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in Mental Health
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Best Evidence Summaries of Topics in Mental Healthcare

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

Question

"In adults with schizophrenia in secure settings, how effective is cognitive behavioural therapy, compared to treatment as usual/any other intervention, in reducing symptoms of schizophrenia?

Clarification of question using PICO structure

Patients: In adults with schizophrenia in secure settings
Intervention: Cognitive Behavioural Therapy (CBT)
Comparator: Treatment as usual/any other intervention
Outcome: Reducing symptoms of schizophrenia

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Clinical and research implications

Evidence from one small randomised controlled trial (RCT) indicates that CBT may offer some potential to improve symptoms and reduce aggressive behaviour in patients with schizophrenia. However, results were inconsistent and findings may have limited generalisability, as the trial was conducted in patients with severe symptoms and a history of violence, the majority of whom were resident in a secure unit.

Further large, high quality RCTs are needed to confirm the findings of this trial and to investigate the effectiveness of CBT in patients with less severe disease and at different stages (acute vs. chronic).

What does the evidence say?

Number of included studies/reviews (number of participants)

We were only able to identify one RCT which reported data relevant to this evidence summary.[1] This trial compared a CBT programme for psychosis to a social activity therapy (SAT) programme. The trial was conducted in people with schizophrenia, who had persistent hallucinations and/or delusions and a history of violent behaviour, 62% of whom were resident in a secure unit; findings may therefore have limited generalisability to a wider schizophrenia population or to those with less severe symptoms.

Main Findings

The RCT reported a statistically significant reduction in the number of participants who had been physically aggressive and the number of incidents of physical aggression, during 6 month follow-up, in the CBT group compared to the SAT group. However, this difference was not apparent during the six month treatment period, and there were no significant difference on measures of verbal aggression at any time point.[1] With respect to symptoms of schizophrenia, participants in the CBT showed greater reductions in the severity of delusions, but not auditory hallucinations, than those in the SAT group ($p = 0.003$), however, this effect did not persist during 6 month follow-up.[1] For in-patients only, the SAT group had significantly more participants who were classified as 'no change/increase risk management' on the Historical Clinical Risk (HCR) management scale than the CBT group and the CBT group had more participants with decreased risk management requirements ($p = 0.014$).[1] There were no significant differences between the CBT and SAT groups on any other outcome measure.

Authors Conclusions

The study authors concluded that CBT targeted at psychosis and anger may be an effective treatment for reducing the occurrence of violence and further investigation of its benefits is warranted.

Reliability of conclusions/Strength of evidence

Evidence from one small, generally well conducted RCT suggested that CBT may offer some potential to improve symptoms and reduce aggressive behaviour in patients with schizophrenia.[1] However, findings were not consistent across different measures of aggressive behaviour at different time points. The trial was rated as being at high risk of bias with respect to participant and therapist blinding, however, it should be noted that the nature of the intervention and comparator effectively precludes blinding and that this is partially compensated for by blinding of outcome assessors. It

should also be noted that the findings of this trial may have limited generalisability, as it was conducted in patients with severe symptoms and a history of violence, the majority of whom were resident in a secure unit.

What do guidelines say?

NICE guidelines consider the use of CBT for adults with schizophrenia. In the preface of the guideline, they make the following statement;

(pp. 14)
"The guideline will also be relevant to the work, but will not cover the practice, of those in:

- occupational health services
- social services
- forensic services
- the independent sector."

The use of CBT is discussed in the same guideline;

(pp. 274-275)
"Offer cognitive behavioural therapy (CBT) to all people with schizophrenia. This can be started either during the acute phase21 or later, including in inpatient settings."

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

- follow a treatment manual22 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."

"Offer CBT to assist in promoting recovery in people with persisting positive and negative symptoms and for people in remission"

Available data, as identified by this evidence summary, do not appear to be sufficient to support the above guidance.

Date question received: 13/01/2014
Date searches conducted: 12/11/2013
Date answer completed: 27/01/2014

References

RCTs

1. Haddock, G., Barrowclough, C., Shaw, J.J., Dunn, G., Novaco, R.W. and Tarrier, N. (2009) Cognitive-behavioural therapy v. social activity therapy for people with psychosis and a history of violence: randomised controlled trial. *The British Journal of Psychiatry 194* pp.152-157.

