and reliable change on the GAD-7 and the PHQ-9.

The Patient Health Questionnaire (PHQ-9): This is a measure of depression and has 9-items measuring depression symptom intensity (Kroenke et al., 2001). Responses are given on a scale of 0-3 ('not at all' to 'nearly every day') and are totalled. Higher PHQ-9 scores represent greater depression severity (i.e., 0-4 none, 5-9 mild, 10-14 moderate, 15-19 moderately severe and 20-27 severe). The cut-off score used in TT services to index depression caseness is a score of ≥10. The PHQ-9 has good psychometric properties and has been validated on both clinical and community norms (Lee et al., 2007; Martin et al., 2006; Kocalevent et al., 2013).

Generalised Anxiety Disorder Scale (GAD-7): This is a measure of anxiety symptoms consisting of 7-items (Spitzer et al., 2006). Responses are given on a scale of 0-3 ('not at all' to 'nearly every day') and are totalled. Higher scores represent greater anxiety severity (i.e., 0-4 minimal anxiety, 5-9 mild anxiety, 10-14 moderate anxiety and 15+ severe anxiety). The cut-off score used in TT services for identifying anxiety caseness is a score of ≥8. The GAD-7 has good psychometric properties and has been validated on both community and clinical norms (Löwe et al., 2008; Herr et al, 2014; Kroenke et al., 2007; 2010).

Research Sample

The sample is described in Figure 1 using a STROBE summary (von Elm et al., 2007). The initial anonymised dataset included sessional data for N=116 patients. Of these, n=8 did not attend at least two treatment sessions[2] and n=32 did not have complete pre/post data, resulting in a final research sample of n=76 patients. Of these, n=16 patients also completed outcome measures at follow-up. Of the n=76 treatment return patients receiving CAT included in the final research sample, n=47 had previous treatment in the service for which

[2] Consistent with current guidelines, a single episode of treatment was determined to have occurred if at least two treatment sessions were attended (National Collaborating Centre for Mental Health, 2024).

the pre and post data was retrievable on the PHQ-9. Therefore, outcomes were compared between previous treatment and CAT for these n=47 patients. For patients who had multiple prior treatment episodes, outcomes from the most recent prior treatment episode were used (i.e., for n=7 the most recent intervention before CAT had been at step 2).

Cognitive analytic therapy

All patients had CAT at Step 3 of the TT service between January 2021 and March 2024. During 16-sessions, the NR was typically shared at session 4 and a narrative reformulation letter writing template was used to achieve this (Crothers, 2019). All CAT therapies had a sequential diagrammatic reformulation (SDR). For those patients completing treatment, goodbye letters were exchanged between therapist and patient at the final session to summarise gains and plan for relapse prevention. Mean duration of the CAT was 164-days and sessions were typically weekly and were 50-60 minutes in length. Time elapsed between final treatment session and follow-up ranged between 4-29 weeks and typically follow-ups were conducted between 1-4 months after completion of CAT.

Definitions and statistical analysis

Supplementary materials summarise the thresholds and terminology used for calculating rates of reliable improvement/deterioration, clinically significant improvement/deterioration, reliable recovery and harm on the pre-post comparisons. Dropout was recorded when any patient did not fully attend and complete the 16-session CAT. Demographics and session attendance are reported using descriptive statistics. Paired sample t-tests or nonparametric alternatives compared (a) pre-vs-post and post-vs-follow-up CAT outcomes on the PHQ-9 and GAD-7 for the whole sample and (b) CAT versus previous treatment pre-vs-post treatment outcomes on the PHQ-9 in the prior treatments sample. Comparisons between rates of reliable improvement (yes/no), clinical improvement (yes/no) and recovery (yes/no) during previous treatments versus CAT were analysed using McNemar's test. For all group level

statistical analyses, the significance level was set at $p<.05$. Box plots were used to summarise the distribution of CAT treatment durations and attendance. Patients with a last recorded diagnosis of a non-depressive disorder were excluded from the dose-effect analysis, resulting in a depression-specific sample of n=65 patients - and this sample were also used in the analysis of dropout and CAT session attendance. This decision was taken because the intention of the CAT pathway in the service was too primarily to treat depression. The session at which clinically significant and/or reliable change occurred was calculated and these results are presented as box plots. The rate of patients who then re-returned to the service within 10-months following completion CAT was tracked and reported as a percentage.

