

Cognitive Behaviour Therapy for Schizophrenia – A Review of Development, Evidence and Implementation

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Key Words

Cognitive behaviour therapy · Cognitive therapy · Schizophrenia · Psychosis

Abstract

Background: Schizophrenia and other psychotic disorders were once thought to be impervious to psychological treatments; however, there is accumulating evidence that cognitive behaviour therapy (CBT) can result in significant clinical benefit to these patients. **Aim:** This paper aims to describe the development and adaptation of CBT in the treatment of schizophrenia, to summarise the evidence to support CBT as a viable treatment and to outline some of the issues in 'rolling out' this treatment into normal clinical settings. **Results:** A number of clinical models of CBT have been developed and these typically consist of a variety of clinical methods with different models providing differing emphasis. Twenty controlled trials of CBT in schizophrenia in which 739 patients were included are reviewed. These studies have a mean effect size for CBT of 0.37 (SD 0.39). There is consistent evidence that CBT reduces persistent positive symptoms in chronic patients and may have modest effects in speeding recovery in acutely ill patients. The evidence of CBT reducing relapse rates is equivocal, although targeted early intervention is promising. The available evidence suggests that CBT can be utilised effectively in routine clinical practice. However, the dissemination of novel psy-

chological treatments into widespread clinical practice is not without difficulty, and issues pertaining to the 'roll-out' of CBT are discussed. **Conclusions:** CBT as an adjunct treatment shows considerable promise for the future treatment of schizophrenia.

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Introduction

Schizophrenia and other psychotic disorders were once thought to be biologically determined and impervious to psychological treatment. Traditional forms of psychotherapy appeared to have little or no benefit for those suffering these conditions and may well be harmful to people with schizophrenia [1]. However over the last decade evidence has accrued that cognitive behaviour therapy (CBT), has considerable utility in treating schizophrenia and psychosis when added to standard psychiatric care [2–5]. There has been sufficient evidence for CBT to become a recommended treatment for schizophrenia in the UK National Institute of Clinical Excellence [6], the government body that recommends which treatments should be used in clinical practice. Furthermore, advances in theoretical understandings of schizophrenia from a psychological perspective [7, 8] can be expected to further inform therapeutic developments in the future. The aim of this descriptive review is to summarise the development and results of CBT studies which have used

an individual cognitive-behavioural approach to treat directly the positive symptoms of schizophrenia¹. There remain gaps within the evidence [2], and such a discussion may stimulate ideas for further research and evaluations. Furthermore, this paper aims to discuss issues regarding the potential impact of CBT studies upon standard clinical practice, that is the implementation of CBT in standard care of schizophrenia.

Development of CBT for Schizophrenia

There have been a number of reasons for the increased interest in effective psychological therapies. In spite of improvements in anti-psychotic medication, there are a substantial group of patients (about 40%) who show minimal or only partial improvement [9]. Even with good medication compliance, a significant and increasing number of patients will relapse. However, medication compliance is rarely good, resulting in further adverse outcomes [10]. Anti-psychotic medication frequently results in unpleasant and distressing side effects, especially disorders of movement. Some side effects can be permanent, such as tardive dyskinesia, and some, on rare occasions, can be fatal. Furthermore, in recent years there has arisen an increasingly vocal and powerful consumer or user movement in mental health that has sought to increase user choice and preference in available treatments for mental disorders. Lastly, there has been much greater emphasis on evidence-based health care and the implementation of treatment approaches that have been shown to work. CBT, with a commitment to evaluation, has demonstrated a significant advantage over other schools of psychotherapy in this regard [11].

