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Cognitive behaviour therapy for long-term frequent attenders in primary care:

a feasibility case series and treatment development study

Abstract

Background

Most frequent attendance in primary care is temporary. Long-term frequent attendance may be suitable for psychological intervention to address health management and service use.

Aim

To explore the feasibility and acceptability of cognitive behaviour therapy (CBT) for long-term attendance in primary care and obtain preliminary evidence regarding clinical and cost effectiveness.

Design and setting

A CBT case series was carried out in five GP practices in the East Midlands.

Method

Frequent attenders (FAs) were identified from case notes and invited by their practice for assessment, then offered CBT. Feasibility and acceptability were assessed by CBT session attendance and thematic analysis of semi-structured questionnaires. Clinical and cost effectiveness was assessed by primary care use and clinically important change on a range of health and quality of life instruments.

Results

Of 462 FAs invited to interview, 87 (19%) consented to assessment. Thirty-two (7%) undertook CBT over a median of 3 months. Twenty-four (75%) attended at least six sessions. Eighteen FAs (86%, $n = 21$) reported overall satisfaction with treatment. Patients reported valuing listening without judgement alongside support to develop coping strategies. Thirteen (54%, $n = 24$), achieved clinically important improvement on the SF-36 Mental-Component Scale at 6-month follow-up and improved quality of life, but no improvement on other outcomes. Primary care use reduced from a median of eight contacts in 3 months at baseline ($n = 32$) to three contacts in 3 months at 1 year ($n = 18$).

Conclusion

CBT appears feasible and acceptable to a subset of long-term FAs in primary care who halved their primary care use. With improved recruitment strategies, this approach could contribute to decreasing GP workload and merits larger-scale evaluation.

Keywords

cognitive behaviour therapy; costs; frequent attendance; health anxiety; medically unexplained symptoms; primary health care; quality of life.

INTRODUCTION

Primary care providers are under sustained pressure to provide an increasing range and volume of services to facilitate reduction in costly secondary care and shifts to better coordinated community provision.¹ Demand for primary care and GP consultation rates have increased by >20% in the past two decades.² Innovation is required to provide appropriate care that also enables greater capacity in primary care.³ A small group of patients are consistently in the top decile of frequent GP consulters over at least a 3 year period.⁴ Such patients have a median of three long-term conditions, two psychiatric conditions, and high health anxiety, often fuelling medical reassurance.^{5,6} Even small reductions in care use, while providing appropriate care, could provide significant gains in capacity.

Interventions for frequent attendance usually assume that primary care attendance will decrease when health improves. The evidence for this assumption is mixed with some studies supporting it⁷ and others contradicting it.⁸ Close medication management, GP training, care coordination and psychological interventions such as cognitive behaviour therapy (CBT) have been effective in either improving mental health or reducing service use,^{9,10} but improvements waned over time in some

cases.¹¹ However, the definitions used in almost all intervention studies either set the threshold for attendance too low or over too short a time frame, typically 1 year to differentiate them from the regular general practice population long term. Defined in this way, most frequent attenders return to normal consultation rates within 12 months.¹² Those who continue to frequently attend for a second year are likely to continue attending at a high rate.⁴

A number of studies have demonstrated that service utilisation is reduced after CBT, particularly when treating disorders associated with high service use,¹³ including reduced hospital use when offering mindfulness-based cognitive therapy for medically unexplained symptoms (MUS),¹⁴ and reduced overall service use when offering individual CBT for somatisation disorder.¹⁵ Only two studies have explicitly considered repeated service use in MUS, however, and only one identified those frequently attending for 2 years.^{16,17} Even then the threshold was not high enough to apply the clinical differentiation suggested,¹² and did not report change in service use. Perhaps the closest to a study exclusively focused on CBT for frequent attendance is a recent pilot study of CBT in emergency care frequent attenders, which showed a reduction for all participants who had

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How this fits in

A range of interventions have been trialled to reduce high service use with mixed results. Most studies have focused on those who frequently attend in the short term. This study addresses those who are likely to continue frequent attendance for several years by offering cognitive behaviour therapy (CBT) to long-term frequent attenders. This feasibility study suggests that long-term frequent attendance can be reduced and general mental health improved by offering CBT.

taken part.¹⁸ Nonetheless, service use is still determined over a short time frame and emergency care priorities and arrangements are different to primary care. In sum, the existing research suggests that CBT can help reduce service use, but little has been done to investigate this specifically and nothing has been done to explore this application in long-term frequent attenders in primary care. Long-term frequent attenders may not find CBT acceptable. Therefore, a feasibility and acceptability study was conducted.

