

Increasing engagement with computerised cognitive behavioural therapies

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Abstract

The evidence base for computerised cognitive behavioural therapy (CCBT) for common mental health problems has expanded rapidly in recent years. Reviews and meta-analyses have produced promising findings with regard to CCBT's effectiveness and acceptability, but developing and supporting effective and sustainable models of CCBT service implementation remains a challenge. This paper considers CCBT usage and explores the uptake of, and engagement with, CCBT. Recent literature on the topic of engagement with CCBT is summarised. Factors relating to discontinuation of use or 'drop-out' are also explored. Drawing on this evidence base we propose a simple '4 Ps' model of engagement factors: the programme, the problem, the person and the provider. We highlight some actions that researchers, service developers and providers can take that might increase uptake and engagement within the CCBT services that they provide. Managing expectations and promoting hope in both service users and providers are emphasised.

Keywords: Computerised CBT, e-mental health, uptake, engagement, drop-out

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1. Introduction

The evidence base for computerised cognitive behavioural therapy (CCBT) in common mental health problems is expanding rapidly. Recent reviews and meta-analyses have produced promising findings regarding CCBT in terms of effectiveness and acceptability (e.g. Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010; Barak, Hen, Boniel-Nissim, & Shapira, 2008; Cuijpers et al., 2009, Kaltenthaler et al., 2006; 2008; Marks, Cavanagh, & Gega, 2007; Newman, Szkodny, Liera, & Przeworski, 2011; Richards & Richardson, 2012).

The attractions of CCBT as a treatment option for common mental health problems include its developing evidence base, relative advantage in terms of cost-effectiveness, increased availability and accessibility of

services (anytime, anywhere), and the congruence of CCBT services with various other contemporary healthcare drivers such as increased choice, reduced stigma, patient empowerment and self-care.

In the United Kingdom, the National Institute for Health and Clinical Excellence (NICE, 2006; 2009) recommends CCBT as a treatment choice for panic, phobia and persistent sub-threshold and mild-to-moderate depression within the National Health Service (NHS). CCBT is offered to clients with common mental health problems in a range of contexts including primary care, specialist CBT therapy clinics, Increasing Access to Psychological Therapies (IAPT; Department of Health, 2008) services and dedicated e-health clinics, and has now reached many thousands of users. Similar guidelines to healthcare providers and expansions in computerised and internet-based interventions are seen internationally.

Whilst CCBT has been demonstrated to be effective in a range of settings, developing and supporting effective and

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sustainable models of CCBT service implementation in routine care presents a challenge – not least due to barriers to uptake and engagement.

This paper considers CCBT usage and explores the challenges to uptake and engagement with CCBT. It aims to summarise recent literature regarding factors influencing engagement with CCBT and presents a simple ‘Four Ps’ model of engagement factors associated with i) the programme, ii) the problem, iii) the person, and iv) the provider. Drawing upon this model, this paper contributes to the literature by highlighting some actions that researchers, service developers and providers can take to increase uptake and engagement with the CCBT services that they provide.

2. Computerised Cognitive Behavioural Therapies (CCBT)

Computerised Cognitive Behavioural Therapy (CCBT) is a generic term that is used to refer to a number of methods of delivering cognitive behavioural therapies (CBT) via an interactive computer interface that uses patient input to make at least some psychotherapy decisions (Marks, Shaw, & Parkin, 1998).

Whilst internet-based interventions for mental health are not limited to cognitive-behavioural approaches (e.g. Paxling, 2011), CBT is the most commonly computerised psychotherapeutic approach within the research literature. This is because the evidence base for manualised CBT for common mental health problems is well developed and appears robust (Roth & Fonagy, 2005). Moreover, the manualised, structured and collaborative approach and techniques of this model are well matched to adaptation into computerised methods of delivery.

