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Research Article

Effect of Cognitive Behaviour Therapy for Psychosis (CBTp) on Depressive Symptoms: A Review of Literature

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Abstract

Objective: There is evidence from the literature that Cognitive Behavioral Therapy for psychosis (CBTp) might have a positive effect on depressive symptoms. The aim of this paper is to examine how treatment using CBTp for patients experiencing psychosis effects depressive symptoms associated with schizophrenia.

Methods: 17 trials of CBTp that reported depressive symptoms were selected for this literature review.

Results: Six out of 17 trials reported benefits for the depressive symptoms. In 3 of these trials CBT for anxiety and low self esteem was used that did not target psychotic symptoms as primary targets. In two trials effects on depression became statistically significant at followup only.

Conclusion: CBTp can reduce depressive symptoms in patients with schizophrenia. However, there is a need for improving reporting of these symptoms in future studies.

Keywords: Cognitive behavioral therapy for psychosis; Schizophrenia; Depressive symptoms; Psychosis; Depression

Background

Approximately one third of those diagnosed with schizophrenia have concurrent depression, with these prevalence rates remaining highly consistent over time, study population, phase of the illness, and measures of depression. Comorbid depression has a considerable impact on the diagnosis, progression, and treatment of schizophrenia [1,2]. Depressive symptoms are associated with considerable long-term hindrance on the treatment of schizophrenia; those with depressive symptoms are more likely to use relapse-related mental health services, have poor social and family relationships, pose a greater danger to self and others, and have a lower quality of life, motivation, mental and physical health, lower level of functioning, and lower level of medication adherence [1,2].

Since the 1980s, Cognitive Behavioural Therapy (CBT) has been used as a method of treatment for affective disorders and has been integrated into common practice [3]. CBT was initially developed based on Beck's priniciples of cognitive therapy for depression [4]. Although, Beck described use of CBT for psychosis [5], the first controlled studies on Cognitive Behaviour Therapy For Psychosis (CBTp) emerged in the early 1990s in the United Kingdom, and this treatment has developed and included some of the theoretical underpinnings of CBT from other disorders. The first controlled studies on Cognitive Behaviour Therapy For Psychosis (CBTp) emerged in the early 1990s in the United Kingdom, and this treatment has developed and included some of the theoretical underpinnings of CBT from other disorders.

Reviews of studies of CBTp have suggested that they are useful for the treatment of schizophrenia, and CBT for psychosis is now recognised as an intervention for schizophrenia in clinical guidelines in the UK and the United States [6-8]. There is evidence from meta analyses too, that it is effective; for example [3]. This review reported overall beneficial effects of the target symptom 0.40 (95% CI= 0.252, 0.548) from 33 studies. The same meta analysis reported an effect size of 0.363 [95% CI=0.079, 0.647] for its effect on depressive symptoms, on the basis of 15 studies. This latter finding has an intuitive appeal, in that CBT was originally developed for depressive symptoms, and both CBT for anxiety and depression and the CBT for psychosis use broadly similar principles. It is therefore important to examine this effect of CBTp on depressive symptoms.

The aim of the current article is to investigate the number of studies that include or address changes in depressive symptoms in the course of CBT treatment for psychosis.

Methods

Searched source

On March, 10, 2015, we searched the Embase, Medline, Current Contents, Web of Science, PsychInfo, and the Cochrane Collaborative Register of Trials. Additionally we hand searched grey literature, and cotacted leaders in the field.

Search strategy

We performed our search using the following search terms either as key terms or as key words:

(SCHIZO* or SCHIZOPHRENIA or SCHIZOAFFECTIVE DISORDER) AND (COGNITIVE

THERAPY or COGNITIVE BEHAVIOUR THERAPY or COGNITIVE BEHAVIOR THERAPY) AND (RANDOM or RANDOMISED CONTROL TRIAL or CLINICAL TRIAL).

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Table 1: Characteristics of included studies that reported the effect of CBT for psychosis with depressive symptoms.

