

Best Evidence Summaries of Topics in Mental Healthcare

BEST *in* **MH** *clinical question-answering service*

Question

In adults of working age who hear distressing voices, how effective are CBT based, hearing voice groups, compared to treatment as usual, in improving patient outcomes (such as improving coping strategies, providing a sense of hope, increasing understanding of voice hearing and reducing service dependency)?

Clarification of question using PICO structure

Patients: Adults of working age who hear distressing voices

Intervention: CBT based hearing voices groups

Comparator: Treatment as usual

Outcome: Improved patient outcomes

Clinical and research implications

One high quality Cochrane review, and two additional small, poor quality randomised controlled trials (RCTs) provided data to inform this evidence summary. The Cochrane review assessed the effectiveness of all forms of cognitive behavioural therapy (CBT), compared to other psychosocial interventions, in people with schizophrenia and found no significant treatment effects for CBT (mortality, relapse, re-hospitalisation, mental state measures, social functioning, and quality of life). This review included 20 RCTs, only one of which assessed a group CBT intervention and specifically stated that the intervention targeted auditory hallucinations, however, this study also found no treatment effect for CBT on any of the outcome measures assessed (mental state measures, relapse, or re-hospitalisation). The two small RCTs both compared group CBT with usual care in people with schizophrenia and auditory hallucinations. Both RCTs reported some positive conclusions with respect to improvements in auditory hallucinations associated with group CBT, however, in neither case were these conclusions adequately supported by the data presented. There was some very limited evidence, from one small RCT, for an improvement in social functioning associated with group CBT. Overall, evidence on the effectiveness of group CBT in adults who hear voices is very limited and does not support a significant effect on auditory hallucinations.

Larger, high quality randomised controlled trials are needed to provide reliable assessments of the effectiveness of CBT which targets auditory hallucinations, and in particular group CBT, for the treatment of adults who hear voices.

What does the evidence say?

Number of included studies/reviews (number of participants)

We identified one Cochrane systematic review,¹ and two additional randomised controlled trials (RCTs), reported in three articles,^{2,3,4} which were considered relevant to this evidence summary. The Cochrane review was only partially relevant as it assessed the effectiveness of all forms of cognitive behavioural therapy (CBT), not just group CBT, compared to other psychosocial interventions, for the treatment of people with schizophrenia.¹ The review included 20 studies, but only two studies assessed group CBT interventions, and only one of these specifically stated that the intervention targeted auditory hallucinations.¹ Both of the additional RCTs included only participants with schizophrenia and auditory hallucinations and both compared a group CBT intervention with usual care.^{2,3,4}

Main Findings

The Cochrane review found no significant treatment effects for CBT on mortality, relapse, re-hospitalisation, mental state measures, social functioning, or quality of life.¹ The one study included in this review, which assessed group CBT and specifically stated that the intervention targeted auditory hallucinations included 88 participants and compared CBT with a psychoeducational programme; this study found no significant treatment effects for CBT on any of the outcome measures assessed (mental state measures, relapse, re-hospitalisation).¹ One of the additional RCTs reported significant pre- to post-treatment improvements in auditory hallucinations in the CBT group, with no significant change in the control group.^{2,3} However, no between group statistical comparisons were reported.^{2,3} The second RCT found no significant overall treatment effect of CBT on auditory hallucinations, and a small to moderate improvement in social behaviour problems at 36 week follow-up (standardised effect size 0.63 (95% CI: 0.11 to 1.16)).⁴

Authors Conclusions

The Cochrane systematic review concluded that current evidence suggests no significant advantage for CBT over other psychosocial interventions for the treatment of people with schizophrenia.¹ One of the additional RCTs concluded that group CBT was helpful in the treatment of auditory hallucinations,^{2,3} and the second concluded that group CBT improves social functioning but unless therapy is provided by experienced CBT therapists hallucinations are not reduced.⁴

Reliability of conclusions/Strength of evidence

One high quality Cochrane systematic review concluded that current evidence does not suggest significant benefit for CBT, compared to other psychosocial interventions, for people with schizophrenia. This conclusion is likely to be reliable. Only one of the 20 studies included in this review assessed a group CBT intervention and specifically stated that the intervention targeted auditory hallucinations, however, this study also found no significant treatment effect for CBT. Two additional RCTs were identified; both were small and poorly reported, with important methodological weaknesses. Although both reported some positive conclusions with respect to improvements in auditory hallucinations associated with group CBT, in neither case were these conclusions adequately supported by the data presented. There was some very limited evidence, from one small RCT, for an improvement in social functioning associated with group CBT.