Whilst CCBT programmes vary in their problem focus, structure and style, some common features are observed between programmes. Most include some elements of psychoeducation relating to the presenting problem and the CBT approach to making sense of it. Most also include some assessment of current problems with feedback, repeated assessment to facilitate change monitoring and feedback throughout the course of the programme. Most programmes promote the identification of target problems and therapeutic goals. They also typically involve action planning and guide the user through cognitive-behavioural change techniques (e.g. behavioural activation, problem solving, identifying and challenging negative automatic thoughts, graded exposure etc.). Finally, most programmes encourage the user to put new learning into practice via ‘homework’ tasks between sessions. Such tasks might take the form of diary keeping, thought recording, approach activities or behavioural experiments.

CCBT programmes are accessed on a variety of devices (PC, tablet, smart phone) usually from an internet server, although some stand-alone programmes are run direct from the device without internet connectivity.

CCBT programmes are typically designed to be used either as ‘pure self-help’, without any professional support, or ‘guided self-help’, in which the user is supported by a technician, coach or therapist throughout their use of the programme. Such support may be delivered in person or remotely via telephone, email or other messaging services. There is some evidence that outcomes for CCBT are improved by the provision of brief human support (Gellatly et al., 2007), particularly in the case of users with more complex needs and those suffering from depression (Newman et al., 2011).

2.1. The evidence base for CCBT

Depression

CCBT programmes have typically, although not exclusively (cf. Titov et al., 2011; Proudfoot et al., 2003), been designed to target single diagnostic entities. In the case of depression, a number of programmes have been designed to target this disease specifically, and have been evaluated as options for the treatment of both sub-clinical and clinical depression. Meta-analyses have consistently indicated that use of CCBT programmes is associated with significant reductions in measured depressive symptoms (Barak et al., 2008; Andrews et al., 2010; Richards & Richardson, 2012; Spek et al., 2007).

A recent meta-review paper cautiously concludes that there is evidence that “certain CCBT packages, specifically Moodgym, Beating the Blues and Colour Your Life, can have a positive effect on symptoms of depression” (p.5, Foroushani, Schneider & Asserah., 2011), although questions about the methodological rigour of both the original research papers and summary papers interrogated is foregrounded in this analysis.

For depression specifically, CCBT programmes offered with support yield better outcomes than those without (Richards & Richardson, 2012). Newman et al. (2011) has argued that in the case of clinical levels of depression, supported options are optimal, however, evidence of some effect in unsupported and very briefly supported CCBT programmes for depression have also been demonstrated (e.g. Richards & Richardson, 2012).

Anxiety

A number of CCBT programmes for both general problems of anxiety and specific anxiety disorders have been developed and evaluated. Meta-analyses have consistently indicated that CCBT programmes are

associated with significant reductions in measured anxiety symptoms (Andrews et al., 2010; Barak et al., 2008; Cuijpers et al., 2009; Spek et al., 2007).

A recent review article has concluded that for motivated clients with anxiety, pure self-help, or programmes with very limited support can be effective, although programmes with more support are associated with greater engagement (Newman et al., 2011).

3. User engagement with CCBT

Taken together, the CCBT literature strongly suggests that such programmes can offer significant benefits for the prevention and treatment of common mental health problems and have the potential to extend the reach of evidence based psychological interventions. Some programmes may attract many users, but evidence to date suggests that a significant number of people may be unwilling to engage with CCBT programmes as a treatment option for anxiety or depression, or having started, use them only briefly, and with little or no benefit. Identifying and understanding barriers and promoters of uptake, engagement and completion (see Figure 1) and the mechanisms by which drop-out occurs is a key priority for contemporary research into CCBT.

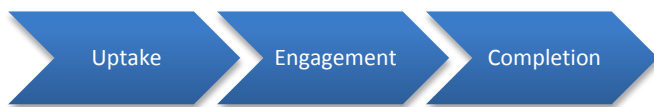


Figure 1. The CCBT user journey

3.1. Uptake rates

Uptake rates of CCBT in the real world may be difficult to establish, as markers of initial interest (e.g. following a web-link, or a brief discussion of treatment options with GP) are rarely recorded. Where uptake rates have been measured in the context of research studies, wide variance has been noted. For example, Whitfield et al. (2006) reported on low uptake (26%) of an offer of CCBT to a waiting list group in a clinical psychology service. In contrast, Learmonth, Trosh, Rai, Sewell, & Cavanagh (2008) reported much higher uptake – 67% (555) of 829 people offered CCBT as a first-step of care within a specialist CBT service. A review of uptake rates in CCBT research trials found that just 38% (range 4% - 83%) of those invited to a CCBT research trial start the programme (Waller & Gilbody, 2008). These large

differences between studies may indicate complex influences on uptake at work.

