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 psycho-educational groups, compared to treatment as usual, in increasing coping skills, improving stress management and improving understanding of the experience and potential triggers of voice hearing?

Clarification of question using PICO structure

Patients: Adults of working age who hear distressing voices.
Intervention: Psycho-educational groups.
Comparator: Treatment as usual.
Outcome: Increasing coping skills, improving stress management and improving understanding of the experience and potential triggers of voice hearing.

Clinical and research implications

Evidence of the effects of any psycho-educational intervention (group or individual) on outcomes related to knowledge of illness, symptoms, social and general functioning, and compliance with medication was contradictory. Data from two systematic reviews, both with significant methodological weaknesses, indicated that group psycho-educational interventions and psycho-educational interventions which include both patients and families may be associated with small reductions in relapse rates compared with usual care. The results of one small, but high quality, randomised controlled trial (RCT) indicated that group cognitive behavioural therapy (CBT) and group psycho-educational interventions are likely to be similarly effective, though there was some indication that group CBT may be associated with fewer re-hospitalisations. We were not able to identify any studies which specifically compared outcomes assessing coping skills, stress management and understanding of the experience and potential triggers of voice hearing in patients receiving group psycho-educational interventions compared with those receiving usual care. Further, high quality RCTs are needed, focussing on the effects of group-psycho-educational interventions on outcomes which measure patients' experience of and ability to cope with their illness.

What does the evidence say?

Number of included studies/reviews (number of participants)

We identified two systematic reviews,[1,2] and one additional randomised controlled trial (RCT),[3] which were considered partially relevant to this evidence summary. None of the identified articles focused solely on comparisons or group psycho-educational interventions versus usual care and reported outcomes did not generally match those specified in the PICO criteria for this evidence summary. One systematic review included RCTs of any psycho-educational intervention versus usual care (44 studies, n=5,142 participants); some data were reported for subgroup analyses of group psycho-educational interventions versus usual care (17 studies, n=2,052).[1] The second review included RCTs which compared any psycho-educational intervention with usual care, waiting list control or an unspecified intervention (18 studies, n=1,534).[2] Although some subgroup data were reported for psycho-educational interventions that included families compared with those that focused on patients only, no separate data were presented for group interventions specifically; overall 12 of the 18 included studies reported using group psycho-educational interventions.[2] The additional RCT compared the effectiveness of a group psycho-educational programme with that of a group cognitive behavioural therapy (CBT) intervention.[3]

Main Findings

One systematic review found a borderline significant reduction in relapse rates associated with group psycho-educational interventions compared to usual care over the medium (RR 0.74 (95% CI: 0.57 to 0.96), 5 studies, n=410)and long term (RR 0.81 (95% CI: 0.66 to 0.99), 2 studies, n=344); exact durations were not specified.[1] The same review found a reduction in non-compliance with medication (RR 0.26 (95% CI: 0.13 to 0.52), 4 studies, n=367) associated with group psycho-educational interventions.[1] No data were reported for outcomes relating to coping skills, stress management, or improving understanding of the experience and potential triggers of voice hearing in studies of group psycho-educational interventions.[1] For overall data (any psycho-educational intervention), data suggested no significant differences between psycho-educational interventions and usual care on measures of knowledge, insight into disease, or illness-related attitudes.[1] Scale-derived data suggested that psycho-educational interventions were associated with better social and global functioning.[1] The second systematic review showed a significant overall effect size (any psycho-educational intervention) on relapse at 7-12 months follow-up (0.48 (95% CI: 0.15 to 0.82), 7 studies, n=362); subgroup analyses indicated that this effect was significant only where psycho-educational interventions included both patients and families.[2] A significant post-treatment effect on knowledge of illness measures was also observed (0.48 995% CI: 0.12 to 0.83), 4 studies, n=278), however, there were insufficient data to assess knowledge outcomes at follow-up.[2] Psycho-educational interventions had no effect on symptoms, functioning, or medication adherence.[2] The additional RCT found no significant differences in compliance with medication, relapse rates, or improvements in symptom scores between participants treated with group CBT and those in the group psycho-educational programme.[3] The CBT group experienced significantly fewer re-hospitalisations during six months follow-up than the psycho-educational programme group (0/31 versus 5/40).[3]

Authors Conclusions

The first systematic review concluded that psycho-educational interventions appear to reduce relapse and readmission and to encourage medication compliance, however, the true effect size is

unclear and further research is needed. The second systematic review concluded that it is worthwhile to include families in psycho-educational interventions and that further research is needed to improve patient-focused interventions. The additional RCT concluded that group CBT showed some, potentially important superiority to the group psycho-educational programme.