Results

Patient demographics

Patient demographics and clinical information is presented in Table 1. In terms of the previous treatment episodes, then 72.34% had received a single prior treatment episode and the remainder had received more than one previous intervention (i.e., range 1-5 previous interventions in the service). Previous intervention duration ranged from 2-24 sessions, with the most common treatment duration being 7-sessions. The most common previous intervention was CBT (65.00%). The mean length of previous treatments was 145-days (SD = 106.2 days). Time elapsed between prior treatment and CAT ranged from 14 to 4293 days, with the mean elapsed time being 1008 days (i.e., equivalent to 2.76 years, SD = 1131 days). The sample returning to treatment and receiving CAT were a predominantly working age, White British and a cisgender female sample. The majority did not identify as disabled, however, 42.00% had a comorbid long-term physical health condition. The sample was moderately depressed on the PHQ-9 before starting CAT. Online supplementary materials

contain the number (and % of sample) of patients at caseness at the start of treatments on the GAD-7 and/or PHQ-9

Dropout and attendance

The dropout rate for CAT was 16.9%. The box plot in Figure 2 summarises CAT session attendance rates showing a session attendance range of between 2-25 sessions (median = 15, IQR = 12-17).

Effectiveness of CAT for treatment returners – group level analysis

The pre vs post group level comparisons for the CAT episodes are reported in Table 2. There was a statistically significant pre-post reduction in depression and anxiety symptoms with moderate effect sizes ($Z = -4.29$, $p < 0.001$, $r = -0.52$ for the GAD-7; $Z = 4.57$, $p < 0.001$, $r = -0.52$ for the PHQ-9). On both PHQ-9 and GAD-7 the group post-treatment means remained above the threshold for caseness (GAD-7 post treatment mean = 8.8, SD = 5.35 and PHQ-9 post treatment mean = 10.07, SD = 7.96).

Effectiveness of CAT for treatment returners – individual level analysis

Table 3 reports outcome categories for the CAT episodes. Reliable improvement and recovery rates for patients at caseness on outcome measures at the start of CAT treatment are reported in online supplementary materials. Given the relatively high proportion (14%) of patients not at caseness on either measure at the start of CAT, improvement and recovery rates were also calculated separately for patients at caseness at the start of treatment (see online supplementary materials). Excluding patients not at caseness at baseline resulted in higher improvement and recovery rates. Of the 65 patients at caseness on at least one measure at the start of treatment, 40% reached reliable recovery on at least one measure by the end of CAT. Table 4 reports the benchmarking exercise for the current study individual rates when compared against the CAT in TT evidence base. This highlights that despite the current

study being a treatment return sample, recovery rates were broadly similar to those found in previous studies.

Dose-effect during CAT

A total of 48 patients from the n=65 depression sample reached clinically significant and/or reliable improvement at some point during CAT treatment. Results are displayed in the box plot in Figure 3. Patients tended to require three or four sessions (medians) to reach reliable and/or clinically significant improvements. With outliers excluded, all CAT patients that experienced reliable and/or clinically significant improvement, did so in ≤10 sessions. Patients tended to require longer (i.e., a median of 6 sessions) to reach reliable recovery.

Longer-term CAT outcomes for treatment returners

Table 2 reports group scores for those patients with available follow-up data (n=16). There was no significant change between the final CAT session anxiety and depression scores and follow-up scores, indicating treatment gains being maintained (t(15)=0.42, p=0.97, d = 0.01 on GAD-7 and t(15)=0.00, p=0.36, d=0.00 on PHQ-9). Following the end of their CAT treatment, 28.9% of patients were re-referred to the service for additional treatment.

Effectiveness of CAT compared to previous treatment

The group level outcomes for previous treatment episodes for N=47 patients are reported in Table 2. There was a statistically significant pre-post reduction in PHQ-9 scores with a moderate effect size during previous treatment (t(46)=3.27, p<0.001, d=0.54), but with the post-treatment group mean being above the threshold for caseness at end of treatment (mean = 12.3, SD = 6.81). This study compared the effectiveness of CAT treatments with previous treatments for this sample of N = 47 patients, in terms of whether patients experienced reliable improvement, clinically significant improvement, and reliable recovery. In previous treatments, 42.6% of patients experienced a reliable improvement, compared with 36% in their subsequent CAT treatments, 38.3% experienced clinically significant improvement in

previous treatments, compared with 23.4% in subsequent CAT treatments and 32% experienced reliable recovery compared to 21.3% in subsequent CAT treatments. Outcome rates between previous treatments versus subsequent CAT treatment episodes can be found in Table 5. The McNemar's tests found no significant rates of difference in terms of the rates of reliable improvement ($p = 0.68$), clinically significant improvement ($p = 0.17$), or reliable recovery ($p = 0.30$) between previous and current CAT treatment episodes.