This study aimed at identifying a sample of patients willing to participate in individual CBT delivered in the practice, by screening patient electronic records of practices for long-term frequent attendance (feasibility); determining whether the intervention was acceptable to these patients in terms of attendance at treatment sessions and questionnaire responses (acceptability); and whether the intervention was associated with reductions in primary care use and improvement in physical and mental health.

METHOD

Design of the study

Potential participants were identified by screening patient electronic records. A case series followed in which every participant was offered an assessment and, where appropriate, CBT. Quantitative assessments of clinical outcome and patient satisfaction were made at baseline, 6 and 12 months. Semi-structured components of satisfaction questionnaires explored patient evaluations further.

Procedure

Long-term frequent attenders (adults attending ≥ 30 face-to-face GP or nurse consultations over 2 years, the top decile of attendance in the first practice recruited to the study) were identified using searches of

clinical systems and invited by post to take part in a clinical interview assessing their physical and emotional health at five GP practices in the East Midlands.¹⁹ Recruitment was staggered over a 28-month period, starting with two practices and adding one approximately every 6 months thereafter. Consultations for routine monitoring were excluded, such as international normalised ratio (INR) for patients taking warfarin. Patients experiencing catastrophic physical illness such as cancer or serious mental health problems such as psychosis were excluded from the study. Those identified were then sent information about the study and an explanation of what their involvement would entail, including the possibility of receiving CBT.

Participants who agreed to face-to-face assessment were interviewed and gave their written and oral informed consent to the study. Participants completed the following self-rated assessments at baseline, 6, and 12 months, collected by researchers independent of therapy provision:

- the Short-Form 36, mental component scale (MCS), a measure of general mental health, and physical component scale (PCS) a measure of general physical health, in the preceding 4 weeks.²⁰ In addition, the SF-6D index score was estimated;
- the 9-item Patient Health Questionnaire (PHQ-9), a measure of depression symptoms, in the previous 2 weeks;²¹
- the 7-item Generalised Anxiety Disorder scale (GAD-7), a measure of anxiety symptoms, over the preceding 2 weeks;²²
- the 15-item Patient Health Questionnaire (PHQ-15), a measure of somatic symptoms, over the previous 2 weeks;²³
- the 18-item Health Anxiety Inventory (HAI), a measure of health anxiety, over the previous 2 weeks;²⁴
- the EQ-5D-3L, a measure of health-related quality of life.²⁵ Index scores were estimated using the MVH A1 tariff;²⁶
- an economic interview adapted from the Client Service Receipt Inventory (CSRI)²⁷ targeting this specific group and exploring recent relevant healthcare use and costs; and
- a five-item questionnaire addressing satisfaction with the CBT treatment completed at 6 and 12 months only.

A structured psychiatric diagnostic interview was completed at baseline only (Structured Clinical Interview for

DSM Disorders; SCID-I).²⁸ When relevant diagnoses were identified from SCID-I assessment or highlighted by the GP, CBT was offered, unless contraindicated by patient suitability (Table 1). All participants offered CBT were included in the analysis, even if no sessions were attended.

Interventions

All participants were offered therapy sessions at their home or GP practice. Wherever possible, therapy sessions were offered at the patient's choice of time and place. The number of therapy sessions offered was dependent on treatment response and patient need, in line with regional

psychological therapy services (from 6 to 40 sessions).

Therapy was based on an individualised formulation of psychosocial factors causing and maintaining frequent consultation and associated psychological problems. If problems were identified where a specific model of CBT existed, the specialised model and protocol were used; for example, CBT adapted to health anxiety.⁶ Where problems were too disparate to fit within a specific model, a generic model was used to formulate and elements of different protocols were integrated.²⁹ Therapy began with an engagement phase to develop a joint understanding of patient difficulties without demeaning their problems. Education about the processes that contributed to frequent consultation and underlying problems followed. Then specific problems were formulated and CBT techniques used to deal with them. Techniques focused on exploring and testing key beliefs contributing to problems, with tasks completed in sessions and between sessions.