Guidelines

National Institute for Health and Care Excellence (2010) Schizophrenia. Core interventions in the treatment and management of schizophrenia in adults in primary and secondary care (updated edition) London: National Institute for Health and Care Excellence. http://www.nice.org.uk/nicemedia/live/11786/43607/43607.pdf

Results

RCTs

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Haddock et al. (2009)	*Participants:* Male and female in-patients and out-patients recruited from NHS services in North West of England. Inclusion criteria: diagnosis of schizophrenia or schizoaffective disorder according to DSM-IV; a history of violent behaviour; experiencing persistent hallucinations and/or delusions (score ≥4 on PANSS sub-scales P1 and P3); receiving antipsychotic medication. *Intervention:* CBT programme which included motivational strategies to aid engagement, strategies to reduce severity and distress of psychotic symptoms and reduce severity of anger linked to violence and aggression (25 sessions conducted by therapists who met the British Association of Behavioural and Cognitive Psychotherapies' Minimum Training Standards for the practice of CBT and had prior experience of applying CBT for people with psychosis). *Comparator:*	n= 77	This trial aimed to assess the effects of CBT on violence, anger, psychosis and risk outcomes in people with a diagnosis of schizophrenia and a history of violence. Most study participants 66/77 (86%) were male, 83% were of white ethnicity and 86% were single. Sixty-nine participants had a diagnosis of schizophrenia, 7 had a diagnosis of schizoaffective disorder and was diagnosed with an un-specified psychotic illness. More than half 48/77 (62%) of study participants were resident in a secure ward and only 4 were resident in there own homes. The mean age of participants in the CBT group was 35.7 ± 12.5 years, and the mean age of participants in the SAT group was 33.9 ± 9.7 years. There were five withdrawals after randomisation; three participants decided not to take part in the study (2 in the CBT group and 1 in the SAT group), one moved away from the area, and one died of natural causes. There were no significant differences between the groups on the number of sessions or minutes of therapy received; all but eight (four from each group) of the study participants received at least ten sessions of therapy.	Randomisation was undertaken by personnel independent of the trial using a computer-generated procedure stratified for gender, presence of substance misuse, severity of anger, presence or absence of actual violence in the last 12 months and residence (out-patient or in-patient).

	Social activity therapy (SAT) programme aimed at helping participants identify activities they enjoyed and helping them carry these out (25 sessions). *Outcomes:* Primary outcome; assessment of aggression and violence (according to sub-scales of Ward Anger Rating Scale WARS). Secondary outcomes; staff-rated aggression and anger (WARS), self-reported anger (Novaco Anger Scale and Provocation Inventory NAS-PI), symptom assessment (Positive and Negative syndrome Scale PANSS, Psychotic Symptom Rating Scales PSYRATS, Global Assessment of Functioning scale GAF), assessment of risk (Historical, Clinical, Risk Management scale HCR-20). Outcome data were collected at four time points: 3 months prior to inclusion in the trial; 6 weeks (pre-treatment baseline); at the end of 6 months treatment; after 6 months follow-up.		Overall, there were no significant differences between the treatment groups in the number of participants who engaged in violent or aggressive acts during treatment or follow-up. However, the CBT group had a significantly lower number of incidents during the treatment period (p = 0.039). There were no statistically significant differences, over the 6 month treatment period or during 6 month follow-up, in the number of participants who engaged in verbally aggressive acts or in the number of incidents of verbal aggression. During the 6 month treatment period, there were no statistically significant differences in the number of participants who were physically aggressive or in the number of incidents of physical aggression. However, during the follow-up period, significantly more participants in the SAT group had been physically aggressive than in the CBT group (p = 0.004), and there was a significantly lower number of physically aggressive incidents in the CBT group (p = 0.028). There were significant interactions between group and treatment on total PSYRATS delusions (but not auditory hallucinations) outcomes at end of treatment; participants in the CBT showed greater reductions in the severity of delusions than those in the SAT group (p = 0.003). However, this effect did not persist during 6 month follow-up. Security risk, on the clinical risk scales of the HCR, was assessed at follow-up for in-patients only (n = 48). The SAT group had significantly more participants who were classified	Allocation concealment was not described. The nature of the intervention and comparator precluded blinding of participants and therapists. Outcome assessors were blinded to treatment group. Analyses were conducted on an intension-to-treat basis. Results were reported for all specified outcomes, but

