

Which Components of CBT are the Most Suitable for Use in Primary Care?

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KEY MESSAGE

- Primary care workers play a significant role in the identification and treatment of patients with depression and anxiety disorders.
- Behavioural interventions are more practical and more suitable for delivery in primary care.
- Delivery of sophisticated cognitive interventions is more time consuming, requires more specialist training and should be restricted to a minority of patients with severe anxiety disorders.

ABSTRACT

Background: With the advent of Improving Access to Psychological Treatments (IAPT), the delivery of cognitive behavioural interventions is an important issue in primary care. How Cognitive Behavioural Therapy (CBT) works, however, is subject to debate.

Question: Which components of CBT are most suitable for use in primary care?

Method: Systematic literature review

Results: 14 Randomised Controlled Trials (RCTs) were identified. Nine out of 14 (64 %) RCTs revealed no significant differences among interventions in the short term follow up. Three out of 14 (21%) RCTs revealed that a combination of cognitive and behavioural interventions or cognitive interventions alone were more efficacious than behavioural interventions alone, primarily in the patients with severe phobic anxiety disorders.

Discussion: The use of behavioural interventions may be more suitable in primary care as they are brief, practical and as efficacious as cognitive interventions in the majority of psychological disorders treated in primary care. Delivering cognitive interventions might be best restricted to a subset of patients with more severe and complex anxiety disorders.

WHY THIS MATTERS TO ME

It is important to understand how different components of CBT contribute to the improvement of patients. This will guide primary care workers' choice of appropriate interventions. It is especially relevant when time is limited and demands are great.

INTRODUCTION:

APT aims to provide people with a variety of treatment options before they are referred to secondary care within the stepped care framework⁸. This is why the delivery of psychological therapies, including CBT interventions, has gained importance in primary care.

One in six working adults (16% of the population) in the UK suffers from depression or an anxiety disorder at any one time⁸. Poor identification and inadequate treatment results in social impairment (e.g. social isolation) as well as loss of work productivity. The impact and the severity of the consequences of depression and anxiety disorders for both the individual and the society cannot be underestimated. In the light of this, the identification of patients who suffer from these conditions and the choice of effective therapeutic interventions for them are crucial.

There is growing evidence of the effectiveness of CBT for a wide range of psychological disorders (e.g. depression, anxiety disorders)². The results of several RCTs questioned the impact of training primary care workers in CBT interventions^{15, 16, 19}, however, another study reported effective use of CBT by primary care workers¹². This might indicate that not all CBT interventions are applicable in primary care. The choice of appropriate interventions and the extent that these interventions are covered in CBT training programmes might explain the conflicting evidence for the effectiveness of training in CBT interventions in primary care.

There is a continued controversy about whether challenging maladaptive thoughts rather than use of behavioural interventions alone adds significant contributions to behavioural change^{14, 22}. This issue hampers the understanding of how CBT works.

Taken all together, it is important for primary care workers to have an understanding of how CBT brings about a change for the following reasons. Firstly, a limited understanding of how CBT works provides poor guidance to primary care workers in their choice of interventions for the treatment of patients with depression and anxiety disorders. As a result, their management of the time and resources to meet the demands of these patients is adversely affected. Secondly, CBT does not always lead to improvement and does not always protect patients from relapse⁷. Having a clear understanding of how interventions bring about change will probably improve its effectiveness. Hence the aim of the present systematic review of the components of CBT is to identify which techniques of CBT are the most suitable for use in PC.

Cognitive interventions are concerned with correcting systematic errors in the thinking process (such as over-generalisation in patients with depression) whereas behavioural interventions are concerned with overt problematic behaviours (such as depressed patients' unwillingness to fulfil daily activities). A combination of cognitive and behavioural interventions covers both areas. On the basis of these definitions, the intervention groups of the RCTs which are included in the present study are classified as either cognitive, behavioural or a combination of cognitive and behavioural (Table 1).