Assessment reports were sent to the GP within 4 weeks of starting therapy, providing a cognitive behavioural formulation of the patient's problems. Where possible, reports were followed-up with brief telephone discussions of helpful strategies for GP consultations with the patient. In two practices regular update meetings were initiated, where GP consultation strategies were discussed and individualised methods for organising care were established.

Data analysis

As a feasibility study, descriptive statistics were calculated for all demographic and outcome measures,³⁰ and no sample size calculation was performed. As all continuous variables were skewed, the median and range or interquartile range (IQR) are presented. Multilevel modelling was used to calculate intraclass correlation coefficients (ICC) reflecting the relative variability in each outcome at GP practice level. Stata (version 14) was used to perform data analysis.

Statistically reliable improvements in score were used to define minimal clinically-important change, in the same way they are used in the national Improving Access to Psychological Therapies programme.³¹ For example, an improvement of ≥ 4 points on the Health Anxiety Inventory is deemed reliably greater than measurement error, real and of clinical importance.³² Free text comments were thematically analysed using template analysis. The responses to each question were synthesised into

Figure 1. Flow of participants recruiting long-term frequent attenders into study by practice. INR = international normalised ratio. SCID = Structured Clinical Interview for DSM Disorders.

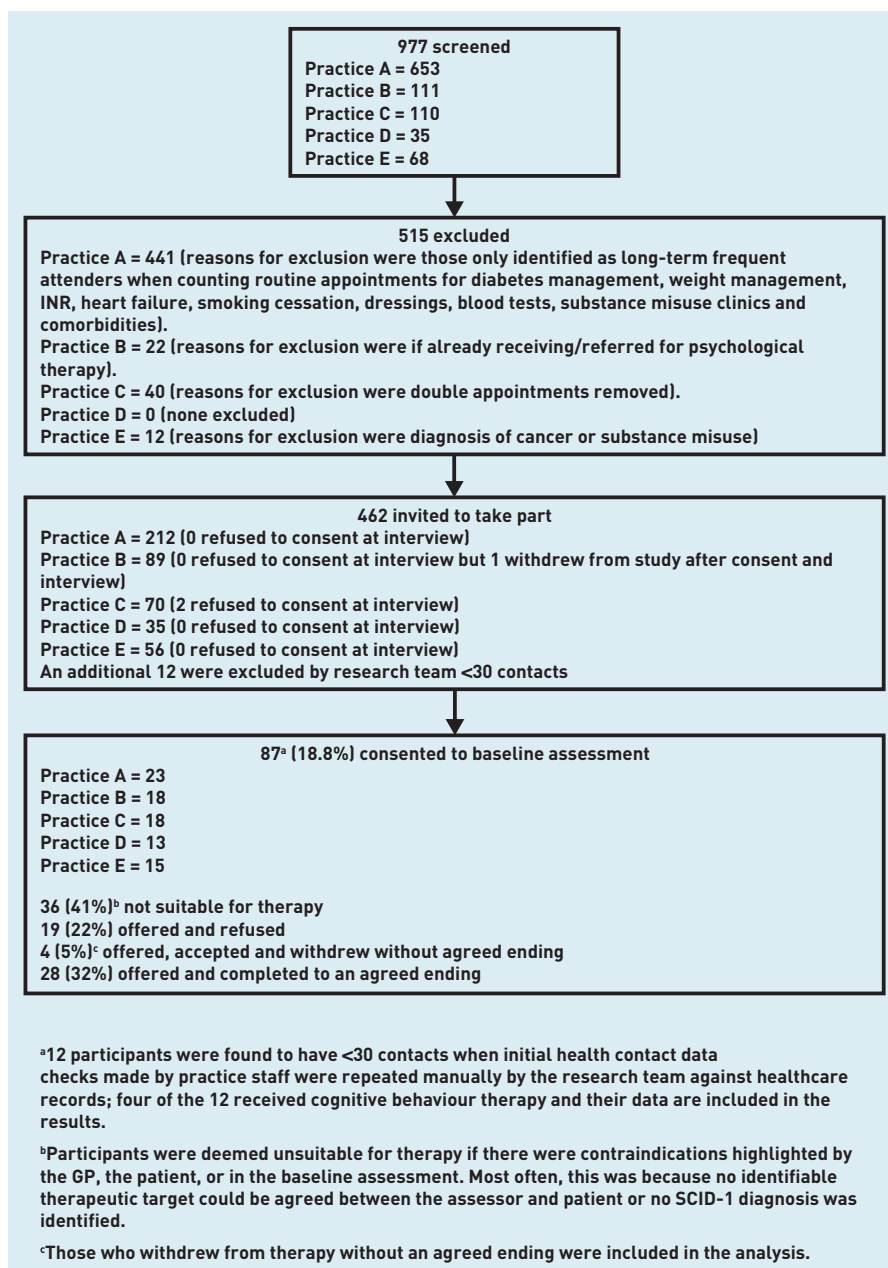


Table 1. Characteristics of patients who undertook CBT and those who did not

Characteristic	Offered and accepted CBT (n= 32)	Not offered/accepted CBT (n= 55)
Media age, years (SD, range)	57 (17.4, 21–87)	59 (18.5, 21–89)
Female, n (%)	23 (72)	40 (73)
Marital status, n (%)		
Married or partner	15 (47)	31 (56)
Single, divorced, separated, widowed	17 (53)	24 (44)
Education, n (%)		
Higher degree	5 (15.6)	4 (7.2)
Other qualifications	15 (46.9)	28 (50.9)
No qualifications	12 (37.5)	23 (41.8)
Monthly net income, n (%)		
£0–£500	9 (33.3)	14 (35.0)
£500–£1000	6 (22.2)	8 (20.0)
≥£1000	12 (44.4)	15 (37.5)
Not applicable	0 (0)	3 (7.5)
Employment, n (%)		
Employed	12 (37.5)	16 (29.6)
Unemployed	5 (15.6)	10 (18.5)
Carer	2 (6.3)	4 (7.4)
Retired	13 (40.6)	24 (44.4)
EQ-5D-3L index score, median (SD, range)		
Health Utility Index	0.586 (0.350, –0.239 to 1.000)	0.691 (0.335, –0.077 to 1.000)
Visual Analogue Scale	50 (18.2, 0–80)	55 (19.3, 15–100)
Primary care contacts in previous 3 months, median (IQR, range)	8 (3.59, 0–61)	6 (39, 0–31)
Number of DSM-IV diagnoses, n (%)^a		
0	3 (9.3)	20 (39.2)
1	1 (3.1)	10 (19.6)
2	3 (9.4)	8 (15.7)
≥3	25 (78.1)	13 (25.5)