Study	Sample Number and Type of Patients	Diagnosis & population	Trial interventions	Measures of depression	Difference in scores[a] Mean (SD)	Comments
Tarrier et al. [21]	N =41, CSE=15 PS=12, WP=14	Treatment resistant symptoms of schizophrenia	CSE (Coping strategy enhancement) *vs.* PS (Problem solving) WP (waiting period)	PAS (Psychiatry assessment scale, depression items	NA	No improvement in depression
Kuipers et al. [17]	N=60, CBT+ TAU=28, TAU=32	Positive symptoms, Schizophrenia, Schizoaffective, delusional disorder	CBT+TAU *vs.* TAU	BDI (Beck Depression Inventory)	NA	No improvement in depression
Wykes et al. [24]	N =21, Individual =11 Group=12	Treatment resistant schizophrenia	CBT, Individual *vs.* Group	BDI (Beck Depression inventory)	NA	No improvement in depression
Halperin et al. [14]	N = 20, CBT=10, WL=10	Schizophrenia (with comorbid social anxiety)	CBT (Group) *vs.* WL (Wait List)	CDSS (Calgary Depression Scale for Schizophrenia)	CBT=4.57 (3.26), TAU= 9.33 (2.70), ($p < 0.001$)	CBT for social anxiety**
Sensky et al. [20]	N= 90, CBT =46, BF-44	Schizophrenia, positive symptoms	CBT *vs.* (BF) Befriending	MADRS (Montgomery-Asburg depression rating scale)	CBT=4.8(4.0), BF=6.0(4.4)	Improvement in CBT group at 9 months follow up (not end of therapy)#
Turkington et al. [23]	N=422,CBT=257, TAU= 165	Schizophrenia and related disorders	CBT *vs.*TAU	MADRS (Montgomery-Asburg depression rating scale)	MD=0.87(P=0.003)	Brief CBT delivered by nurses
Hall et al. [13]	N= 25, CBT=12, TAU=13	Positive symptoms	CBT +TAU *vs.* TAU	HADS (Hospital Anxiety & depression scale)	NA	CBT for self-esteem** (No improvement in depression)
Rector et al. [19]	N=42, CBT+ETAU =24, ETAU= 18	Treatment resistant schizophrenia	CBT +ETAU (enriched treatment as usual) *vs.* ETAU	BDI(Beck Depression Inventory)	NA	Improvement in both groups, but no difference between groups
Jolley et al. [15]	N= 21.CBT=12, TAU=9	Schizophrenia spectrum disorder (early psychosis)	CBT + TAU *vs.* TAU		NA	No improvement in depression
Kingsep et al. [16]	N= 33, CBT= 16, TAU=17	Schizophrenia with comorbid social anxiety	CBT (Group) *vs.* TAU	CDSS (Calgary Depression Scale for Schizophrenia)	CBT=4.06 (2.89) TAUl= 9.29 (2.87), ES(1.82)	CBT for social anxiety**
Trower et al. [22]	N=38, CTCH=18 TAU=20	Schizophrenia with command hallucinations	CTCH (CT for command hallucinations) *vs.* TAU	CDSS (Calgary depression scale for schizophrenia)	No change at end of therapy. At 12 months follow up CBT= 8.1 (7.4). TAU= 12.6 (6.7) (P=0.012)	No change in depression at end of therapy. By 12 months, depression had risen in TAU#
Granholm et al. [12]	N= 76, CBSST=37, TAU=39	Chronic schizophrenia	CBSST (CB Social skills training) + TAU *vs.* TAU	HDRS (Hamilton Depression rating scale)	NA	No improvement in depression, but increase in depression mid-therapy
Cather et al. [10]	N = 28, fCBT=15 PE=13	Schizophrenia, schizoaffective disorder with depression	FCBT (Functional cognitive behavioural therapy) *vs.* PE	PANASS (Positive and negative symptoms scale) dysphoric mood	NA	Improvement in both groups, but no difference between groups
Barrowclough et al. [9]	N =113, CBT =57, TAU=56	Schizophrenia, schizoaffective	CBT (Group) *vs.* TAU	Hospital anxiety & depression scale (HADS)	NA	No improvement in depression
Garety et al. [11]	N= 301 No carer pathway n=218, Carer pathway n=83	Non-affective psychosis	CBT *vs.* Family intervention	BDI (Beck Depression Inventory)	MD (95%CI) at 24 months= 73.07 (76.04 to 70.11)	CBT for relapse prevention. CBT showed a beneficial effect on depression at 24 months (not at 12 months)
Penn et al. [18]	N=65, CBT=32 SST=33	Schizophrenia with distressing voices	CBT (Group) *vs.* SST (Social skills training)	BDI (Beck Depression Inventory)	NA	CBT for hallucinations. No improvement in depression
Rathod et al. [25]	N=30, CaCBT=14 TAU=16	Schizophrenia and related disorders	CaCBT (Culturally adapted CBT) *vs.* TAU	MADRS (Montgomery-Asburg depression rating scale)	No change at end of therapy or at 6 months follow up	CBT was culturally adapted for ethnic minority clients

[a]MD: Mean Difference; ES: Effect Size; + RCTS that reported improvement in Mood; ** RCTs in which CBT did not directly target psychotic symptoms # No change at the end of therapy; but differences at follow up; TAU: Treatment as Usual; CBT: Cognitive Behaviour Therapy.

Selection of studies

We included any published or unpublished randomized or quasi-randomized controlled trials using CBT for schizophrenia or schizophrenia-like illnesses that reported the effect of therapy on depressive symptoms. We therefore included " studies providing outcome on depressive symptoms, either on a primary scale (such as the Hospital Anxiety and Depression Rating Scale) or a subscale or an item of another scale (such as Positive And Negative Symptoms

Scale), provided the data on these subscales is clearly given". Initial search returned 296 abstracts, of which 96 were clearly irrelevant. All abstracts were then inspected. If there was a doubt from the abstract alone, the full paper was obtained for clarification. Two authors (FN & TM) independently identified studies that had reported changes in mood. Conflicts were resolved through an independent review by MA or SF. Data were entered into an electronic database. In addition, we also inspected published meta-analyses and relevant Cochrane reviews. After removal of duplicates, abstracts and protocols we selected 36 studies for full text.