CBT for schizophrenia, although following a common theme and set of principles, has developed in a number of centres and been informed by a number of theoretical and conceptual bases. For example, in my own group in Manchester we developed the coping skills approach which originated from a number of sources. Firstly, we were influenced by the empirical finding that many patients with schizophrenia acquire coping strategies to deal with their hallucinations and delusions [12]. This observation was found to be in agreement with the findings of other researchers [13–17]. Secondly, of importance was the work on self-regulation by Karoly and Kanfer [18] in

which target behaviour is identified as problematic and monitored with the purpose of implementing alternative responses through a process of self-regulation. This approach was thought to be especially relevant to schizophrenia as it involved a potential enhancement of executive control through response inhibition, selection and implementation. Lastly, central to the coping approach, although not unique to it, was the process of a detailed individual idiosyncratic assessment or case formulation to understand the individuals experience of psychosis. (For a detailed account of case formulation in CBT generally see Tarrier and Calam [19], and for a clinical heuristic in psychosis see Haddock and Tarrier [20] and Tarrier [21].) This allowed a treatment strategy to be formulated based upon the clinician's assessment of the determinants of the individual's psychotic symptoms. The aim of the coping skills approach is in line with a recovery model in which the patient learns cognitive and behavioural strategies with which to reduce psychotic symptoms or the distress they cause. This has the advantage of emphasising coping as a normal reaction to aversive experiences which aids engagement.

Other clinical research groups have modified Beck's version of cognitive therapy to use with schizophrenic patients [22], which have given central emphasis to the role of beliefs in causing and maintaining psychopathology. Beck [23] first published a case study of cognitive therapy in the treatment of delusions in 1952. Kingdon and Turkington [24] have also given prominence to the concept of a normalising rationale in providing the patient with an acceptable understanding of their disorder. This emphasis on beliefs has been taken a logical step further in analysis of schema or underlying assumptions or beliefs held by the patient [25]. Hall and Tarrier [26] adopted a very specific CBT approach to improve the patient's self esteem, which was derived from Beck's cognitive therapy with depression [27], in demonstrating that the strength of beliefs about self are influenced by focus of attention and evaluation of evidence. Bach and Hayes [28] have developed a version of CBT called Acceptance and Commitment Therapy (ACT) which is based upon mindfulness [29]. ACT also has its origins in radical behavioural approaches of goal attainment. More recently, an approach from the field of substance abuse, motivational interviewing [30], has influenced CBT approaches to psychosis. Initially, this new method was developed to address the considerable problem of increasing drug and alcohol misuse amongst people suffering from psychosis [31, 32]. Motivational interviewing-influenced CBT is potentially valuable in itself in bringing

¹ Compliance therapy has not been included as it does not conform to these criteria.

about positive change in general and in facilitating the patient achieve valued goals which psychotic symptoms may impair [33]. Thus CBT is not, as some claim, merely a set of techniques but it is a clinical approach that is dynamic and developing and has a theoretical basis which continues to stimulate advances in clinical practices. However, in spite of the development of various clinical heuristics on which to base different treatment models there is as yet little direct empirical support to demonstrate the superiority of any one theoretical approach.

Specific Difficulties in Treating Schizophrenia

Schizophrenia, by its nature, poses a number of difficulties for the clinician delivering a psychological treatment (see Haddock and Tarrier [20] and Tarrier [21] for a more detailed discussion of these). These consist of: (1) psychological factors, such as restricted attention, elevated arousal, stigmatization, co-morbidity and high risk of suicide; (2) psychosocial factors, such as sensitivity to interpersonal and family environments and risk of victimization, and (3) social factors, such as social deprivation, downward social drift, restricted social networks and adverse effects of a psychiatric career. These factors may effect the nature and delivery of CBT.

Furthermore, because schizophrenia is a relapsing condition with frequent incomplete recovery, there are phase-specific aims which will determine the nature and strategy of the CBT intervention. For example, in chronic patients with drug-resistant symptoms the aim will be to achieve further symptom reduction in a relatively clinically stable patient, whereas in acutely ill patients, the aim will be to speed symptom recovery in floridly ill patients. In remitted patients the aim may be to prevent future relapse. In prodromal stages, the aim may be to achieve early identification and implement treatment so as to decrease the duration of untreated psychosis. There are intriguing preliminary results which suggest that CBT can prevent translation into full psychosis in vulnerable individuals who are experiencing prodromal symptoms [34].