Reliability of conclusions/Strength of evidence
Two systematic reviews, both with significant methodological weaknesses, reported contradictory evidence on the effects of any psycho-educational intervention on outcomes related to knowledge of illness, symptoms, social and general functioning, and compliance with medication.[1,2] Both reviews reported some evidence for a reduction in relapse rate associated with group psycho-educational interventions,[1] and psycho-educational interventions which include both family and patients.2 However, effect sizes were based on small numbers of patients and were generally not large.[2] One additional small, but high quality, RCT found no significant differences in compliance with medication, relapse rates, or improvements in symptom scores between group CBT and a group psycho-educational programme; patients in the CBT group experienced fewer re-hospitalisations during follow-up.[3] No studies were identified which specifically compared outcomes assessing coping skills, stress management and understanding of the experience and potential triggers of voice hearing in patients receiving group psycho-educational interventions compared with those receiving usual care. Overall, there is some very limited evidence that group psycho-educational interventions or psycho-educational interventions which include both patients and families may be associated with small reductions in relapse rates compared with usual care. There is also some limited evidence that group psycho-educational interventions may have similar effects to group CBT.

What do guidelines say?

The following were identified in NICE guidelines (CG82, 2010);

"In his recent review of the NHS, Darzi (2008) emphasised the importance of 'empowering patients with better information to enable a different quality of conversation between professionals and patients'. Precisely what and how much information a person requires, and the degree to which the information provided is understood, remembered or acted upon, will vary from person to person." (Pg. 314)

"There is no new robust evidence for the effectiveness of psychoeducation on any of the critical outcomes…It is noteworthy that most of the studies reviewed did not take place in the UK, and the nature and quality of the information provision in standard care may differ from services in the UK setting. The evidence found for the update does not justify making a recommendation. However, the GDG acknowledges the importance of providing good quality and accessible information to all people with schizophrenia and their carers, and have hence made a number of related recommendations." (Pg. 316)

The limited evidence identified in this summary does not contradict statements on psycho-educational interventions included in current guidelines.

Date question received: 29/07/2013
Date searches conducted: 02/08/2013
Date answer completed: 18/08/2013

References

SR

Xia J, Merinder LB, Belgamwar MR. Psychoeducation for schizophrenia. *Cochrane Database of Systematic Reviews 2011, Issue 6.* http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002831.pub2/pdf

Lincoln, T.M., Wilhel, K. and Nestoriuc, Y. (2007) Effectiveness of psychoeducation for relapse, symptoms, knowledge, adherence and functioning in psychotic disorders: A meta-analysis. *Schizophrenia Research 96* pp. 232-245.

RCT

Bechdolf, A., Kuntermann, C., Schiller, S., Klosterkotter, J., Hambrecht, M. and Pukrop, R. (2004) A randomised comparison of group cognitive-behavioural therapy and group psychoeducation in patients with schizophrenia. *Acta Psychiatr Scand 110* pp. 21-28.

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). CG82. London: National Institute for Health and Care Excellence. http://www.nice.org.uk/nicemedia/live/11786/43607/43607.pdf