What do guidelines say?

NICE guidelines do not specifically consider CBT based groups, however when discussing CBT as a therapy for schizophrenia, they state the following:

“CBT should be delivered on a one-to-one basis over at least 16 planned sessions and:

- follow a treatment manual so that:
 - people can establish links between their thoughts, feelings or actions and their current or past symptoms, and/or functioning
 - the re-evaluation of people’s perceptions, beliefs or reasoning relates to the target symptoms,
- also include at least one of the following components:
 - people monitoring their own thoughts, feelings or behaviours with respect to their symptoms or recurrence of symptoms
 - promoting alternative ways of coping with the target symptom
 - reducing distress
 - improving functioning.”

<http://guidance.nice.org.uk/CG82/Guidance>

(2010, CG82, pp. 369).

Furthermore, when discussing psychological interventions for personality disorder NICE guideline state that:

“Adaptations have also been made in cognitive behavioural therapy (CBT) and interpersonal therapy (IPT). Some of these adapted therapies are offered as psychological therapy programmes (for example, mentalisation-based partial hospitalisation and DBT); other are provided as more straightforward time-limited one-to-one or group treatments (for example, CBT or CAT).”

<http://guidance.nice.org.uk/CG78/Guidance>

(2009, CG78, pp. 27)

Based on one, high quality Cochrane review, current evidence does not appear to support a general recommendation for CBT in people with schizophrenia. Current NICE guidelines do not specifically address the use of group CBT interventions in this population and the evidence identified in this summary is limited and inconsistent.

Date question received: 03/07/2013

Date searches conducted: 10/07/2013

Date answer completed: 17/07/2013

References

SR

1. Jones C, Hacker D, Cormac I, Meaden A, Irving CB. (2012) Cognitive behaviour therapy versus other psychosocial treatments for schizophrenia. *Cochrane Database of Systematic Reviews*. Issue 4.
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008712.pub2/pdf>

RCTs

2. McLeod, T., Morris, M., Birchwood, M. and Dovey, A. (2007) Cognitive behavioural therapy group work with voice hearers. Part 1. *British Journal of Nursing* 16 (4) pp. 248-252.
3. McLeod, T., Morris, M., Birchwood, M. and Dovey, A. (2007) Cognitive behavioural therapy group work with voice hearers. Part 2. *British Journal of Nursing* 16 (5) pp. 292-295.
4. Wykes, T., Hayward, P., Thomas, N., Green, N., Surguladze, S., Fannonb, D., and Landauc, S. (2005) What are the effects of group cognitive behaviour therapy for voices? A randomised control trial. *Schizophrenia Research* 77. pp. 201– 210.

Results

Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Jones (2012)	03/2010	<p><i>Population:</i> Studies of people with a diagnosis of schizophrenia, by any criteria, were eligible for inclusion. Studies which included participants with diagnoses of other psychotic disorders were included if >50% of participants had a diagnosis of schizophrenia. Studies of people with late-onset (after age 60 years) schizophrenia were excluded.</p> <p><i>Intervention:</i> Studies assessing cognitive behavioural therapy (CBT) were eligible for inclusion. The authors categorised 'well defined' CBT interventions as having the following characteristics: a discrete psychological intervention, administered in addition to, and separately from, other therapeutic interventions; recipients establish links between their symptoms, thoughts and beliefs, and consequent distress or problem behaviour; participants re-evaluate of their perceptions, beliefs or reasoning relating to the target symptoms.</p> <p><i>Comparator:</i> Standard care, active or non-active other psychological or social interventions.</p> <p><i>Outcomes:</i></p>	<p>Total n=20 studies</p> <p>Group CBT targeting auditory hallucinations n=1 study</p>	<p>This review aimed to assess the effects of CBT for people with schizophrenia when compared with other psychological therapies.</p> <p>Studies included participants between the ages of 18 and 65 years, who were selected from in-patient and out-patient populations at varying phases of illness (from acute phase to relatively stable but with treatment resistant symptoms), and with a range of typical co-morbidities. Participants had a current diagnosis of psychosis (schizophrenia, delusional disorder or schizoaffective disorder) and all studies employed operational criteria for diagnoses (DSM III-R, DSM IV, DSM-IV TR or ICD-10). Many participants were reported to have comorbid mental disorders, such as depression or anxiety disorder. The 20 trials were considered to have included participants with a representative range of duration of illness.</p> <p>CBT interventions varied with respect to</p>	<p>The review reported a clear research objective and defined appropriate inclusion criteria.</p> <p>Relevant studies were identified from a search of the Cochrane Schizophrenia Group's Register, which is compiled from regular searches of four major bibliographic databases and handsearches of conference proceedings. In addition, the bibliographies of</p>