How therapy is focussed and delivered will vary depending on these phase-specific conditions. Lastly, in many patients schizophrenia may be a life-long disorder which will require more than a brief therapeutic intervention of up to 12 months. The literature to date does little to address this issue and whether intervention over long periods is feasible or beneficial nor indicate how different phase-related aspects of CBT could be integrated into long-term care.

The Evidence for CBT for Schizophrenia

Twenty clinical trials have been identified that evaluate CBT used directly to reduce positive psychotic symptoms as an adjunct to standard psychiatric care, which includes antipsychotic medication. These studies compare the CBT group with a control group which usually consists of standard psychiatric care. Sixteen of these studies have been carried out within the UK with one each from Canada, The Netherlands, Italy and the USA. Sixteen studies involve chronic outpatients, one chronic inpatients and three patients hospitalised for an acute episode. These 20 trials treated a total of 739 patients with CBT, with a mean of 37 (SD = 48, range = 7–225) treated in each study. Using the method described by Gould et al. [3], the effect size was calculated from data presented in 19 of these trials². These studies have a mean effect size for CBT compared to the relevant control condition of 0.37 (SD = 0.39, median = 0.32) with a range between –0.49 and 0.99. Using Cohen's [35] convention for categorising effect sizes, 14 (74%) studies achieve at least a small effect size, 6 (32%) at least a moderate effect size and 3 (16%) a large effect size [36]. However, there is variability in methodological rigour within these trials. Investigation of the association of methodological rigour and effect size indicates that trials with methodological weaknesses, especially lack of blind assessment, are associated with elevated effect sizes [36]. These trials are described in table 1, including detail of their methodological strengths.

Reduction of Persistent Positive Symptoms in Chronic Schizophrenia

There is consistent evidence that CBT in addition to standard psychiatric care can reduce persistent psychotic symptoms when compared to standard psychiatric care alone. This has been demonstrated in small pilot trials and in larger more robust randomised controlled trials (table 1). There are significant benefits of CBT over standard care in both positive and negative symptoms, and these appear to be sustained over a follow-up period of up to 2 years after the termination of treatment [56–58].

A number of trials have compared CBT in addition to standard care with a non-specific control treatment, for example supportive counselling (SC) [45, 51] and befriending [48]. The results with this comparison are equivocal. Tarrier et al. [45] and Durham et al. [51] show non-

² One trial report did not publish adequate data on positive symptoms and these data were not forthcoming from the authors.