			as 'no change/increase risk management' than the CBT group and the CBT group had more participants with decreased risk management requirements (p = 0.014). There were no significant differences between the CBT and SAT groups on any other outcome measure.	reporting was limited to measures of significance (some incidence data reported for primary outcome only and additional data were included in supplementary tables).

Risk of Bias: SRs

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Haddock et al. (2009)	☺	?	☹	☺	☺	☺

☺Low Risk ☹High Risk ? Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
SRs and Guidelines			
NICE	schizophrenia AND cbt	68	1
DARE	(forensic* OR secure* OR prison*) IN DARE 111 Delete 2 (offence* OR offense* OR offend*) IN DARE 69 Delete 3 (deviant* OR delinquen*) IN DARE 30 Delete 4 (crime* or criminal*) IN DARE 97 Delete 5 MeSH DESCRIPTOR Forensic Psychiatry EXPLODE ALL TREES 22 Delete 6 MeSH DESCRIPTOR Forensic Nursing EXPLODE ALL TREES 0 Delete 7 MeSH DESCRIPTOR Criminals EXPLODE ALL TREES 6 Delete 8 MeSH DESCRIPTOR Criminal Psychology EXPLODE ALL TREES 3 Delete 9 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8	249	1
Primary studies			
CENTRAL	#1 schizophrenia:ti,ab,kw (Word variations have been searched) 8079 #2 psychosis or psychoticpsychosis or psychotic 4812 #3 CBTCBT 2131 #4 "cognitive behav*""cognitive behav*" 6004 #5 "cognitive therapy""cognitive therapy" 5748 #6 #1 or #2#1 or #2 10918 #7 #3 or #4 or #5#3 or #4 or #5 8641 #8 #6 and #7#6 and #7 799 #9 forensicforensic 328 #10 securesecure 1648 #11 offendersoffenders 537 #12 MeSH descriptor: [Forensic Psychiatry] explode all trees 158 #13 #9 or #10 or #11 or #12 2535 #14 #8 and #13 = 3	3	

PsycINFO	1. PsycINFO; exp SCHIZOPHRENIA/; 70726 results. 2. PsycINFO; Schizophrenia.ti,ab; 75402 results. 3. PsycINFO; Schizo* OR psychotic OR psychosis .ti,ab; 98379 results. 4. PsycINFO; 1 OR 2 OR 3; 130484 results. 5. PsycINFO; COGNITIVE BEHAVIOR THERAPY/; 10627 results. 6. PsycINFO; CBT.ti,ab; 7233 results. 7. PsycINFO; "cognitive behavi*".ti,ab; 26761 results. 8. PsycINFO; (cognitive adj3 therap*).ti,ab; 19395 results. 9. PsycINFO; 5 OR 6 OR 7 OR 8; 33701 results. 10. PsycINFO; 4 AND 9; 1412 results. 11. PsycINFO; (secure adj3 service*).ti,ab; 272 results. 12. PsycINFO; "low secure".ti,ab; 113 results. 13. PsycINFO; "medium secure".ti,ab; 317 results. 14. PsycINFO; "high secure".ti,ab; 142 results. 15. PsycINFO; (forensic adj3 psychiat*).ti,ab; 3366 results. 16. PsycINFO; (forensic adj3 mental).ti,ab; 908 results. 17. PsycINFO; (secure adj3 hospital*).ti,ab; 172 results. 18. PsycINFO; (forensic adj3 service*).ti,ab; 657 results. 19. PsycINFO; FORENSIC PSYCHIATRY/; 3431 results. 20. PsycINFO; FORENSIC PSYCHOLOGY/; 3310 results. 21. PsycINFO; MENTALLY ILL OFFENDERS/; 3068 results. 22. PsycINFO; 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21; 10983 results. 23. PsycINFO; 10 AND 22; 16 results.	16	
Embase	29. EMBASE; Schizophrenia.ti,ab; 98185 results. 30. EMBASE; Schizo*.ti,ab; 129525 results. 31. EMBASE; (psychotic OR psychosis).ti,ab; 55532 results. 32. EMBASE; exp SCHIZOPHRENIA/; 136186 results. 33. EMBASE; 29 OR 30 OR 31 OR 32; 195284 results. 34. EMBASE; CBT.ti,ab; 7200 results. 35. EMBASE; "cognitive behavi*".ti,ab; 21126 results.	27	