Discussion

This study has been the first to evaluate both outcomes and dose-effect in CAT for depression in a clinical population defined by the fact that they were returning for more treatment. There has been little focus on the treatment return population in the TT evidence base and the needs of this cohort of patients are therefore poorly understood. This study therefore contributes to the call made by Lorimer et al., (2023) for more evaluations of the interventions provided for treatment returners in TT services. There were statistically significant post-treatment reductions to depression and anxiety symptoms, although it is worth noting group means at end of treatment were still at 'caseness' on both measures. Effect sizes were moderate and slightly smaller than those reported in the Hallam et al., (2021) CAT effectiveness meta-analysis. Analysis of follow-up outcomes suggested that change was maintained over the 1-7 months of the post-CAT period, and this mirrors the Gallyfallos et al., (2004) and Owen et al., (2023) CAT for depression follow-up results. The follow-up results were encouraging, considering that this group of patients were treatment returners. However, CAT is clearly not a panacea because 28.94% then returned to the service post-CAT for more psychological help. Siddall et al., (1988) emphasised the heterogeneity of treatment-returning patients, with some returning to a service with the same

presenting problem, some with a new presenting problem, some feel the previous intervention was helpful and want this again and some want a completely different psychological therapy.

Approximately a quarter of the sample had had more than one prior intervention in the service before CAT. This mirrors the Lorimer et al., (2023) findings of a cohort of patients that return to TT services multiple times and the Kellett et al., (2022) evidence that CAT patients frequently have received other psychological interventions prior to receiving CAT. Boerema et al., (2016) found that 14% of N = 85,754 depressed patients returned for more help within 3-years. Treatment lengths in the depression sample tended to be between 13-17 sessions, which is consistent with the offer of 16-session CAT contracts. The average duration of the interventions delivered prior to CAT was 7-sessions and therefore treatment returners attended for more CAT sessions than during previous interventions. The dropout rate for CAT was 16.9% which compares favourably with estimates of 19.7% for psychotherapy generally and 18.69% for CAT specifically in first time attendees (Swift & Greenberg, 2012, 2014; Simmonds-Buckley et al., 2022).

Overall, 34% of patients included reached reliable recovery on the GAD-7 and/or PHQ-9 by the end of CAT. This is below the 48% TT KPI, but in a treatment returning sample. It is worth noting that 14% were not at caseness on either measure at the beginning of treatment and patients who are not at caseness, by definition, cannot recover. With these patients excluded, the reliable recovery rate was 40%. This is noteworthy in a cohort who previously had CBT and either did not recover or subsequently relapsed. Depression which does not durably respond to first-line treatments has been referred to as ‘treatment resistant depression’ (Brownswijk et al., 2019). When TT patients have more severe anxiety and depression at intake then recovery rates fall to 30% for depression and 34% for anxiety (Griffiths et al., 2015). Recovery rates from prior treatments were akin to the CAT rates, with no significant differences between the rates. In terms of empirically predicting service

return, Lorimer et al., (2023) noted the current lack of knowledge on predictors. Having a poor outcome from previous treatment does not seem to predict treatment return. The case for clinical follow-up being a routine and commissioned feature of TT services has been previously made (Wakefield et al., 2021).