Table 1. Controlled trials of CBT for schizophrenia

Study	Target population	Treatment group	Randomization	Blind rating	Outcomes	Drop-out and attrition	Analysis	Post-treatment results	Effect size
Milton et al. (1978) [37]	chronic in-patients	belief modification (n = 8) confrontation (n = 8)	yes	yes	BPRS strength of delusions	not described 13%	treatment completers	BM > C	0.78
Tarrier et al. (1993) [38]	chronic out-patients	CBT (n = 15) PS (n = 12) TAU (n = 14)	yes (CBT + PS) TAU not randomised	no	BPRS	not described 31%	treatment completers	CBT = PS > TAU	0.35
Garety et al. (1994) [39]	chronic out-patients	CBT (n = 13) TAU (n = 7)	not randomised	no	PQ BPRS MADS	all included 0%	missing data estimated (REML)	CBT > TAU	0.55
Drury et al. (1996) [40, 41]	acute in-patients	CBT (n = 30) ATY (n = 32)	yes	no	PAS	described 36%	treatment completers	CBT > ATY	0.93
Bentall et al. (1994) [42] Haddock et al. (1998) [43]	chronic out-patient/ hallucinations	focussing (n = 14) distraction (n = 11) TAU (n = 8)	yes TAU not randomised	yes	PQRST	not described 24%	treatment completers	Focusing = distraction TAU not analysed	0.29
Kuipers et al. (1997) [44]	chronic out-patients	CBT (n = 28) TAU (n = 32)	yes	no	BPRS	described 18%	ITT missing data estimated	CBT > TAU	0.37
Tarrier et al. (1998) [45]	chronic out-patients (geographic cohort)	CBT (n = 33) SP (n = 26) TAU (n = 28)	yes + independent	yes + verified	BPRS	described 9%	ITT missing data estimated	CBT > SP > TAU	0.73
Haddock et al. (1999) [46]	acute in-patients	CBT (n = 10) SP (n = 11)	yes + independent	yes	BPRS	described 5%	ITT	CBT = SP	-0.49
Pinto et al. (1999) [47]	chronic in- and out-patients	CBT (n = 19) SP (n = 18) all on clozapine	yes	no	BPRS SAPS SANS	not described 10%	treatment completers	CBT > SP	0.99
Sensky et al. (2000) [48]	chronic out-patients	CBT (n = 46) befriending (n = 40)	yes independent	yes	CPRS	all available 0%	ITT	CBT = befriending	0.14
Barrowclough et al. (2001) [31]	chronic out-patients dual diagnosis	CBT (n = 18) TAU (n = 18) (CBT plus FI+MI)	yes independent	yes	PANSS	described 11%	ITT	CBT > TAU	0.26
Lewis et al. (2002) [49]	acute in-patients recent onset (geographic cohort)	CBT (n = 101) SP (n = 106) TAU (n = 102)	yes independent	yes + verified	PANSS PSYRATS	described 18%	ITT missing data estimated	CBT > SP > TAU	0.12
Turkington et al. (2002) [50]	chronic out-patient	CBT (n = 257) SP (n = 165)	yes independent	yes	CPRS	described 16%	ITT missing data estimated	CBT > TAU	0.23
Bach and Hayes (2002) [28]	chronic out-patient	CBT (n = 40) TAU (n = 40)	yes	yes	Re-hospitalization	12.5%	treatment completers	CBT > TAU	data not available
Durham et al. (2003) [51]	chronic out-patient	CBT (n = 22) SP (n = 23) TAU (n = 21)	yes independent	yes + verified	PANSS PSYRATS	described 9%	ITT	CBT > SP > TAU	-0.32
Rector et al. (2003) [52]	chronic out-patient	CBT (n = 29) TAU (n = 21)	yes	yes	PANSS	described 16%	treatment completers	CBT = TAU	0.28
Gumley et al. (2003) [53]	chronic out-patient	CBT (n = 72) TAU (n = 72) CBT included EI relapse prevention	yes	no	PANSS	described 8%	treatment completers	CBT > TAU	0.19
Hall and Tarrier (2003) [26]	chronic in-patient	CBT (n = 12) TAU (n = 13)	yes	no	PANSS	described 8%	treatment completers	CBT > TAU	0.88

Table 1 (continued)

Study	Target population	Treatment group	Randomization	Blind rating	Outcomes	Drop-out and attrition	Analysis	Post-treatment results	Effect size
Valmaggia et al. [54]	chronic out-patient	CBT (n = 34) TAU (n = 24)	yes independent	yes	PANSS	described 28%	ITT missing data estimated	CBT = TAU	0.32
Startup et al. (2004) [55]	chronic in-patients	CBT (n = 47) TAU (n = 43)	yes	yes	SAPS SANS BPRS	described 27%	ITT	CBT > TAU	0.44

CBT = Cognitive behaviour therapy; PS = problem solving; ATY = activity and recreational therapy; TAU = treatment as usual; SP = supportive psychotherapy; EI = early intervention; BPRS = brief psychiatric rating scale; PQ = personal questionnaire; MADS = Maudsley assessment of delusions scale; PAS = psychiatric assessment scale; PQRST = personal questionnaire

rapid scaling technique; PANSS = positive and negative symptom scale; SAPS = scale for assessment of positive symptoms; SANS = scale for assessment of negative symptoms; CPRS = comprehensive psychiatric rating scale; PSYRATS = psychotic symptom rating scale; REML = residual maximum likelihood; ITT = intention to treat.

significant advantages of CBT generally compared to SC that disappear over follow-up [58]. Whereas Sensky et al. [48] report little difference between CBT and befriending at post-treatment but significant advantage for CBT at 18 months of follow-up when the positive effects of befriending decay with time. The performance of these non-specific treatments was a surprise as they were predicted to perform no better than treatment as usual. However, there is evidence that when the effects of treatment on specific psychotic symptoms were investigated, SC did significantly worse with hallucinations compared with CBT [59]. Thus it may be that unstructured treatments do have a therapeutic effect on delusional thought but specific structured interventions are necessary to improve hallucinations. This is an area that requires further investigation.