^a $\chi^2 = 22.8$, $P < 0.001$. SD = standard deviation. CBT = cognitive behaviour therapy. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, 4th Edition.

key themes and illustrative quotes were presented.³³

RESULTS

Participants

Of 462 long-term frequent attenders, 87 (18.8%) agreed to attend a baseline research assessment and 32 (6.8%) participants were offered and accepted CBT (Figure 1). Table 1 shows that participants and non-participants did not statistically differ significantly in demographic features, healthcare use, or health utility.

Most individuals met criteria for three or more mental health disorders, most commonly generalised anxiety disorder and major depressive episode.

Attendance and satisfaction with treatment

A median of 11 CBT sessions was attended across a median 3 months (range 0–40 months). There were 24 (75%)

participants who attended at least 6 CBT sessions; 29% (8 in total) attended five or fewer sessions, and were regarded as not completing CBT.

Figure 2 shows satisfaction with the CBT offered. Responses were obtained from 21 (75%) and 17 (61%) participants at 6 and 12 months, respectively. Among questionnaire responders, at 12 months 88% reported satisfaction with the overall treatment offered (86% at 6 months). If given the choice again, 88% stated that they would want the same treatment at the point it was offered (81% at 6 months).

Themes emerging from thematic analysis of responses to semi-structured questions about therapy are presented below each of the three questions asked (Box 1). These showed that participants valued being listened to without judgement. Importance was placed on the development of coping strategies, even though chronic problems often were not resolved by the end of therapy. Participants also described wishing that the intervention had been readily available earlier in the course of their problems.

The type of liaison between GP and therapist referred to in qualitative reports is illustrated in this case example: a CBT formulation identified that frequent GP consultation often made physical symptoms worse by increasing anxiety and associated tension. Therefore, a strategy was agreed among therapist, patient, and GP that an initial reminder of this formulation would be discussed at any consultation to decide whether this was the primary cause. This supported a strategic reduction in consultation and development of more useful coping strategies. As a result, a shared understanding was established that reassurance from the GP was short-lived and the patient was often left worried about other illnesses they had not considered when different possibilities were discussed in consultations. The GP then developed a more targeted focus on investigations and information of clinical importance rather than for reassurance.