The dose-effect findings suggest that patients who experienced reliable reductions to their depression symptoms tended to do so early during the early phase of CAT. This is new evidence as previously there have been no studies of the dose-effect relationship in CAT. The median number of sessions by which reliable improvement, clinically significant improvement and reliable recovery was reached were CAT sessions 4, 3 and 6 respectively. This is consistent with dose-response evidence base where change tends to be clustered during early stages of therapy (Howard et al., 1986) and there is CBT-specific evidence of this nonlinear curve with clear reductions in depression symptom severity occurring during first 8-sessions (Klien et al., 2024). With outliers excluded, patients achieving either reliable or clinically significant change (not both), all reached these thresholds within 10 sessions or less. This would suggest that the reformulation and recognition phases of CAT were enabling change. Reformulation enables a shared understanding of the origins and maintainers of depression and when successful and unsuccessful therapies have been compared, this kind of shared understanding emerges as important (Werbart, Annevall & Hillblom, 2019). It is acknowledged that some service users can find reformulation to be painful, frightening and upsetting process (Balmain et al., 2021) and there is evidence from a dismantling trial of CAT for depression (Kellett et al., 2028) that narrative reformulation did not significantly improve outcome. Therefore, the reliable change found in the early stages of CAT found here may have been due to non-specific factors, with these being common across the various psychotherapies and important in terms of outcome (Wampold, 2015).

Limitations

There were several methodological limitations to this study. Notable is the lack of randomisation to treatment, a pre-registered study protocol and the lack of any measures of treatment integrity (Perepletchikova, Treat & Kazdin, 2007); these limitations being common in NRS (Holmqvist et al., 2015). The data was drawn from a limited sample within the service of majority white British, non-disabled and working-age cisgender women. There were some missing pre/post data and the number of CAT cases that were successfully hitched for comparison to their previous treatment were only a ratio of the full sample. Patients may have possibly accessed previous treatments outside of the TT service that housed the research. The range of time that elapsed between previous treatment and CAT varied considerably. The sample at follow-up from CAT was small and this limits the reliability of the conclusions drawn regarding durability. Due to the CAT pathway also taking referrals from the staff support hub, this may have (a) created subsamples that were not at casenness at screening and (b) reflected a bias in screeners in allocating to CAT. The high proportion of the research sample that also had a comorbid LTC may have also negatively affected the outcomes (Seaton et al., 2022). The inclusion of trainee CAT therapists in the sample may have suppressed outcomes and there was no treatment integrity check of the CAT was delivered. There is a valid and reliable measure of CAT competency (Bennett & Parry, 2024). Because the study was reliant on TT outcome measures, there was a limited number of outcome measures analysed.

Being ‘sub-threshold’ for depression on the PHQ-9 does not replace a full clinical assessment of depression, and patients can attend during a phase where they may be currently vulnerable to depression, but where symptoms are not captured by the PHQ-9. Whilst the PHQ-9 and GAD-7 have good specificity and sensitivity for anxiety and depression in primary care (Kroenke et al., 2001; Spritzer et al., 2006), these measures may have poor

sensitivity to the type of therapeutic change enabled by CAT (Hallam et al., 2021). A commonly used method to evaluate dose-effect are growth curves (Howard, 1986), but this approach is problematic when patients have received varying lengths of treatment. This is due to patients being likely to dropout from treatment at the point of reaching a 'good enough level' then biasing outcomes to create more negatively accelerated curves (Barkham 1996; 2006). Sessional data should ideally be modelled against treatment length to control for this (Krause et al., 1998) requiring a much larger sample size than was possible here.

Clinical and Research Implications

Findings from this evaluation suggest that the CAT pathway was moderately effective for those returning to the service for help with depression. However, CAT was no more effective than the previous treatments experienced by the same patients in the same service. Patients who experienced change during CAT tended to maintain gains at follow-up and follow-up is an inherent part of the CAT approach (Ryle & Kerr, 2020). The finding that 14% of patients were not at 'caseness' on either outcome measure at the start of CAT treatment is useful information in terms of designing inclusion and exclusion criteria for future studies. Future research is needed where the time elapsed between treatments is controlled for in case selection. Measuring change to idiographic outcomes (alongside nomothetic outcomes) could be achieved through sessional measurement of TPs and associated TPPs during CAT. The patient experience measure that is collected in TT services but was unstudied here was typically positive regardless as to whether recovery criteria had been met. Future evaluation of TT services should make more use of this patient feedback and it be part of the routine outcome tapestry. Services offering CAT should also consider using the Personality Structure Questionnaire (PSQ; Pollock et al., 2001) as an outcome measure, in addition to utilising the full range of TT disorder specific measures. Indexing competency needs to take place in NRS of CAT (Bennett & Parry, 2024) as well as during clinical trials.