Results

We found 17 studies involving 1,396 individuals, that reported mood as a target. Information on these 17 studies was compiled and is outlined in (Table 1).

Out of 17 RCTs [9-25] only 6 [11,14,16,20,22,23] reported improvement in mood, the rest failed to find benefit in favour of CBT compared with the Control condition. In 3 RCTs the focus of CBT was not psychotic symptoms. Of these two focused on social anxiety [14,16], and another on self esteem [13]. Four studies reported use of CBT in group settings [9,14,16,18]. One trial reported effect of CBT to continue once the therapy had stopped [20], while another [22] reported an increase in depression scores in control group compared with the CBT group at follow up. Interestingly there was no statistically significant difference in mood in these two RCTs at the end of therapy. One RCT reported a brief version of CBT [23]. Most of the studies reported outcome on mood measures, without sufficient statistical details. One study [12] reported mid therapy deterioration in depression, that was possibly due to incrase in insght.

These studies focused on a variety of diagnoses, including; schizophrenia, schizoaffective disorder, delusional disorder, non-affective psychosis, psychotic disorder, and schizophrenia spectrum disorder. These studies also used a number of assessment scales to measure depression. These studies reported a variety of scales to measure depressive symptoms, which have been included in (Table 1).

Discussion

CBT for schizophrenia has great potential to address both the schizophrenia and the associated symptoms given that this form of treatment is based on a stress vulnerability model [26]. The use of this model allows for emphasis on a number of factors and triggers, such as life events and predispositions, which may address not only schizophrenia but the depressive symptoms associated with such.

None of the studies directly addressed depressive symptoms in patients with schizophrenia. Change in depressive symptoms was recorded as a secondary outcome to effect of CBT for psychosis on schizophrenic symptoms. There were, however, three studies which focused on social anxiety (2 studies) or low self esteem (1 study), and possibly could have a direct effect on depressive symptoms. Another interesting finding is that, in two studies no benefits were found for CBT at the end of therapy, but the difference becamse statistically apparent at the follow up. It is possible that the effect of CBT continues to increase with time, as individuals learn and practice techniques. In another study CBT continued to reduce the

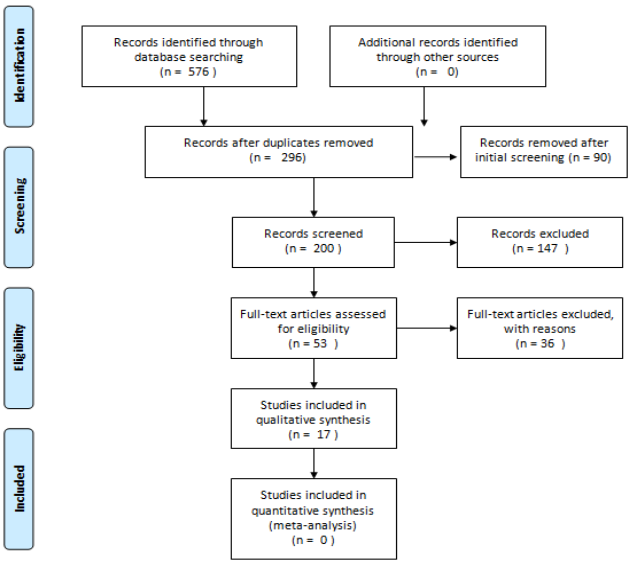

Figure 1: PRISMA flow diagram.

symptoms of depression, while in the second study patients in the control group had an increase in symptoms. It is possible that CBT might have a protective effect on depressive symptoms in those with schizophrenia. The results are not consistent as most studies did not find an improvement in mood, as a secondary outcome, and therefore it is hard to draw any firm conclusions in this area. There were also problems with the reporting of the results.

It is difficult to say with certainty what might have caused an improvement in depressive symptoms in those receiving CBT for psychosis. We can only guess that this improvement might be due to, (a) an overall improvement in psychotic symptoms, or, (b) due to the direct effect of CBT (as the CBT for psychosis is underpinned by the same principles as CBT for depression) and finally (c) it might be due to an improvement in functioning and well being. While the first two possibilities have an intuitive appeal, the last one has indirect evidence. In their meta-analysis Wykes et al., [3] examined the relationship between different outcomes and found that improvement in functioning was directly related to an improvement in mood (R=0.954, P=0.003, N=6). However, what is more difficult to explain is the lack of effect of CBTp on depressive symptoms in most studies.

Conclusion

It can be concluded that CBT for psychosis can have a positive effect on depressive symptoms. This has serious implications for overall well being and long term prognosis of patients with schizophrenia. However, these findings need to be replicated in RCTs that focus on depressive symptoms as the primary outcome. Similarly, future trials of CBT for psychosis should improve reporting of these symptoms.

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