3.2. Engagement and Adherence

There is no agreed definition of engagement with CCBT. In between logging-on and active completion of a self-help intervention lie a number of other possible indicators of engagement. These include repeat programme visits, module completion, accessing support sessions, reading self-help materials, completing in-session activities online, engaging in between-session homework activities.

Individual studies have reported on various CCBT engagement metrics and their predictors (e.g. Neil et al., 2009), but there is little conclusive evidence of what markers of engagement are most significant or how to reliably predict them.

3.3. Drop-out

Measures of disengagement from self-help interventions tend to focus on “drop-out” - or non-completion - of a planned treatment program. Whilst “self-pacing” is one treatment level benefit often assigned to the use of self-help materials, most CCBT programs are designed to be used in a structured format and have a proscribed number of modules. In the case of guided CCBT this may be coupled with a predetermined number of support contacts.

A number of review papers have estimated the average attrition or drop-out rate from computer-based therapies including CCBT. Again, large differences between studies are found. In a meta-analytic study Kaltenthaler et al. (2008) reviewed 16 trials of CCBT and found a mean drop-out rate of 31.75% (SD 16.5%, range 0-75%). Waller and Gilbody (2008) found a median of 56% treatment starters completed a full course of CCBT in the trials they reviewed. Drop-out rates may be higher in real world and pragmatic research contexts than in strictly controlled trials.

For depression, drop-out rates for unsupported CCBT appear to be higher than for supported CCBT (Richards & Richardson, 2012). Drop-out rates for open-access CCBT programmes appears much higher than access during research trials. Less than 1% of unsupported open access users having been reported to complete CCBT for depression (Christensen, Griffiths, Groves, & Korten, 2006), with similar figures recorded for panic (Farvolden, Denissov, Selby, Bagby, & Rudy, 2005).

Reasons for drop-out might include dissatisfaction with treatment allocation, practitioner advice to discontinue, symptom deterioration or illness, move of house and work commitments (Proudfoot et al., 2003). However, it is

acknowledged that not all disengagement from self-help programs is counter-therapeutic, and in some cases it may represent a self-determined therapeutic early ending based on early gains, symptom improvement, or uptake of alternative services. Further investigation of the actions and experiences of this under-researched population may enhance our understanding of engagement processes in CCBT and e-health more broadly.

4. The Four P's model

The potential clinical benefit of CCBT programmes for common mental health problems is supported a large number of original studies and meta-analyses (see above). Additional benefits have been hypothesised including service and user cost-savings, extended reach of services, increased access, reduced user stigma, increased user empowerment and learned resourcefulness. However, translating these potential benefits into practice may be limited by barriers to uptake, engagement and completion. This presents a challenge for CCBT stakeholders including programme developers, practitioners and service providers.

We present a simple quadripartite model that describes each of the core factors associated with engagement and disengagement with CCBT (Figure 1). Evidence of the importance of each core factor for engagement is described in this section. The section concludes with advice to CCBT stakeholders on how to adopt this model in decision making about CCBT.

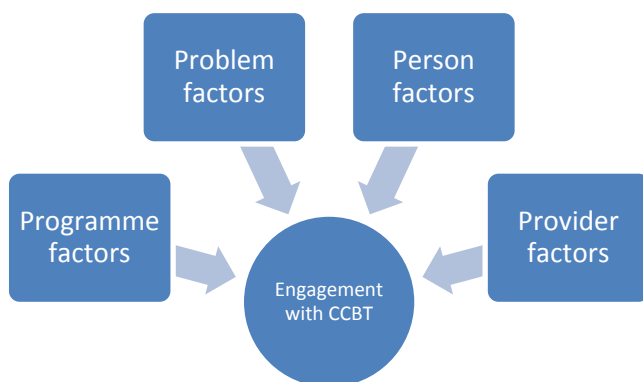


Figure 2. Four Ps model of engagement with CCBT

4.1. Programme factors

A review of the literature suggests that CCBT treatments may vary in a number of ways which might influence engagement. These include programme content, structure, length, content, style, and interactivity.