The dose-effect results imply that in this treatment return cohort then reliable, reformulation of depression is a key phase of CAT. Services may wish to consider trialling offering 8-session CAT based on these dose-effect finding (Kellett et al., 2024; Taylor et al., 2024). Given the effectiveness results shown here, there is a research need to now progress onto: (a) conducting a head-to-head randomised trial of CAT versus CBT for those in their first treatment episode for depression and (b) develop more efficient means of selecting and matching patients with the histories (e.g., childhood trauma) and difficulties (e.g. hard to treat depression) seen here, to the most likely efficacious psychological intervention. There has been recent evidence that the selection of patients for CAT guided self-help (CAT-GSH) in TT services can be improved through implementing the AI-derived patient advantage index (Wojnarowski et al., 2024). When patients received an AI-indicated GSH then significantly higher recovery rates were observed at both post-treatment and follow-up. Health economic as well as clinical evaluations of technologies that enable optimal treatment selection and allocation are clearly important for treatment return populations.

Psychotherapy is the treatment of choice for patients presenting with complex emotional and relational needs, with the specialized psychotherapies (i.e., dialectical behaviour therapy, mentalization-based treatment, transference-focused therapy and schema therapy; Oud et al., 2018; Zanarini 2009) being more effective than non-specialised approaches, but whilst often offering and requiring lengthier treatment contracts. When CAT has been compared to cognitive-behavioural and psychoanalytic psychotherapy in an NHS specialist psychotherapy service for this clinical population, CAT was the briefest of the interventions and the outcomes were largely equivalent (Gaskell et al., 2023). Studies need to identify outcomes where CAT has been offered first and then CBT second. The needs of those patients that return to the service after receiving CAT (i.e., 30% of the current sample) are unclear and need to be better understood. This may be a group of patients with *common*

but chronic common mental health problems such as depression that services struggle to meet the needs of (Paganin, Signorini & Sciarretta, 2023).

Conclusions

Knowledge of what is best to provide for TT treatment return cohorts is scant and so sensitively responding to patient preferences is crucial when people return for more psychological help. The TT service return rate should be a KPI. There are clearly cohorts of patients that have a chronic version of depression and so have 'difficult to treat' depression and their needs appear to be currently poorly understood and catered for. When stasis/poor outcome or dropout has occurred, then offering the same intervention again needs to be carefully considered and so the plurality of the treatment offer is particularly important. Reliable recovery tended to be reached within 3-6 sessions of CAT, suggesting that shorter treatment contracts may be sufficient for some patients. CAT appears initially acceptable and effective for treatment returners re-presenting with depression in TT services, but this needs to be better tested in a clinical trial.