Speeding Recovery in Acute Schizophrenia

A number of studies have investigated the efficacy of CBT in speeding recovery in acutely ill patients hospitalised for a florid psychotic episode. Drury et al. [40, 41] reported on a very innovative approach and demonstrated that CBT reduced recovery time by 25–50% and produced significant clinical benefits in terms of reduced symptomatology. In a 5-year follow-up of their sample, the CBT group reported less residual symptomatology than the activity control group although there was no difference in positive symptoms as a whole [60]. Haddock et al. [46] attempted to reproduce the results of Drury et al. [40, 41], with a sample size based upon the reported effect size from the study by Drury et al. [40, 41]. There were a number of methodological improvements in the study by Haddock et al. [46]. These included: blind and independent assessment of outcome; assessments carried

out by an experienced psychiatrist; clearly defined CBT without inclusion of family groups, and a clearly defined SC control group. Although there were differences between the CBT and control group over 2-year follow-up, including a lower percentage of relapses, time to relapse and days spent in hospital, these differences were not statistically significant. It is possible that the results reported by Drury et al. [40, 41] were over-optimistic, resulting from an inflated effect size due to inadequate methodology. In spite of these potential difficulties, the study by Drury et al. [40, 41] established that CBT could be carried out even with those who were most severely ill, a fact confirmed by Haddock et al. [46]. This finding stimulated the Study of Cognitive Reality Alignment Therapy in Early Schizophrenia (SoCRATES) [49, 61] which tested whether CBT delivered during admission for an acute episode of early (first or second episode) schizophrenia would speed recovery and confer resistance to subsequent relapse. CBT in addition to standard in patient care, treatment as usual (TAU), was compared with SC in combination with TAU and TAU alone in 11 mental health units serving three geographically defined catchment areas. Three hundred and nine patients, 80% of whom were first episodes, were randomly allocated to one of the three treatment groups. All groups showed a significant improvement over the first 70 days with faster resolution of symptoms shown in both groups who received the psychological additional treatments. There were significant benefits for those who received CBT compared with those who received solely TAU at 4 weeks. These benefits disappeared at 6 weeks. There appeared to be no difference between CBT and SC except in the treatment of hallucinations in which SC did poorly [49].

The results at 18 months of follow-up, essentially mirror the earlier treatment phase results. Patients who received TAU only had significantly more psychotic symptoms at follow-up than those who received either of the two psychological treatments. Again there was an indication that SC did poorly with hallucinations although there were no other differences between the CBT and SC groups. There were no differences between the three treatment groups in relapse, rehospitalization or time to relapse or rehospitalization [61].

Retrospective analysis of the data from the SoCRATES study suggested that there may be an age effect in response to treatment. The younger group (under 22 years of age) had significantly higher symptom scores and lower levels of social functioning and showed a poorer response to TAU than the older group. The younger group were also rated by the therapists as significantly more difficult to engage in therapy, either CBT or SC [62].