Results

Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Xia et al. (2011)	02/2010 updated 11/2012	*Participants*: People diagnosed with schizophrenia or schizoaffective disorder according to either DSM, ICD or CCMD criteria and those with multiple diagnoses. *Intervention*: Psycho-education, defined as the education of a person with psychiatric disorder in subject areas that serve the goals of treatment and rehabilitation. Included all didactic interventions of psycho-education or patient teaching involving individuals or groups. *Comparator*: Standard care, defined as the normal level of psychiatric care provided in the trial's geographical area. *Outcomes*: The primary outcome measures were compliance, compliance with medication, compliance with follow-up and relapse. Multiple secondary outcome measures were specified covering knowledge and understanding of illness, behaviour, social functioning, global functioning, global state, mental state, expressed emotion, quality of life, satisfaction with care and adverse events. *Study design*: Randomised controlled trials (RCTs)	44	The review aimed to assess the efficacy of psycho-educational interventions, of any type, compared to standard care for the treatment of severely mentally ill people. A secondary aim was to compare the efficacy of different types of psycho-educational intervention. A total of 44 studies (n=5,142 participants were included), of which 17 studies (n=2,052) compared group psycho-educational interventions to standard care and were therefore considered partially relevant to this evidence summary; where reported, the mean age of participants in these studies ranged from 30 to 37 years and all included both male and female participants. Three studies (n=412), two of brief interventions and one of a standard intervention, assessed compliance with medication and found that group psycho-	The review reported a clear research objective and defined appropriate inclusion criteria. Searches used the Cochrane Schizophrenia Group Trials Register, supplemented by reference screening and contact with experts. Study selection and data extraction were carried out by one reviewer, with a random sample (10%) checked by a

				educational interventions were associated with a reduction in non-compliance compared with usual care, RR 0.26 (95% CI: 0.13 to 0.52). Four studies (n=367) assessed loss to follow-up and found no significant differences between the psycho-educational interventions group and the usual care group at any time point. Five studies (n=410) assessed relapse from any cause and found a borderline significant effect in favour of group psycho-educational interventions in the medium term, RR 0.74 (95% CI: 0.57 to 0.96); a similar effect was found for long term studies, RR 0.81 (95% CI: 0.66 to 0.99), 2 studies (n=344). No data were reported for outcomes relating to coping skills, stress management, or improving understanding of the experience and potential triggers of voice hearing in studies of group psycho-educational interventions. For overall data (any psycho-educational intervention), data suggested no significant differences between psycho-educational interventions and usual care on measures of knowledge, insight into disease, or illness-related attitudes. Scale-derived data suggested that psycho-educational interventions were associated with better social and global functioning.	second reviewer. The methodological quality of included studies was assessed using the Cochrane risk of bias tool and results were reported. Pooled estimates derived from studies with differing interventions and time periods and apparent statistical heterogeneity is of questionable validity.

Lincoln et al. (2007)	03/2006	*Participants*: People with schizophrenia, schizoaffective disorder, delusional disorder, short psychotic disorder or schizotype disorder according to DSM, ICD or CCMD. *Intervention*: Treatment protocol where psycho-education was the core element of treatment (conducted in more than 50% of the treatment time). Defined as having a focus on relevant information about the disorder while promoting better coping. *Comparator*: Treatment as usual, waiting list or non-specific intervention. *Outcomes*: Measures of relapse or rehospitalisation, symptoms, functioning, knowledge about the disorder or treatment adherence. *Study design*: RCTs which reported data To allow estimate of effect sizes: means and standard deviations, t- or F-values, change scores, frequencies or probability levels.	18	The review aimed to assess the effects of interventions for schizophrenia and other psychotic disorders in which psycho-education was the primary element, with and without integration of family members, on knowledge about the disorder, adherence, relapse and rehospitalisation, symptoms and functioning. The review included 18 studies, with a total of 1,534 participants; mean age 30.5 years. Five studies assessed patient-directed psycho-educational interventions, six studies investigated family-directed psycho-educational interventions and seven studies investigated patient and family-directed psycho-educational interventions. Twelve of the 18 studies were conducted in groups and the majority of studies were conducted in out-patient settings. Where reported, the mean duration for family interventions was 36.8 weeks (SD=18.4) and the mean duration for patient interventions was 27.8 weeks (SD=18.5). The overall post-treatment effect sizes, for any psycho-educational intervention, were significant for relapse/rehospitalisation (0.53 (95% CI: 0.12 to 0.95), 5 studies, n=452) and knowledge (0.48 995% CI: 0.12 to 0.83), 4	The review reported a clear research objective and defined appropriate inclusion criteria. Relevant studies were sought using searches of three bibliographic databases, supplemented by hand searching and reference screening. However, included studies were restricted to those published in English, French, or German; relevant studies may therefore have been omitted. Review processes were undertaken independently by two reviewers; this