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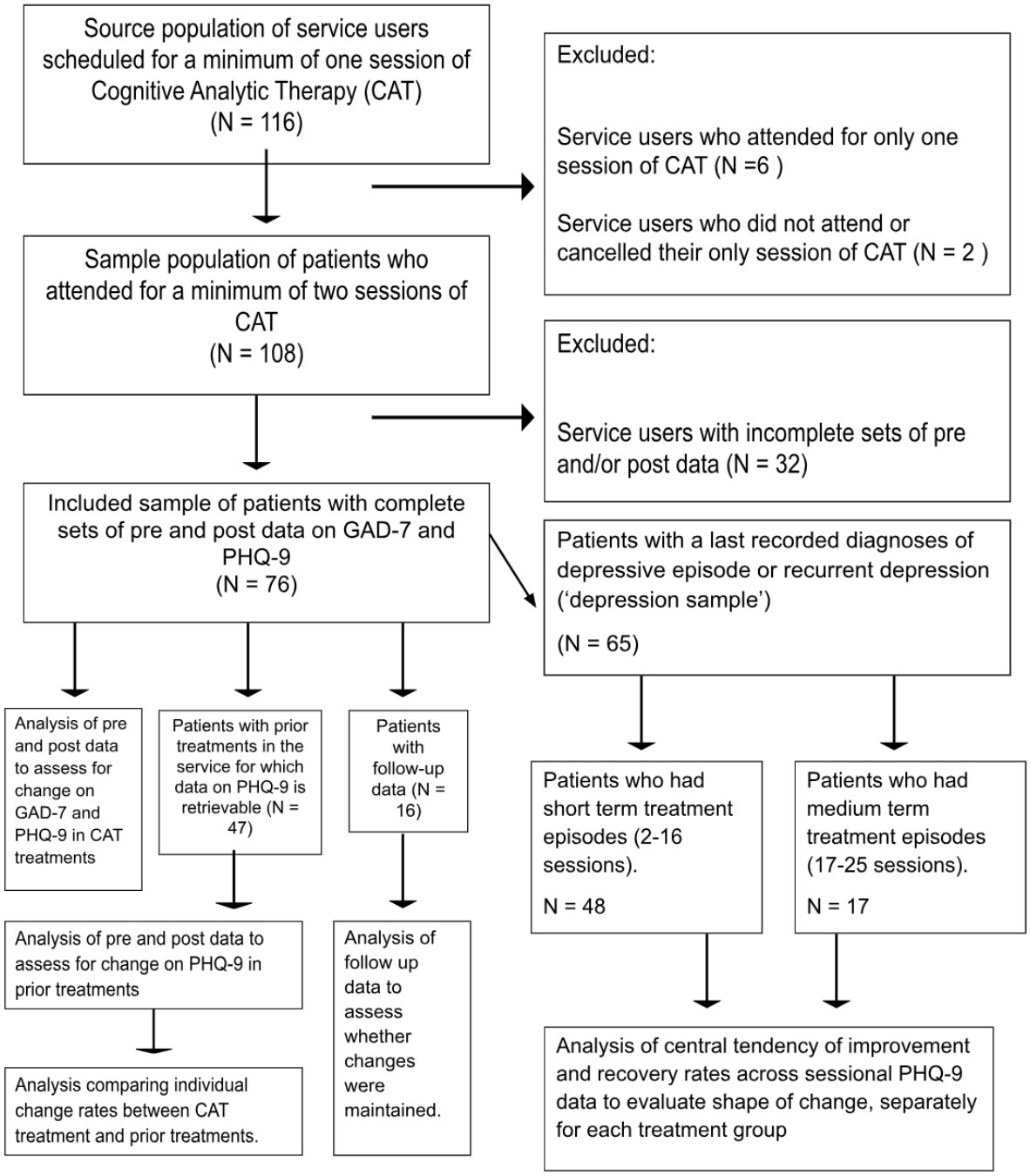

Figure 1: STROBE summary of sample generation and associated planned analyses

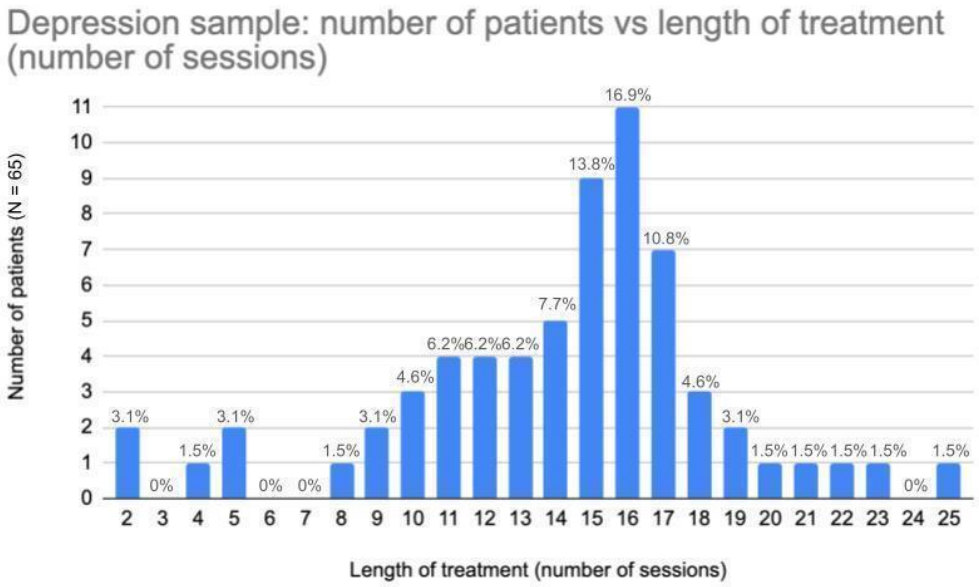

Figure 2: number of sessions delivered for CAT depression treatment returners

Reliable improvement
Sample size: 25
Median: 4
Minimum: 2
Maximum: 16
First quartile: 2.5
Third quartile: 5.5
Interquartile Range: 3
Outliers: 16 12

Clinically significant improvement
Sample size: 18
Median: 3
Minimum: 2
Maximum: 21
First quartile: 2.75
Third quartile: 6.25
Interquartile Range: 3.5
Outliers: 21 12