Relapse Reduction

Although there is evidence for symptom reduction with CBT in both chronic and acute phases of schizophrenia, the evidence that CBT significantly reduces relapse is less impressive. The finding for patients treated during an acute episode are disappointing [46, 60, 61]. In the SoCRATES study of acute patients, similar rates for clinical relapse for CBT (33%), SC (29%) and TAU (36%) and rehospitalization CBT (55%), SC (52%) and TAU (51%) were reported [61]. In patients treated during the chronic phase the results are more equivocal. In their chronic sample, Tarrier et al. [45] reported 14% relapses in TAU compared with none in the CBT or SC groups over the 3 months of treatment period. This changed to relapse rates of 28% for CBT, 19% for SC and 27% for TAU after 15 months [57]. At 27 months, there were 27% relapses in the combined CBT and SC group and 39% in the TAU group [58]. However, none of the follow-up results are significant for across-group comparisons. Bach and Hayes [28] using ACT with inpatients found a subsequent reduction in rehospitalization from 40% in the TAU to 20% in the ACT group over a 4-month follow-up period. Gumley et al. [53] used a targeted CBT which was implemented on the appearance of early signs of relapse. The CBT group showed significantly reduced relapses (14%) compared with the control group (36%) over a 12-month period. The duration of relapse, but not the severity or time to relapse, was also reduced. These results suggest that a dedicated and intensive relapse prevention programme is necessary to impact upon relapse rates.

Depression

One issue which is often raised by psychiatrists is their fear that CBT in reducing psychotic symptoms may increase depression and possibly also suicide risk. An improvement in insight might be the mechanism by which depression is precipitated. Strangely, this concern is not raised when symptomatic improvement is achieved with anti-psychotic medication, even though there are other disadvantages to medication. To test the hypothesis that alleviation of positive symptoms would result in an increase in depression, the correlations between both patient-rated and observer-rated measures of depression and hopelessness with positive symptoms were investigated retrospectively by Tarrier et al. [59]. If depression increased after successful symptom reduction then a significant negative correlation would be predicted. This was not the case, in fact modest but highly significant positive correlations were found indicating that depression and hopelessness were reduced with a reduction in positive symptoms [59]. Co-morbid depression, hopelessness and suicidality have not been the direct focus of cognitive-behavioural treatments up to the present time but are urgent clinical problems which will need to be addressed by future studies.

Applicability to Normal Clinical Settings

Well-controlled randomised clinical trials are often criticised in that they do not reflect the 'real world' of clinical practice. This is for two reasons. Firstly, the therapists in clinical trials are highly trained 'experts' working from a university research centre. Secondly, the narrow inclusion criteria operating in clinical trials means that the atypical and frequently difficult and complex cases often seen in clinical practice are excluded.

It is probably true that in the early stages of evaluation of any new therapy, the trial therapists will be the 'experts' who devised the therapy. But in the later phases of evaluation this is less likely. In the SoCRATES trial [49, 61] the therapist were clinical psychologists and nurse therapists who had worked in normal service settings. In a trial by Turkington et al. [50] community psychiatric nurses were trained to deliver CBT in a trial that recruited 422 patients suffering from schizophrenia in which 225 completed CBT treatment. Patients treated with CBT by nurses showed significant clinical gains compared with control patients who received standard care. In these two trials, experienced therapists were trained and supervised to deliver CBT indicating that it is not

just a small group of 'experts' who can deliver therapy. It may well be that to deliver CBT to these patients, therapists need to be skilled, experienced and well trained; they may become 'experts' but this does not mean that the therapy is inaccessible. Sometimes, the argument is advanced that the specialist skills required to deliver CBT makes it too expensive and uneconomical. A well-trained workforce in mental health would appear a positive advantage to society rather than a disadvantage, and the benefits accruing to those suffering severe mental disorders are worth the cost. After all, the same argument is not advanced to terminate heart surgery, which also requires highly trained, experienced and skilled practitioners.

A number of studies have been reported on the successful use of CBT to treat psychotic patients in routine clinical practice [63, 64]. Turkington and Kindon [65] demonstrated that CBT could be administered by general psychiatrists working in the public health services, in spite of their heavy work load, with significant benefits to their patients. Lastly, in a study of the effectiveness of the Thorn Training Programme in psychosocial interventions at Manchester, it was reported that patients treated by psychiatric nurses trained in CBT with individuals and families showed significant clinical improvements [66].