				studies, n=278). Psycho-educational interventions had no effect on symptoms, functioning, or medication adherence. Effect sizes for relapse and rehospitalisation remained significant for 12 months after treatment but were not significant at longer follow-up periods (effect size at 7-12 months 0.48 (95% CI: 0.15 to 0.82), 7 studies, n=362). There were insufficient data to determine knowledge effect sizes at follow-up. Subgroup analyses indicated that only interventions which included the family were significantly effective in reducing relapse at 7-12 months follow-up (effect size 0.48 (95% CI: 0.10 to 0.85), 6 studies, n=322); the effect size for patient-only interventions was non-significant.	procedure aims to minimise the introduction of error and/or bias. Methodological quality was assessed using an 18 point scale (details reported in an appendix) and results were incorporated in the analyses. The combining of studies of different types of intervention, with varying participant characteristics, to produce overall effect sizes is of questionable validity.

RCTs

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Bechdolf et al (2004)	*Participants*: Recruited from consecutive acute admission to the in-patient unit in Cologne. Aged 18-64 years and met the criteria for a schizophrenic episode or related disorder according to ICD-10. Excluded if primary diagnosis includes drug or alcohol dependence, organise brain disease, learning disability or hearing impairment. *Intervention*: Psychoeducation; 8 sessions in 8 weeks, followed a semi-structure format and lasted between 60-90 minutes. Primarily didactic and included formulation, guided discovery and motivational interviewing. Considered symptoms of psychosis, models of psychosis, effects and side-effects of medication, early symptoms of relapse and relapse prevention. *Comparator*: Group cognitive-behavioural therapy, 16, 60-90 minute sessions in 8 weeks. Treatment involved the following elements: assessment and engagement (sharing information about voices and delusions, models of psychosis); improving self-esteem; formulation of key-problems; interventions directed at reducing the	n=88	This study aimed to compare the effects on re hospitalisation, relapse, symptoms and compliance with medication of a brief group cognitive behavioural therapy (CBT) intervention with a psycho-educational group programme in patients with schizophrenia. There were no significant differences between the CBT and psycho-educational groups at baseline with respect to age, gender, time since diagnosis, and number of admissions. There was no significant difference in relapse rates at six months between the CBT and psycho-educational groups, however, there were significantly fewer re-hospitalisations in the CBT group than in the psycho-educational group (0/31 versus 5/40). There were no significant differences in compliance with medication between the two treatment groups at pre-treatment, post-treatment, or 6 months follow-up. Significant pre- to post-treatment and pre-treatment to follow-up improvements in PANSS-positive, PANSS-negative and PANSS-general scores were seen for both treatment groups. There were no significant differences in treatment effect between the groups, on any measure of symptoms.	Randomisation was conducted by computer-generated random numbers for blocks of eight participants. The results were placed in sealed envelopes and only opened at the time of treatment allocation. The nature of the interventions precluded blinding of participants and study personnel, however,

	severity and the occurrence of key problems; relapse prevention/keeping well. *Outcomes*: Re-hopsitalisation, relapse, psychopathology (PANSS) and compliance with medication.			outcome assessments were conducted by independent raters, who was not aware of treatment groups. Intention-to-treat analyses were used and data were reported for al specified outcome measures.

Risk of Bias: SRs

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Xia et al. (2011)	☺	☺	☹	☺	☹
Lincoln et al. (2007)	☺	☹	☺	☺	☹

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Bechdolf et al. (2004)	☺	☺	☹	☺	☺	☺