Reliable recovery
Sample size: 9
Median: 6
Minimum: 3
Maximum: 21
First quartile: 3.5
Third quartile: 14
Interquartile Range: 10.5
Outliers: none

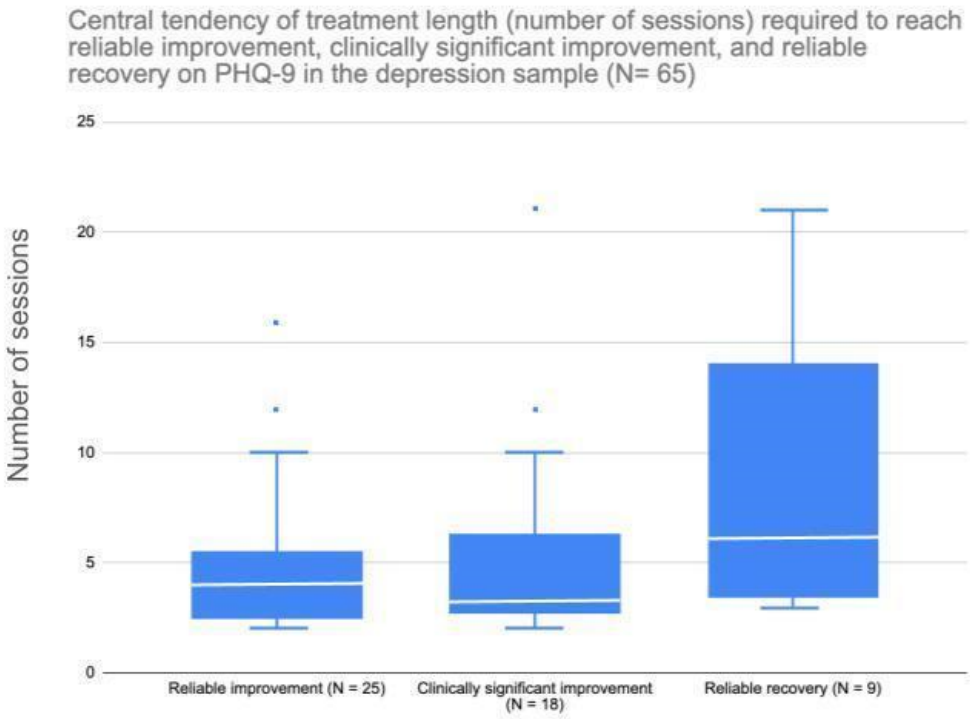

Figure 3: box plot of number of CAT sessions required to reach reliable improvement, clinically significant improvement, and reliable recovery on the PHQ-9 in the depression sample.

Table 1. *Demographic and clinical information (N=76)*

Demographic variables	**N (%[a])**
Gender	
Female	60 (78.9%)
Male	15 (19.7%)
Transgender	1 (1.3%)
Age category	
18-21 years	2 (3%)
22-29 years	14 (18%)
30-39 years	27 (36%)
40-49 years	15 (20%)
50-64 years	17 (22%)
65-79 years	1 (1%)
80+ years	0 (0%)
Religion	
No Religion	42 (66.7%)
Christian	15 (23.8%)
Buddhism	1 (1.6%)
Hinduism	1 (1.6%)
Other	4 (6.3%)
Missing	13
Disability	
Disability	10 (14.3%)
No Disability	60 (85.7%)
Missing	6
Long-Term Medical Condition (LTC)	
LTC present	32 (43.2%)
No LTC	42 (56.8%)
Missing	2
Clinical Variable	**N (%[a])**
Number of prior treatment episodes	
One	34 (72.3%)
Two	10 (21.3%)
Three or more	3 (6.4%)
Unknown	29
Modality of most recent prior treatment	
Cognitive Behavioural Therapy (CBT)	31 (66.0%)
Guided Self-Help	7 (14.9%)
Compassion Focussed Therapy (CFT)	3 (6.4%)
Comprehend, Cope and Connect	3 (6.4%)
Behavioural Activation	1 (2.1%)
Eye Movement Desensitization and Reprocessing (EMDR)	1 (2.1%)
Mindfulness Based CBT	1 (2.1%)
Missing	29
Primary presenting problem at start of CAT	
Depressive Episode	55 (72.4%)
Recurrent Depressive Disorder	10 (13.2%)
Generalised Anxiety Disorder	7 (9.2%)
Post-Traumatic Stress Disorder	2 (2.6%)
Not defined	2 (2.6%)
Baseline PHQ-9 at Start of CAT	
Mean, SD	M = 14.4, SD = 6.4

[a] Percentages calculated using only those cases with full data (i.e., excluding missing).