		<p>The primary outcome measures specified were: all cause mortality and sudden unexpected death or suicide; no clinically important response as defined by the individual studies (for example global impression less than much improved, or less than 50% reduction on a specified rating scale) - short-, medium- and long-term. Secondary clinical outcomes were: other measures of mental state; adverse effects; engagement with services; global state; quality of life; satisfaction with treatment</p> <p><i>Study design:</i> Parallel or cross-over randomised controlled trials (RCTs) were eligible for inclusion.</p>	<p>both the target and the nature of the intervention. In addition to cognitive restructuring, hypothesis testing and behavioural experiments, most CBT interventions commonly included other therapeutic activities such as psychoeducation, relapse prevention, coping strategy enhancement, problem-solving strategies or relaxation training. Only one of the included studies assessed group a CBT intervention and reported specifically targeting auditory hallucinations.</p> <p>Comparator interventions were divided into active and non-active (e.g. unstructured conversations with a therapist). All study participants received standard care, in addition to CBT and or the comparator intervention, and standard care typically included anti-psychotic medication.</p> <p>Study duration ranged from eight weeks to five years.</p> <p>Overall results of the review: No significant differences were found between CBT and comparator psychosocial interventions for mortality, relapse, re-hospitalisation, mental state measures, social functioning, or quality of life. The only</p>	<p>included studies were screened for additional articles.</p> <p>All stages of the review process included measures to minimise error and bias (involvement of multiple reviewers).</p> <p>The methodological quality of included studies was assessed using the Cochrane risk of bias tool.</p> <p>Analyses were clearly described and broadly appropriate. Assessment and exploration of clinical and statistical heterogeneity was reported.</p>
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				<p>significant effect reported was for Beck Depression Inventory (BDI) longer term (not defined); mean difference -6.21 (95% CI: -10.81 to -1.61), based on 2 RCTs, one of which assessed an individual CBT intervention which reported targeting auditory hallucinations.</p> <p>Group CBT targeting auditory hallucinations: The single study of group CBT which reported targeting auditory hallucinations included 88 participants and compared CBT with a psychoeducational programme. This study reported no significant differences between the CBT intervention and the comparator on any of the outcome measures assessed (mental state measures, relapse, re-hospitalisation).</p>	
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RCTs






Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
McLeod et al. (2007, part 1 and 2)	<i>Participants:</i> Twenty adults with a DSM-IV (Diagnostic and Statistical Manual) (American Psychiatric Association, 1994) diagnosis of schizophrenia who were experiencing auditory hallucinations. Participants were under the care of the local mental health	n = 20	<p>This study did not report a clearly stated aim.</p> <p>Study participants were of mixed gender with a range of duration of voice hearing (details not reported).</p> <p>There was a significant reduction, from baseline, in the</p>	No details of the randomisation process or allocation concealment