Content

In terms of content, NICE (2009a) recommends that self-help programmes 'based on the principles of CBT' are recommended for the treatment of depression. This should include both the specific tools and techniques of evidence based CBT interventions, but also the common factors which may promote user engagement.

Few studies have compared CBT techniques delivered in a CCBT format head-to-head. Christensen, Griffiths, Mackinnon and Brittliffe (2006) found that two sessions of CBT techniques with or without the addition of behavioural strategies resulted in the reduction of depression.

A recent qualitative analysis has indicated that CCBT programmes for depression are characterised by substantial evidence of built-in common factors (e.g. generating hope, empathy and warmth, collaboration, feedback; Barazzone, Cavanagh & Richards, 2012). While theory and research suggest that such factors ought to promote engagement and decrease drop-out, further research is required to ascertain whether this is actually the case.

Structure

Relatively little is known about the impact of programme structure on treatment uptake or drop-out. There is some evidence of improved adherence with greater structure (Celio, Winzelberg, Dev, & Taylor, 2002). Preliminary evidence from Andersson (2010) suggests both 'pick and mix' and 'set menu' models can work, but to date no head to head trials have been published and the best available evidence is for structured programmes which involve 'taking the user by the hand' through a treatment programme (Kraft, Drozd, & Olsen, 2009).

Length

Relatively little is known about the impact of the length (or number) of sessions of self-help treatment on treatment uptake or dropout, although longer programmes may have suffer from their greater opportunity for disengagement. At the brief-intervention end of the scale, Christensen, Griffiths, Mackinnon and Brittliffe (2006) found no difference in treatment completion between patients randomised to 1, 2, 3, 4, or 5 sessions of internet based self-help (mean rate of completion 20%).

Many CCBT programmes are designed in sessions based on a typical therapy session (e.g. about 50 minutes). However, actual use of these programmes suggests users may prefer to digest the programmes in briefer units, and that CCBT use is more aligned with everyday internet use than the classical model of face-to-face therapy. The average length of stay on MoodGym is 9.5 minutes (Christensen, Griffiths, & Korten, 2002). The average number of “log-ons” to an 8 session programme is 26 (Colour Your Life), and the average number of sessions completed is 3.4 per user; De Graaf et al., 2009). The average length of stay on internet intervention sites may also be shorter outside of research trials (Wanner et al., 2010).

Style and interactivity

Lewis, Pearce and Bisson (2012) have recently reported that the outcomes of self-help interventions for anxiety are enhanced by the presentation of multi-media or web-based materials. But limited research to date has robustly explored the impact of self-help style, media or interactivity on CCBT engagement (or outcomes). Christensen, Griffiths and Jorm (2004) found similar effects of an interactive internet CCBT programme (MoodGym) and a non-interactive internet psychoeducation site (BluePages) on depression symptoms, but higher rates of drop-out in the CCBT group. Further research is needed to unpack the treatment and retention effects of interactivity and media.

The interactive capacities of computerized therapies offer enormous scope for potentially engagement-enhancing features and there may be many benefits to developing a user interface with this in mind. Such interfaces should be matched to the users preferences and needs: ‘user-friendly and not over technically advanced’ (Andersson, Carlbring, Berger, Almqvist, & Cuijpers., 2009). While in need of further research, the alliance features of self-help materials are highlighted as an important area of potential development in terms of promoting engagement (Barazzone, Cavanagh & Richards, 2012).

4.2. Problem factors

The presenting features of clinical problems such as anxiety and depression may in themselves contribute to engagement with CCBT programmes. In addition, problem severity, comorbidity and complexity might contribute to an understanding of why people engage with or disengage from CCBT.