Another patient participating in the study discovered that the nausea and occasional vomiting she experienced was exacerbated by anxiety. A CBT formulation highlighted the way that desperate attempts to prevent feelings of nausea actually increased anxiety and worsened the symptoms. This had frequently led to seeking anti-emetic medication. In collaboration with the GP, anti-emetic prescriptions were gradually reduced, alongside use of the formulation as a rationale for reducing consultations in these circumstances.

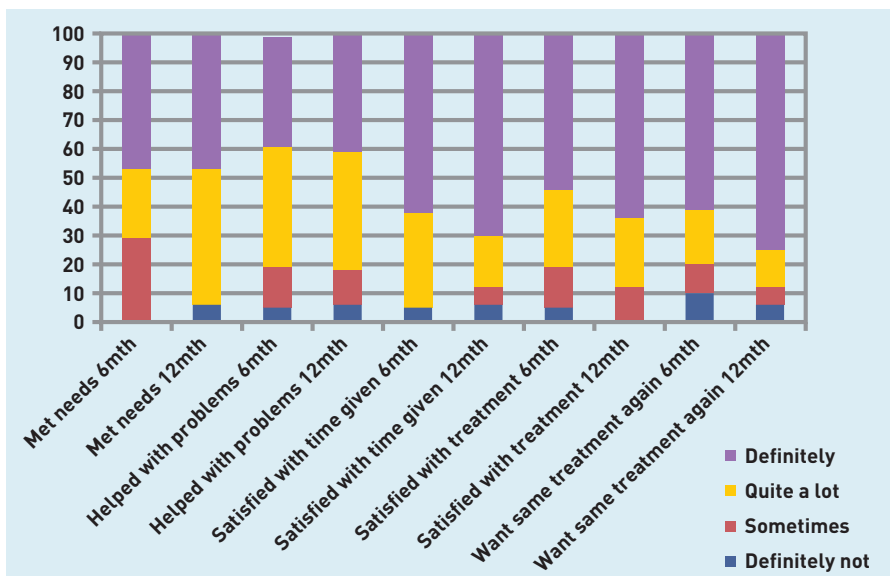


Figure 2. Patient satisfaction questionnaire results at 6-month (n = 21) and 12-month (n = 17) follow-ups. Mth = months.

Clinical outcomes

Table 2 shows the outcome measures collected. Thirteen of 24 participants (54%) achieved at least a 5-point improvement on the SF-36-MCS at 6 months. A change of ≥ 5 is deemed to indicate a clinically-important change.²⁰ There were no clinically-important changes on the other five clinical outcome measures, although both measures of quality of life (EQ-5D-3L, SF-6D) showed

improvement over 12 months. A per protocol analysis revealed that the 10 participants who completed at least six sessions of CBT and the SF-36 for each time point largely retained improvement in median MCS scores at 12 months (baseline: 25.9, 6 months: 36.1, 12 months: 34.0). All ICCs for practice level variance in outcomes scores were low, with a maximum of 1.5%.

Service use

All forms of primary care service use more than halved at 6 months and reduced further at 12-month follow-up (Table 3). For all types of consultation the maximum number of consultations more than halved at 12-month follow-up. Secondary care use did not increase in line with the reduction in primary care use and remained relatively consistent throughout.

DISCUSSION

Summary

This study suggests that offering CBT is feasible and acceptable for a small but substantial proportion of long-term frequent attenders in primary care if both therapist and GP work together to consider processes underlying frequent consultation. Screening from medical records followed by cold-calling by researchers resulted in 19% of

Box 1. Qualitative feedback from the participant evaluation questionnaire

Question 1: Are there things that you found particularly helpful to you?

Nine comments from seven participants highlighted practical strategies they had gained from therapy to cope with their difficulties alongside reports of progress. Notably, this was the case even where problems were not resolved:

'I am in no way cured but what I am able to do is deal with my mental health issues in a very positive way. I feel very confident in seeing and acknowledging the issue, breaking it down into small pieces and deal with it accordingly ... I don't beat myself up any more about the past ... I can honestly say that my mental state of mind is million miles away from the wreck I was before I started my therapy.' (Participant 1, 39-year-old female)

Seven comments from seven participants described the value they placed on having an opportunity to be heard and understood. In some cases it appeared that this was the participant's main aim in therapy:

'Just being able to talk was helpful enough.' (Participant 3, 20-year-old female)

Question 2: Are there things that you think should be improved?