One of the major challenges of the implementation of evidence-based medicine is that new empirically supported treatments are disseminated into clinical practice as rapidly as possible and that those who would benefit from these treatments have easy access to them. Mental health services, unfortunately, rarely reflect research and many commonly used treatments have, at the best, equivocal support for their effectiveness [67]. There are a number of reasons why psychological treatments of proven effectiveness are slow to permeate into routine services. These include: a lack of a partnership between researchers and clinicians; an absence of the appropriate knowledge and skills within the workforce; characteristics of the workplace which impede new developments, and the fact that it takes longer to acquire and implement new skills than is generally thought [68]. Lastly, unlike the heavy marketing by drug companies of their pharmaceutical agents there are few 'product champions' that have the same influence and resources to 'market' and promote the implementation of non-drug treatments.

One prerequisite for increasing the availability of a new psychological treatment is to train the workforce to provide the treatment. This is a more complex issue than was once thought, and it raises questions about the adequacies

of training, clinical competence, supervision and professional qualifications. Further questions arise on how training is best delivered and how to maintain therapists' skills and the quality of treatment delivered. A simple example will suffice, on training psychiatric nurses in psychosocial treatment skills we found that many were enthusiastic and highly competent but after completing their training and returning to their place of work they were frequently either not supported by their management and they became frustrated and left or they were no longer satisfied with their routine clinical work and left to seek teaching or research posts. Either way, highly trained clinicians were lost to the clinical workforce. However, dissemination is by no means impossible and can be achieved, although it is a complex process and much more likely to happen if there is support at institutional and policy levels.

A further difficulty in the effective 'rolling out' of CBT into a general service setting is that there is little guidance on the number, frequency or duration of CBT treatment sessions. The frequency or intensity of treatment has shown some variation in the published studies [5]. For example, Tarrier et al. [45] implementing an intensive twice weekly CBT intervention over 3 months compared with Kuipers et al. [44] who provided CBT on a weekly or fortnightly basis over 9 months. Both studies report clinical benefits from their interventions. In the published studies, the duration of treatment is determined by the constraints of a clinical trial; however, in a service setting many patients will have long term needs, and CBT of much longer duration may be indicated although the current literature provides no indication as to whether this is either feasible, effective or economically viable. Furthermore, there is little indication as to which techniques are important or necessary in bringing about clinical change. This search for 'active ingredients' has yet to be initiated as a research programme although it has been marked up for future research [5]. However, faith in the productive result of such a programme may be misplaced. If CBT is regarded as an approach rather than just a set of techniques, then different conclusion can be drawn. CBT as an approach implies there is a shared 'world view' about the nature of therapy and how clinical problems should be addressed which includes shared assumptions about the origins of psychopathology and causality. This can be thought of as an adherence to a general model and, thus, therapy and therapeutic actions will either be within the 'spirit of CBT' or not. Thus, it may be that, therapeutically, adherence to the 'spirit of CBT' may be more important than which specific individual or collection of

techniques are included. This has implications for training and implementation as the CBT approach needs to be taught and implemented rather than set of techniques.

Conclusions

There have been considerable advances in recent years at both a theoretical and treatment development level in the psychology of schizophrenia. The evaluations of CBT have shown marked improvements in methodological rigour, and there is promising evidence that CBT will result in clinical benefits for schizophrenic patients. However, the most recent meta-analysis concluded that 'Cognitive behavioural therapy is a promising but underevaluated intervention. Currently, trial-based data supporting

the wide use of cognitive behavioural therapy for people with schizophrenia or other psychotic illnesses are far from conclusive. More trials are justified, especially in comparison with a lower grade supportive approach. These trials should be designed to be both clinically meaningful and widely applicable' [2].

Further research should focus on identifying the characteristics of patients who will benefit from CBT at various phases of the disorder and in understanding the mechanisms by which improvement occurs. There is evidence that these treatment methods can be transferred to routine clinical practice, although the broad dissemination of the required skills and knowledge throughout the workforce may be a complex process. Universal accessibility to effective CBT treatments may be a slower process than was once hoped but it remains an achievable goal.

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