Anxiety and depression

Characteristic features in the clinical presentation of anxiety and depression might contribute to potential users’ ability to initially take-up and persevere with self-

help CCBT interventions. Cardinal symptoms of depression such as poor concentration and a sense of hopelessness may appear contraindicated for active engagement with self-help CCBT. Moreover, common features of depressive disorders such as difficulties in goal setting and engagement, and loss of agency (helplessness) might contribute to difficulties in working through self-help change strategies. Similarly, anxious preoccupation and habitual avoidance seem poorly matched to experiences for new learning and taking therapeutic “risks” in self-help programmes. Limited research to date has explored how such problem features might be associated with CCBT engagement, and further research is recommended.

Severity, comorbidity and complexity

Relatively little is known about the impact of problem severity, comorbidity or complexity on engagement or disengagement with CCBT. CCBT is typically recommended for problems of mild-to-moderate severity, although there is an absence of evidence advocating the exclusion of more severe presentations. CCBT is recommended by NICE for the treatment of depression in the context of chronic physical illness (2009b). There is also some evidence that CCBT may be effective for depression with comorbid substance misuse (Kay-Lambkin et al., 2009).

However, there is some evidence that comorbid diagnosis of personality disorder may be related to disengagement from self-help interventions. For example, Andersson, Carlbring and Grimaud (2008) found personality disorder to be a negative predictor of outcome a self-help treatment for panic, mirroring Persons, Burns, and Perloff’s (1988) study of predictors of the success of cognitive therapy for depression, which indicated that a comorbid diagnosis of personality disorder predicted premature ending of face-to-face therapy. Andersson et al. (2008) suggest that self-help treatment options offer less room for repair of misunderstandings in communication, which may be particularly important for maintaining engagement in people with personality disorders.

Problem complexity might not exclude people from possible benefit of CCBT for a target problem, but a more sophisticated level of service may be required to support this in practice.

4.3. Person factors

Demographic variables

Demographic variables such as age, gender, and level of education have been considered as factors that might influence CCBT engagement.

Proudfoot (2004) has speculated that computer based self-help may be a particularly acceptable treatment option for

young males, although this review found no studies to support differential levels of uptake of CCBT in this group. Indeed some evidence suggests that female users may be more likely to adhere to a self-help programme (Neil, et al., 2009) and find CCBT programmes more acceptable than do males (Cavanagh et al., 2009).

Kaltenthaler, Parry, & Beverley (2004) speculated that for older people, in the case of self-help treatments, “computer use may be unacceptable” (p. 73). However, evidence from a “willingness to engage” questionnaire study with older adults (aged 65+) indicated that almost half would be interested in using CCBT and would be willing to learn the computer skills required (Elsegood & Powell, 2008). A recent systematic review concluded that older adults are an under researched group who may potentially benefit from CCBT programmes for depression (Crabb et al., 2012).

Waller and Gilbody (2008) note a bias towards higher levels of education and higher social class in participants of research studies of CCBT in comparison to population averages for primary care populations, which suggests that these self-help strategies (or at least engagement in research trials regarding them) may not be equally accessible or attractive as treatment options across the population. This is supported by evidence from studies of face-to-face CBT where economically disadvantaged groups tend to experience more barriers to treatment engagement and adherence than other groups (Mukherjee et al., 2006).

Literacy and computer-literacy have been considered as possible barriers to accessibility or suitability of self-help CBT approaches (McLeod, Martinez, & Williams, 2009). The ability to read and write in the language in which CCBT materials are scripted at a level matched to the materials is pre-requisite to their accessibility.

Waller and Gilbody (2008) found that participants in studies of CCBT tended to have high levels of computer literacy in comparison to the general population, suggesting that potential users with lower levels of computer literacy may opt-out of such treatments. Access to a computer at home, in a health care practice or other location (library, internet cafe etc.) is also requisite to CCBT use.