Table 1: Cognitive and behavioural components of CBT

Cognitive Interventions (CI)	Behavioural Interventions (BI)	Combination of Cognitive and Behavioural Interventions (COM)
CT	E-EGT-PBE-IE-GE-HBET	CBGT
AT	BA	RET
MBST	SCD	CBT
CR	RT	CPT
CP	SIT	

*E: Exposure; CT: Cognitive Therapy; CBT: Cognitive Behavioural Therapy; BA: Behavioural Activation; AT: Automatic Thoughts; CBGT: Cognitive Behavioural Group Therapy; EGT: Exposure Group Therapy; PBE: Performance Based Exposure; CP: Cognitive Performance; IE: Interoceptive Exposure; MBSR: Mindfulness Based Stress Training; RET: Rational Emotive Therapy; SIT: Self-Instructional Training; RT: Relaxation Training; GE: Graded Exposure; CS: Cognitive Restructuring; SCD: Self-Control Desensitization; HBET: Habituation Based Exposure Therapy; CPT: Cognitive Performance Treatment (combined)

METHOD:

Identification of Relevant Trials:

A literature search was carried out by using three electronic databases without time or language limits. Psych INFO was searched by using the following subject headings Cognitive Therapy OR Cognitive Behaviour Therapy OR Behaviour Therapy in combination with key words (* indicates truncation) component* OR process*, OR mediat* or moderat* or mechanis*. The studies were limited to treatment studies. EMBASE was searched by using the following subject headings: Behavior Therapy OR Cognitive therapy in combination with component* OR process*, OR mediat* or moderat* or mechanis*. These studies were limited to treatment (high specificity) studies. Additionally MEDLINE was searched by using the following subject headings Cognitive Therapy OR Behavior Therapy in combination with the same key words as stated above. Reference lists from retrieved articles were

also examined. In addition Anxiety and Obsessive and Compulsive Disorder treatment guidelines were downloaded from the National Institute of Clinical Excellence (NICE)'s web site^{26,27} and its reference lists were examined for relevant articles. A hand search for the following identified key journals was conducted; *Journal of Consulting and Clinical Psychology*, *Behavioural and Cognitive Psychotherapy* and *Behavioural Therapy**. Finally, the author contacted the key investigators at the OCTC (Oxford Cognitive Therapy Centre) and at the IOP (Institute of Psychiatry) Psychology Department in order to find out if there were any relevant unpublished studies.

Results were then downloaded to EndNote (version 5) and duplicates were deleted. The abstracts of the retrieved studies were reviewed and compared against the inclusion criteria. Where no definitive decision could be made on the basis of the abstract alone, the original paper was used. A second independent reviewer also checked the abstracts and identified papers. Where differences in selection occurred, these were resolved by discussion.

CRITERIA:

(i) Inclusion: all randomised controlled trials (RCTs) which compare different components of CBT were included in the present review. (ii) Exclusion: Studies which compare CBT with other treatment modalities were excluded from the present review.

PsychInfo	Embase	Medline	Other
251	428	933	24

Results:

The initial search of databases revealed the following number of articles:

Having applied the above exclusion criteria; this was reduced to 14 RCTs. Results of those RCTs are presented in table 2.

Three out of the 14 included trials (21%) showed that a combination of cognitive and behavioural or cognitive components alone were significantly more efficacious compared to the behavioural components alone in the short term^{20, 30, 32}. Of the three studies, two revealed that a combination of cognitive and behavioural interventions was more efficacious than behavioural interventions alone in the short term^{20, 30}.

Nine out of 14 RCTs (64%) revealed that cognitive interventions alone, behavioural interventions alone and a combination of cognitive and behavioural interventions were equally efficacious in the short term or that cognitive intervention was superior to a

combination in the short term³².

Three of the 14 trials reported significantly more improvements among the patients treated with cognitive interventions alone or a combination of cognitive and behavioural interventions compared with behavioural interventions alone in the long term follow up^{14, 24, 25}.

DISCUSSION:

Present results reveal that cognitive interventions and behavioural interventions are equally efficacious in treatment of the majority of patients with depression and anxiety disorders.