	<p>trust and, with one exception, were referred from community settings.</p> <p><i>Intervention:</i> An 8 week, 8 session, group CBT programme, included education/information giving, anxiety management techniques, a space to discuss experiences, find explanations and try coping strategies. Usual care was continued.</p> <p><i>Comparator:</i> Treatment as usual.</p> <p><i>Outcomes:</i> Beliefs About Voices Questionnaire (BAVQ/BAVQ-R) Chadwick and Birciwood, 1995, 2000); Auditory Hallucinations Rating Scale (PSYRATS) Haddock et al, 1999); The Beck Depression Inventory (Beck, 1961); The Power Scale (Birchwood et al, 2000); The Positive and Negative Syndrome Scale (PANNS) (Kay et al, 1987). Assessments were undertaken pre-treatment and post-treatment (week 12).</p>		<p>frequency of hearing voices in the CBT group (baseline mean 2.60±0.70, week 12 mean 1.40±0.97, p < 0.01), with no significant change in the control group; no statistical measures of between group difference were reported.</p> <p>There was a significant reduction, from baseline, in the perceived power of voices in the CBT group (baseline mean 4.20±1.00, week 12 mean 3.30±1.06, p < 0.01), with no significant change in the control group; no statistical measures of between group difference were reported.</p> <p>There were no significant changes from baseline, in level of distress, in either group.</p> <p>90% of attendees reported finding the group helpful on a feedback questionnaire.</p>	<p>were reported.</p> <p>The nature of the intervention precluded blinding of participants and study personnel and it was unclear whether outcome assessments were undertaken independently.</p> <p>No details of the analysis methods were reported.</p> <p>The specified outcome measures were not fully reported and it was unclear whether all</p>
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











				participants were included in the analyses.
Wykes et al (2005)	<p><i>Participants:</i> Adults (>18 years) were recruited from a rolling programme of referrals from community mental health teams. All fulfilled the following criteria: DSM IV criteria for schizophrenia by chart review; persistent and distressing auditory hallucinations (score 3 on hallucinations item on the PANSS); no planned changes in medication during the treatment period; substance abuse or medical disorder does not significantly contribute to symptoms.</p> <p><i>Intervention:</i> Group CBT; Seven sessions; (i) Engagement and sharing of information about the voices, (ii) Exploring models of psychosis, (iii) Exploring beliefs about hallucinations, (iv) Developing effective coping strategies, (v) How to improve self-esteem, (vi) Developing an overall model of coping with voices, (vii) Follow-up session. The duration of the intervention and frequency of the sessions were not reported.</p> <p><i>Comparator:</i> Treatment as usual.</p> <p><i>Outcomes:</i> Social Behaviour Schedule (SBS, Wykes and Sturt, 1986); The Hallucinations Scale (PSYRATS; Haddock et al., 1999), a self</p>	N = 85 (CBT arm n=45, control arm n=40).	<p>This study aimed to assess the effectiveness of group CBT in settings of community mental health teams with a relatively short therapy duration.</p> <p>The mean age of study participants was 40 years and 59% were male. 65% had a disease duration >10 years and 82% were currently prescribed atypical antipsychotics. The mean baseline SBS score was 12.5±8.5, the mean baseline PSYRATS score was 28±6.1, the mean baseline Rosenberg self-esteem score was 17.4±3.9 and the median baseline number of coping strategies was 6.5 (range 0-16).</p> <p>There was a statistically significant improvement in social behaviour problems in the CBT group compared to the control group, as indicated by total SBS score. Post-treatment and follow-up standardised effect sizes were small and moderate (0.26 (95% CI: -0.26 to 0.77) and 0.63 (95% CI: 0.11 to 1.16), respectively).</p> <p>There were no significant treatment effects on PSYRATS auditory hallucination scores, self esteem, or number of coping strategies employed. Where a clustering effect indicated improvements in hallucinations in some CBT groups, this was associated with receiving treatment early in the trial and having experienced therapists.</p>	<p>Randomisation was described as being carried out “independently and in blocks”; no further details were reported.</p> <p>No details of allocation concealment were reported.</p> <p>The nature of the intervention precluded blinding of participants and study personnel and it was unclear whether outcome assessments</p>


	<p>report measure of the experience of auditory hallucinations; self esteem measured by Rosenberg measure (Rosenberg, 1965). Effective Coping strategies were assessed from the appropriate section of the Mental Health Research Institute Unusual Perceptions Schedule (MUPS; Carter et al., 1995). Assessments were conducted at baseline, post-intervention (week 10) and follow-up (week 36).</p>			<p>were undertaken independently.</p> <p>Analysis methods were described in detail, but it was not clear whether analyses were conducted on an intention-to-treat basis.</p> <p>Results were reported for all specified outcome measures.</p>
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Risk of Bias: SRs


Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Jones 2012					

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
McLeod 2007 (references 2 and 3)						
Wykes 2005						