Nine comments from seven participants focused on wishes that CBT would be made more widely and easily available and that they had been offered such psychological support. A second theme focused on a desire for greater accessibility of CBT through GP practices:

'I feel lucky to have been picked up by the therapy services but feel it should have been at GP consultation not as part of a survey.' (Participant 5, 52-year-old male)

'I hope this research programme leads to a corporate approach to anxiety. Everyone is different. My anxieties started when I was diagnosed with a brain tumour since then my outlook changed and maybe going to my GP was not always the best action.' (Participant 6, 58-year-old male)

There were two additional comments expressing that nothing required improvement.

Question 3: Do you have any observations you wish to make?

Six comments from five participants expressed luck and gratitude at being 'chosen' for the study and the benefits gained from taking part:

'I am very grateful to [the therapist] for his time, understanding amicability and guidance. I apply the techniques [the therapist] has taught me regularly and I am more hopeful for the future. Many thanks to you all for selecting me for this research project.' (Participant 7, 33-year-old female)

One participant expressed that they did not feel their situation had improved.

Table 2. Clinical outcomes at baseline, 6 months, and 12 months

Outcome	Baseline Median [n] (min, 25th, 75th, max)	6 months Median [n] (min, 25th, 75th, max)	12 months Median [n] (min, 25th, 75th, max)
SF-36 MCS	38 [30] (14, 26, 43.1, 68)	43.9 [25] (21.8, 31.2, 53.6, 60.3)	34.7 [19] (14.3, 31.3, 40.2, 64.1)
SF-36 PCS	34.1 [30] (13.9, 23.2, 47.2, 55.4)	29.9 [25] (14.1, 22.9, 46.5, 58.4)	30.5 [19] (15.4, 23.9, 49, 60)
PHQ-9	9 [28] (1, 6.5, 16, 22)	10 [24] (0, 6, 13.5, 25)	11.5 [18] (0, 4, 18, 25)
GAD-7	8.5 [30] (0, 5, 14, 21)	6.5 [24] (0, 3, 12.5, 21)	9 [18] (0, 4, 14, 21)
PHQ-15	12.5 [30] (5, 10, 18, 24)	10.5 [24] (2, 8, 17, 22)	12 [18] (3, 7, 16, 22)
HAI	20 [30] (6, 11, 25, 37)	17.5 [24] (5, 11.5, 26, 38)	21 [19] (5, 11, 25, 34)
EQ-5D-3L index score	0.586 [32] (-0.239, 0.124, 0.725, 1.000)	0.620 [24] (-0.077, 0.225, 0.778, 0.848)	0.620 [19] (-0.181, 0.088, 0.725, 0.850)
SF-6D index score	0.539 [30] (0.301, 0.485, 0.632, 0.776)	0.595 [25] (0.301, 0.543, 0.637, 0.738)	0.601 [19] (0.316, 0.500, 0.636, 0.698)

Median scores are presented next to [sample size] and the four quartiles of the range are reported underneath for each time point. GAD = Generalised Anxiety Disorder scale. HAI = Health Anxiety Inventory. MCS = mental component scale. PCS = physical component scale. PHQ = Patient Health Questionnaire. SF = The Short Form (36) Health Survey.

patients agreeing to an assessment and 7% of patients agreeing to CBT. Approximately 75% of these participants completed at least six sessions of CBT, with median treatment duration of 11 sessions over 3 months. Approximately 87% were satisfied with their treatment. Benefits described by participants included being listened to

Table 3. Three-month primary care consultation rates

	Pre-therapy (n = 32) Median (min, 25th, 75th, max)	6-month follow-up (n = 22) Median (min, 25th, 75th, max)	12-month follow-up (n = 18) Median (min, 25th, 75th, max)
GP face-to-face	4 (0, 2, 6, 25)	2.5 (0, 1, 4, 14)	2 (0, 1, 3, 8)
GP telephone	0 (0, 0, 1, 24)	0 (0, 0, 2, 7)	0 (0, 0, 1, 10)
GP home visit	0 (0, 0, 0, 12)	0 (0, 0, 0, 8)	0 (0, 0, 0, 5)
Nurse face-to-face	1 (0, 0, 2, 36)	0 (0, 0, 1, 2)	0.5 (0, 0, 1, 9)
Nurse telephone	0 (0, 0, 0, 1)	0 (0, 0, 0, 5)	0 (0, 0, 0, 0)
Nurse home visit	0 (0, 0, 0, 28)	0 (0, 0, 0, 6)	0 (0, 0, 0, 0)
Total primary care	8 (0, 3.5, 9, 61)	3.5 (0, 3, 6, 26)	3 (0, 1, 6, 29)
Total secondary care	1 (0, 0, 2, 10)	1 (0, 0, 2, 5)	0 (0, 0, 1, 3)

non-judgementally and receiving support to develop coping strategies for chronic problems. Often participants reported that coping improved even if associated problems did not.