On the basis of the present results, how CBT works could be explained by multi-level memory theory of psychopathology⁷. Early adversities generate vulnerability in the form of negative mental representations (memories) of the self and the world (e.g. "I am unlovable", "others are unreliable")⁷. In the acute phase of emotional disorders, those negative representations become highly accessible and result in problematic behaviours (symptoms of anxiety and depression). Both cognitive and behavioural intervention procedures aim to make alternative positive representations (e.g "I have lovable qualities") more accessible⁷. Behavioural interventions alter negative mental representations by producing new patterns, whereas cognitive interventions alter them by creating and strengthening alternative positive representations through reality-based reasoning⁷.

Furthermore, some RCTs report greater improvement in long-term follow up of patients who have had cognitive interventions^{14, 24, 25}. This effect was demonstrated primarily in the patients with moderate or severe phobic anxiety disorders (e.g. social phobia, agoraphobia). It is possible that the patients with more severe anxiety disorders might have more stable negative representations, perhaps dating from early childhood. Constructing positive representations might require a longer term and more cognitively oriented therapy⁷. However, these patients are a minority of those treated in primary care.

Problem Solving Treatment (PST) has shown promise in primary care setting^{16, 33}. PST is a form of CBT where patients are encouraged to focus on a specific problem and work on it in a step by step manner. Such steps are: definition of the problem, generating alternative solutions, choosing one solution, implementing the solution and evaluating outcomes^{3, 9}. Compared to other forms of CBT components, PST is briefer and suitable for delivery in crisis situations⁹. PST was not included in this review as there are no PST component analysis studies published to date. PST may be an important

review as there are no PST component analysis studies published to date. PST may be an important component of CBT for future research in primary care.

Training in CBT is potentially expensive and time consuming³³. The psychological interventions offered in primary care must be brief and user friendly³³. In light of this, it could be argued that, behavioural interventions of CBT compare favourably with other components with regards to the time and cost of training⁹.

To conclude, the present review provides support for the view that both cognitive and behavioural treatment procedures can work equally effectively and that they both alter negative mental representations through different mechanisms. Behavioural interventions are arguably more suitable in primary care because they are simpler, less time consuming and require a lower level of training for their delivery. Sophisticated cognitive interventions, however, appear to be more effective with patients who need long term treatments perhaps best delivered in secondary and tertiary care.

Table 2: CBT Component Analysis Studies

Study	Disorder	Sample Size (N)	Short-term Findings	Long-term Findings
Salkovskis et al. (2006)	PDA	N= 16	BI <COM	BI <COM
Koszycki, Benger, Shlik & Bradwejn (2007)	GSAD	N=53	CI < COM	CI=COM
Williams & Falbo (1996)	PDA/PD	N=48	CI =BI = COM > C	CI =BI = COM > C
Van Open et al. (1995)	OCD	N=71	CI > BI	CI=BI
Emmelkamp, Mersh, Vissia & Helm (1985)	SP	N=34	COM = BI	COM= BI
Lovell, Noshirvani, Thrasher & Livanou (2001)	PTSD	N=77	BI = CI = COM = C	BI = CI = COM = C
Mattick, Petters & Clarke (1989)	SP	N=43	BI =CI = COM > C	CI > COM>BI>C
Emmelkamp & Beens (1991)	OCD	N=21	COM= BI	COM = BI
Borkovec et al. (2002)	GAD	N=69	CI= BI = COM	CI= BI = COM
Arntz (2002)	PD	N=69	CI= BI	CI = BI
Ost, Thulin & Ramnero (2004)	PDA	N=73	COM = BI	COM= BI
Jacobson et al (1996)	D	N=150	CI = BI = CI	CI = BI = CI
Michelson, Marchione, Greenwald & Marchione (1996)	PDA	N=92	COM>BI	COM>BI
Hoffman (2004)	SP	N=90	COM = BI	COM>BI

*PDA: Panic Disorder with Agoraphobia; PD: Panic Disorder without Agoraphobia; SP: Social Phobia; OCD: Obsessive Compulsive Disorder; GAD: Generalised Anxiety Disorder; GASD: Generalized Social Anxiety Disorder D: Depression; PTSD: Post Traumatic Stress Disorder; SA: Social Anxiety; C: Control; BI: Behavioural Interventions; CI: Cognitive Interventions; COM: Combination of Cognitive and Behavioural Interventions

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