Student samples have been specifically targeted as a potential market for self-help interventions, particularly computerised therapies with mixed results (Lindvedt et al., 2008; Mitchell & Gordon, 2007; Tarrier, Liversage, & Gregg, 2006). Lindvedt et al. (2008) speculated that internet based self-help programmes may be particularly attractive to young adults in the student population who are at high-risk of common mental health problems but may not seek out help from traditional (face-to-face) mental health services. The results of their study of Norwegian students indicated that many participants

reporting an unmet need for help with psychological problems expressed a positive attitude to the experience of accessing an internet based self-help CBT programme for depression. In contrast, two studies exploring attitudes to computer based self-help CBT in UK student populations found that such programmes fared poorly, being rated 12 out of 14 in order of personal preference for treatments of posttraumatic stress disorder (Tarrier, et al., 2006) and as the preferred treatment choice for depression for only 10% of participants (Mitchell & Gordon, 2007). However, the computer-aided therapy programmes described in these studies had a limited evidence base, and prior knowledge of computer-based therapies in the samples was low. Attitudes toward computer-aided therapy for depression improved somewhat after a demonstration of a CCBT programme (Mitchell & Gordon, 2007).

User expectations

Pre-therapy expectations about the nature of CCBT treatment and its likely benefits will influence a potential user's willingness to engage with that treatment and their hopefulness about the outcomes of engagement. Where treatment credibility and outcome expectations are high, programme uptake and continuation is more likely (e.g. Longo, Lent, & Brown, 1992). In an open study of a CCBT programme, pre-treatment expectancies predicted programme completion, but not outcomes. (Cavanagh et al., 2009).

Murray et al. (2003) found that potential users who don't take up the offer of computer-based therapy expected it to be less useful than treatment starters and had a range of concerns and misunderstandings about the programme. Users' ‘mental model’ of accessing psychological support or therapy may differ from a guided self-help treatment option (e.g. ‘*I didn't know there would be homework*’; Macdonald et al., 2007), and should be elicited and clarified in a discussion of treatment choice regarding CCBT.

Lack of programme credibility and lack of motivation were identified as barriers to engagement with self-help materials by CBT practitioners surveyed by McLeod et al. (2009). As poor motivation may be a clinical feature of depressive disorders this may make engagement with CCBT programmes targeting depression particularly challenging.

Future research needs to better explicate the mechanisms of individual differences in preferences, motivation, and adherence with CCBT. Face-to-face therapy literature suggests that personality and relationship factors such as attachment style influence therapeutic process (Slade 1999; Eames & Roth, 2000) and outcomes (Tasca et al., 2006). Pilot data suggest that attachment style might be associated with preferences for different kinds of

therapies (Millings et al., 2011). Given the relational peculiarity of CCBT – that is, while the user may form a relationship with the provider (where guidance is present), the main therapeutic tasks occur in the a-relational context of the programme – it is particularly important to understand how the user’s mental models of relationships might fill the relational vacuum and guide programme use.

4.4. Provider factors

A review of the literature suggests that CCBT provider contexts may vary in a number of ways which might influence engagement. These include the treatment location, provider attitudes, the amount of support, who offers support and the type of support offered.

Location

There is evidence that CCBT can be an effective treatment option for common mental health problems when made available in a broad range of provider services including primary care (Proudfoot et al., 2004), secondary care (Ormrod et al., 2010), specialist CBT services (Learmonth et al., 2008), service-user led third sector organisations (Cavanagh, Seccombe, & Lidbetter, 2011) and dedicated e-health services (e.g. Andersson et al., 2008). To date, no studies have robustly compared different service models to provide evidence of optimal delivery contexts.

Wherever accessed, the “positioning” of self-help services may be important for promoting and maintaining engagement. Williams & Martinez (2008) have noted that where computer-aided therapy programmes are positively introduced as a “first step of care” they tend to have a far higher take-up than in situations where self-help is simply offered as a ‘stop-gap’ option to persons who already have the offer of face-to-face therapy with a practitioner.

Provider attitudes

Provider attitudes to self-help in general and CCBT specifically might influence the availability of self-help materials and support services, as well as the accessibility of these for clients.

Two surveys of accredited CBT therapists have found that most therapists offer some self-help materials to clients, and have a positive attitude towards their use. However, just one third had accessed training in the use of self-help materials. Those who had received training rated the helpfulness of self-help materials more favourably and tended to offer them to patients more frequently (Keeley, Williams, & Shapiro, 2002; McLeod, Martinez &

Williams, 2009).