☺Low Risk ☹High Risk ? Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
SRs and Guidelines			
NICE	Psychoeducation Psycho-education Schizophrenia	224	1
DARE	1 MeSH DESCRIPTOR Hallucinations EXPLODE ALL TREES 13 Delete 2 (auditory adj5 hallucinations) IN DARE 6 Delete 3 (verbal adj5 hallucinations) IN DARE 1 Delete 4 (hear* adj6 voice*) IN DARE 4 Delete 5 (voice*) IN DARE 70 Delete 6 #1 OR #2 OR #3 OR #4 OR #5 86 Delete 7 MeSH DESCRIPTOR Schizophrenia EXPLODE ALL TREES 440 Delete 8 MeSH DESCRIPTOR Psychotic Disorders EXPLODE ALL TREES 131 Delete 9 MeSH DESCRIPTOR Schizophrenia and Disorders with Psychotic Features EXPLODE ALL TREES 522 Delete 10 (psychoeducation) IN DARE 47 Delete 11 (psychoeducation*) IN DARE 97 Delete 12 (schizo*) IN DARE 578 Delete 13 #7 OR #8 OR #9 OR #12 843 Delete 14 #10 OR #11 97 Delete 15 #13 AND #14 20 Delete 16 #6 OR #15 105 Delete	105	2
Primary studies			
CENTRAL	#1 "auditory hallucinations":ti,ab,kw (Word variations have been searched) 109 #2 Enter terms for search "hear* voices""hear* voices" 27	25	

	#3 MeSH descriptor: [Hallucinations] explode all trees 207 #4Enter terms for searc"hearing voices"25 #5Enter terms for searc#1 or #2 or #3 or #4289 #6Enter terms for searcpsychoeducation473 #7Enter terms for searcskills or training or coping or cope39208 #8Enter terms for searcstress and manag*3538 #9Enter terms for searc#6 or #7 or #841310 #10Enter terms for searc#5 and #946		
PsycINFO	1. PsycINFO; AUDITORY HALLUCINATIONS/; 1339 results. 2. PsycINFO; "auditory hallucinations".ti,ab; 1786 results. 3. PsycINFO; (hear* adj3 voices).ti,ab; 847 results. 4. PsycINFO; 1 OR 2 OR 3; 2949 results. 5. PsycINFO; PSYCHOEDUCATION/; 3006 results. 6. PsycINFO; psychoeducation.ti,ab; 1943 results. 7. PsycINFO; (cop* adj2 skills).ti,ab; 3944 results. 8. PsycINFO; (stress adj3 manag*).ti,ab; 5082 results. 9. PsycINFO; (skills adj3 training).ti,ab; 8319 results. 10. PsycINFO; trigger*.ti,ab; 19412 results. 11. PsycINFO; 5 OR 6 OR 7 OR 8 OR 9 OR 10; 39526 results. 12. PsycINFO; 4 AND 11; 43 results.	43	
Embase	14. EMBASE; "auditory hallucinations".ti,ab; 1824 results. 15. EMBASE; (hear* adj3 voices).ti,ab; 496 results. 16. EMBASE; AUDITORY HALLUCINATION/; 2948 results. 17. EMBASE; 14 OR 15 OR 16; 4153 results. 18. EMBASE; PSYCHOEDUCATION/; 3070 results. 19. EMBASE; psychoeducation.ti,ab; 1785 results. 20. EMBASE; (cop* adj2 skills).ti,ab; 2799 results. 21. EMBASE; (stress adj3 manag*).ti,ab; 5391 results. 22. EMBASE; (skills adj3 training).ti,ab; 7126 results. 23. EMBASE; trigger*.ti,ab; 195088 results.	95	

	24. EMBASE; 18 OR 19 OR 20 OR 21 OR 22 OR 23; 213270 results. 25. EMBASE; 17 AND 24; 95 results.		
Medline	26. MEDLINE; "auditory hallucinations".ti,ab; 1355 results. 27. MEDLINE; (hear* adj3 voices).ti,ab; 386 results. 28. MEDLINE; AUDITORY HALLUCINATION/; 8859 results. 29. MEDLINE; 26 OR 27 OR 28; 9595 results. 30. MEDLINE; PSYCHOEDUCATION/; 0 results. 31. MEDLINE; psychoeducation.ti,ab; 1150 results. 32. MEDLINE; (cop* adj2 skills).ti,ab; 2208 results. 33. MEDLINE; (stress adj3 manag*).ti,ab; 4269 results. 34. MEDLINE; (skills adj3 training).ti,ab; 5680 results. 35. MEDLINE; trigger*.ti,ab; 174772 results. 36. MEDLINE; 31 OR 32 OR 33 OR 34 OR 35; 187356 results. 37. MEDLINE; 29 AND 36; 105 results.	105	
Summary	**NA**	**NA**	

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