 Low Risk

 High Risk

 Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>SRs and Guidelines</i>			
NICE	Hearing voices Auditory Hallucinations Group CBT	104	2
DARE	(cogniti* adj3 (behavio\$ OR intervention* OR psychotherap* OR technique* OR therap* OR treat*)) IN DARE 907 2 (CBT) IN DARE 247 3 (hallucinat*) IN DARE 69 4 (auditory) IN DARE 82 5 (hear* ADJ3 voic*) IN DARE 3 6 MeSH DESCRIPTOR Cognitive Therapy EXPLODE ALL TREES 596 7 MeSH DESCRIPTOR Hallucinations EXPLODE ALL TREES 13 8 MeSH DESCRIPTOR Affective Disorders, Psychotic EXPLODE ALL TREES 149 9 (hear* ADJ3 voic*) IN DARE 3 10 MeSH DESCRIPTOR Psychotic Disorders EXPLODE ALL TREES 131 11 (group* ADJ5 (cognit*)) IN DARE 118 12 #1 OR #2 OR #6 OR #11 1129 13 #3 OR #4 OR #5 OR #7 OR #8 OR #9 OR #10 422 14 #12 AND #13 45		
<i>Primary studies</i>			
CENTRAL	#1 hearing voices 176 #2 group*308436 #3 voices and group*930 #4 #1 and #2 130 #5 #3 or #4 930 #6 cognitive or cbt 22390	33	

	#7 #5 and #6 194		
PsycINFO	1. PsycINFO; AUDITORY HALLUCINATIONS/; 1329 results. 2. PsycINFO; (hear* adj3 voices).ti,ab; 839 results. 3. PsycINFO; 1 OR 2; 1999 results. 4. PsycINFO; COGNITIVE BEHAVIOR THERAPY/; 9888 results. 5. PsycINFO; CBT.ti,ab; 6752 results. 6. PsycINFO; "cognitive behavio*" .ti,ab; 25664 results. 7. PsycINFO; 4 OR 5 OR 6; 27127 results. 8. PsycINFO; group*.ti,ab; 617073 results. 9. PsycINFO; GROUP COUNSELING/ OR GROUP PSYCHOTHERAPY/; 20613 results. 10. PsycINFO; (voices AND group*).ti,ab; 1804 results. 12. PsycINFO; 8 OR 9 OR 10; 617898 results. 13. PsycINFO; 3 AND 7 AND 12; 24 results.	24	
Embase	14. EMBASE; AUDITORY HALLUCINATION/; 2887 results. 15. EMBASE; (hear* adj3 voices).ti,ab; 478 results. 16. EMBASE; 14 OR 15; 3273 results. 17. EMBASE; COGNITIVE BEHAVIOR THERAPY/; 30538 results. 18. EMBASE; CBT.ti,ab; 6467 results. 19. EMBASE; "cognitive behavio*" .ti,ab; 19534 results. 20. EMBASE; 17 OR 18 OR 19; 38825 results. 21. EMBASE; group*.ti,ab; 2892769 results. 22. EMBASE; GROUP COUNSELING/ OR GROUP PSYCHOTHERAPY/; 15618 results. 23. EMBASE; (voices AND group*).ti,ab; 1108 results. 24. EMBASE; 21 OR 22 OR 23; 2897350 results. 25. EMBASE; 16 AND 20 AND 24; 33 results.	33	
Medline	31. MEDLINE; (hear* AND voices).ti,ab; 748 results. 32. MEDLINE; "auditory hallucination*" .ti,ab; 1439 results. 33. MEDLINE; (voice* AND group*).ti,ab; 4869 results. 34. MEDLINE; group*.ti,ab; 2451305 results. 35. MEDLINE; PSYCHOTHERAPY, GROUP/; 11742 results. 36. MEDLINE; 34 OR 35; 2454670 results.	49	

	37. MEDLINE; 31 OR 32; 2091 results. 38. MEDLINE; 36 AND 37; 466 results. 39. MEDLINE; 33 OR 38; 5114 results. 40. MEDLINE; COGNITIVE THERAPY/; 15483 results. 41. MEDLINE; "cognitive behavi*".ti,ab; 14796 results. 42. MEDLINE; CBT.ti,ab; 4859 results. 43. MEDLINE; 40 OR 41 OR 42; 23538 results. 44. MEDLINE; 39 AND 43; 49 results.		
Summary	NA	NA	

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