In their review of the literature on barriers to uptake of computer-based therapies in particular, Waller and Gilbody (2008) concluded that clients are more positive about computer-based therapies than are professionals. This is supported by evidence from a survey of CBT practitioners who expressed doubts about the acceptability of CCBT programmes to users (Whitfield & Williams, 2004). Few therapists in this survey (<3%) offered computerised self-help materials to clients either as a stand-alone treatment or an adjunct to face-to-face therapy, despite emerging evidence of effectiveness.

Amount of support

Reviews and meta-analysis of CCBT have consistently demonstrated that supported programmes yield greater clinical benefit than unsupported programmes. In addition, supported programmes are associated with higher levels of completion (e.g. Newman et al., 2011; Richards & Richardson, 2012; Spek et al., 2007).

Where support is offered, this ranges from a few minutes to several hours of therapist support per user during the course of the programme. Palmqvist et al (2007) reported a linear, positive relationship between support time and therapeutic outcomes, but to date the relationship between support time and engagement remains unclear. Further research exploring optimal support time for different groups of clients, using different CCBT programmes in different contexts needs to be established.

What kind of support is needed?

Baguely et al. (2010) offer ‘good-practice guidelines’ for self-help services, highlighting the key role of support workers in identifying problems and goals to work on, helping the user to choose appropriate self-help materials, supporting them in their efforts to change and the monitoring and review of progress. The development of a new ‘therapeutic relationship triangle’, between the user, supporter and CCBT programme warrants future research (Cavanagh, 2010).

Kenwright (2010) recommends brief (no longer than 20 minutes), structured, scheduled support sessions for guided self-help including CCBT. The content of support sessions should include collaborative agenda setting, monitoring and review of clinical measures, goals and homework activities, positive feedback on any progress, identification and discussion of obstacles, problem solving support, weekly collaborative goal-setting, and homework activities with planning for potential problems.. This kind of support has been demonstrated to be effective in both research studies and real-world contexts offering CCBT. In addition to regular human support, log-on reminders sent by post-card, email,

telephone or SMS may have an impact on program adherence and on outcome (Clarke et al., 2005).

Who should provide support?

There is evidence that CCBT can be effectively supported by a range of professionals and para-professionals, with limited evidence to differentiate between supporter type in engagement outcomes.

In one study of CCBT for depression, briefly trained 'technicians' were found to offer outcomes as effective as experienced clinicians when offering similar levels of support. Dropout rates were also similar in both groups (Robinson et al., 2010).

4.5. The fifth 'P': Putting it all together

The 4 P's model of CCBT engagement highlights four core factors associated with CCBT engagement (and disengagement): person, programme, problem, and provider factors. The reliability and validity of the '4 Ps' model should be evaluated in future research. Each factor is important in its own right, but is also likely to interact with each other factor to influence engagement processes and outcomes. Further research is needed to better understand the additive and interactive effects of these factors on engagement outcomes. CCBT stakeholders are advised to consider a multifactorial approach to understanding engagement when making treatment decisions at an individual and service level.

5. Final comments

The evidence base for CCBT for common mental health problems is promising, but developing and supporting effective and sustainable models of CCBT service implementation remains a challenge – not least due to barriers to uptake, engagement and completion. This paper has explored some of the knowledge base relevant to user engagement with CCBT programmes, and has presented a quadripartite model of CCBT engagement which should be considered when making decisions about CCBT treatment at an individual or service level.

The 'four Ps' model considers person, programme, problem and provider factors that may influence engagement with CCBT. This model may be used as a tool to support the development and implementation of CCBT programmes and services. Systems which take each of these factors, and their interaction, into account are likely to benefit from increased uptake and engagement and reduced drop-out. Actions to optimise engagement outcomes may improve the reach and benefit

of CCBT for many people with common mental health problems.

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Declaration of interest

Kate Cavanagh is a consultant to, and Abigail Millings employed by, Ultrasis UK Ltd, which markets Beating the Blues, an internet based programme for depression and anxiety.

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