	36. EMBASE; (cognitive adj3 therap*).ti,ab; 16433 results. 37. EMBASE; COGNITIVE THERAPY/; 32816 results. 38. EMBASE; 34 OR 35 OR 36 OR 37; 43748 results. 39. EMBASE; (secure adj3 service*).ti,ab; 271 results. 40. EMBASE; "low secure".ti,ab; 56 results. 41. EMBASE; "medium secure".ti,ab; 279 results. 42. EMBASE; "high secure".ti,ab; 117 results. 43. EMBASE; (forensic adj3 psychiat*).ti,ab; 3576 results. 44. EMBASE; (forensic adj3 mental).ti,ab; 488 results. 45. EMBASE; (forensic adj3 service*).ti,ab; 818 results. 46. EMBASE; (secure adj3 mental).ti,ab; 66 results. 47. EMBASE; (secure adj3 psychiatr*).ti,ab; 216 results. 48. EMBASE; (secure adj2 hospital*).ti,ab; 238 results. 49. EMBASE; FORENSIC PSYCHIATRY/; 12118 results. 50. EMBASE; 39 OR 40 OR 41 OR 42 OR 43 OR 44 OR 45 OR 46 OR 47 OR 48 OR 49; 14200 results. 51. EMBASE; 33 AND 38 AND 50; 27 results.		
Medline	52. MEDLINE; Schizophrenia.ti,ab; 73126 results. 53. MEDLINE; Schizo*.ti,ab; 101568 results. 54. MEDLINE; (psychotic OR psychosis).ti,ab; 39194 results. 55. MEDLINE; exp SCHIZOPHRENIA/; 82456 results. 56. MEDLINE; 52 OR 53 OR 54 OR 55; 143817 results. 57. MEDLINE; CBT.ti,ab; 4704 results. 58. MEDLINE; "cognitive behavi*".ti,ab; 14321 results. 59. MEDLINE; (cognitive adj3 therap*).ti,ab; 10688 results. 60. MEDLINE; COGNITIVE THERAPY/; 14686 results. 61. MEDLINE; 57 OR 58 OR 59 OR 60; 24411 results. 62. MEDLINE; (secure adj3 service*).ti,ab; 174 results. 63. MEDLINE; (secure adj3 mental).ti,ab; 42 results. 64. MEDLINE; (secure adj3 psychiatr*).ti,ab; 127 results. 65. MEDLINE; (secure adj2 hospital*).ti,ab; 137 results. 66. MEDLINE; "low secure".ti,ab; 26 results.	10	

	67. MEDLINE; "medium secure".ti,ab; 139 results. 68. MEDLINE; "high secure".ti,ab; 51 results. 69. MEDLINE; (forensic adj3 psychiat*).ti,ab; 2432 results. 70. MEDLINE; (forensic adj3 mental).ti,ab; 304 results. 71. MEDLINE; (forensic adj3 service*).ti,ab; 539 results. 72. MEDLINE; FORENSIC PSYCHIATRY/; 7827 results. 73. MEDLINE; 62 OR 63 OR 64 OR 65 OR 66 OR 67 OR 68 OR 69 OR 70 OR 71 OR 72; 9428 results. 74. MEDLINE; 56 AND 61 AND 73; 10 results.		
Summary	**NA**	**NA**	

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