Table 2 *Pre vs post and post vs follow-up outcomes for CAT treatments (n=76) and on CAT versus last previous treatment (n=47).*

Outcome measure	Start of CAT		End of CAT					Percentiles 50th (Median)	
	Mean	SD	Mean	SD	Z	*p*	*r*	Pre	Post
GAD-7	12.22	5.35	8.80	6.51	-4.29	<.001	-0.49	13	7.5
PHQ–9	14.41	6.44	10.07	7.96	-4.57	<.001	-0.52	13.5	8.5

	End of CAT		Follow-up from CAT								
	Mean	SD	Mean	SD	M	95% CI - lower	95% CI - upper	*df*	*t*	*p*	*d*
GAD-7	8.69	5.88	8.63	5.95	0.06	-3.10	3.22	15	0.42	0.97	0.01
PHQ–9	10.18	6.61	10.18	6.18	0.00	-3.32	3.32	15	0.00	0.36	0.00

	Start of prior treatment		End of prior treatment								
	Mean	SD	Mean	SD	M	95% CI - lower	95% CI - upper	*df*	*t*	*p*	*d*
PHQ-9	16.32	5.82	12.3	6.81	4.02	1.84	6.2	46	3.72	<0.001	0.54

Table 3 *Outcome categories for CAT episodes*

	CAT treatments (N = 76)					
	Reliable improvement	Reliable deterioration	Clinically significant improvement	Clinically significant deterioration	Reliable recovery	Clinically significant and reliable deterioration
GAD-7	34 (45%)	7 (9%)	22 (29%)	2 (3%)	20 (26%)	1 (1%)
PHQ-9	31 (41%)	8 (11%)	23 (30%)	3 (4%)	21 (28%)	2 (3%)
GAD-7 and/or PHQ-9	42 (55%)		30 (39%)		26 (34%)	

Table 4 *Benchmarking improvement rates for CAT interventions in TT services*

	Caseness at beginning of CAT (% of patients)			Clinically significant improvement (% of patients)			Reliable improvement (% of patients)			Reliable recovery (% of patients)		
	PHQ-9	*GAD-7*	*PHQ-9 and/or GAD-7*	*PHQ-9*	*GAD-7*	*PHQ-9 and/or GAD-7*	*PHQ-9*	*GAD-7*	*PHQ-9 and/or GAD-7*	*PHQ-9*	*GAD-7*	*PHQ-9 and/or GAD-7*
Kellett et al. (2018)*	100			55.8 or 76.7*			46.2 or 46.5*			34.6 or 44.2*		
Wakefield et al., (2021)**	95	99		37	38		55	52		36	38	
Owen et al., (2023)***						50			79			47
This evaluation: all patients	75	76	86	30	29	39	41	45	55	28	26	34
This evaluation: patients at caseness at baseline on PHQ-9	100			40			51			37		
This evaluation: patients at caseness at baseline on GAD-7		100			36			48			34	
This evaluation: patients at caseness at baseline on PHQ-9 and/or GAD-7			100			45			52			40

* Kellett et al., (2018) RCT; **Wakefield et al., (2021) NRS; ***Owen et al., (2023) NRS

Table 5: Reliable improvement, clinically significant improvement and reliable recovery rates in prior treatments vs CAT treatments *(N=47)*

Prior intervention and CAT intervention		
	CAT Treatment	
Prior treatment	Reliable improvement	No reliable improvement
Reliable improvement	7	13
No reliable improvement	10	17

McNemar p = .68 (non-significant)

Prior intervention and CAT intervention		
	CAT Treatment	
Prior treatment	Clinically significant improvement	No clinically significant improvement
Clinically significant improvement	5	13
No clinically significant improvement	6	23

McNemar p = 0.17 (non-significant)

Prior intervention and CAT intervention		
	CAT Treatment	
Prior treatment	Reliable recovery	No reliable recovery
Reliable recovery	5	10
No reliable recovery	5	27

McNemar p = .30 (non-significant)