Primary care contacts reduced by more than half from the top decile of attendance. If maintained, this could result in a substantial financial saving and capacity development for GP practices. Clinically-important improvement was achieved in the SF-36 MCS at 6 months but this was not maintained at 12 months, and no other measure showed clinically-important change.

Strengths and limitations

This is an in-depth feasibility study with findings that indicate the potential for the intervention to be effective if studied on a larger scale. It is also noteworthy that this was achieved with good rates of satisfaction by providing appropriate care rather than restricting care.

The cold-calling approach may indicate a minimum rate of acceptance. This could be improved if potential participants were approached by familiar practice staff, and further improved if GPs clinically-prepared patients for receiving the intervention over a period of time. More formal arrangements for liaison between GP and therapist may have made this a more consistent intervention across practices. Nonetheless, the absence of randomisation provides a more accurate estimate of the acceptability of the approach in routine care. In this study, the frequency of consultation was not adjusted for age and sex so the study may have engaged older patients and more female patients as these groups are likely to be overrepresented among FAs.⁴ Despite this, participants from both sexes and a range of ages were represented and expressed satisfaction with treatment.

The clinical and cost effectiveness of the CBT approach cannot be established without a larger randomised controlled trial (RCT) using an intention to treat design and a sufficient follow-up time.

Comparison with existing literature

This study sits among other studies demonstrating that service use can be reduced using CBT.¹⁴⁻¹⁶ It adds that CBT is feasible and acceptable to at least a subset of long-term frequent attenders, so service use reduction could be extended to this important group. In contrast with previous literature, CBT was not offered to patients whose high service use was likely to remit spontaneously or a subgroup in which the level of service use was variable. As such,

this study opens up an application of CBT which was largely untried beforehand, and may have significant benefits for patients and services.

This study further supports liaison between GPs and mental health professionals to manage frequent attendance.¹⁰ An integrated approach providing both CBT and more structured GP liaison to consider relevant psychological, physical, and social issues is worthy of further investigation. Like other interventions for people with frequent attendance, improvements in mental health outcomes occurred after treatment but were not sustained at 12 months.¹¹ As such, this study provides support for the argument that service use can be reduced even if health problems remain at a similar severity and are not dependent on one another.⁸ In the current study, the most likely explanation based on the qualitative data and service use reduction is that CBT helps to develop adaptive self-management strategies, but it is unclear why this led to reduced service use yet little change in health status. An alternative hypothesis is that CBT did not improve outcome but prevented iatrogenic worsening of outcome caused by repeated reassurance seeking leading to increased severity of anxiety.⁶

An adequately powered RCT clustered by GP practice, with a design informed by

this study, would give clearer answers to these hypotheses. Measures of general mental health or quality of life should be the primary clinical outcome measure as psychiatric interviews revealed that the severity of depression and anxiety varied quite markedly among long-term frequent attenders when assessed at baseline. This study indicates that in future research general practice staff should play a closer role in participant recruitment to help improve acceptability. Structured liaison between GP and therapist across all recruitment sites is also likely to improve therapy completion rates and give clearer strategies for consultations.

Implications for practice

This study highlights the promise and potential of an intervention that could create greater capacity in primary care and support for GPs in managing a demanding group of patients. If the reduction in service use shown was replicated and maintained, engaging only a small proportion of long-term frequent attenders would lead to cost-effective capacity generation.

This study indicates that significantly reduced service use and high rates of patient satisfaction may be possible in a way that is acceptable and feasible through joint work between GP and therapist.

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Ethical approval

The study was approved by the Nottingham Multicentre Research Ethics Committee (REC Ref 11/EM/0392) and research governance approval was obtained from Nottingham City, Nottinghamshire and Bassetlaw Primary Care Trusts.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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