

Best Evidence Summaries of Topics in Mental Healthcare

BEST in MH *clinical question-answering service*

Question

In adolescents (aged 12+) with first-episode psychosis, how effective is family therapy, compared to standard treatment, in improving patient outcomes?

Clarification of question using *PICO* structure

Patients: Adolescents (aged 12+)

Intervention: Family therapy

Comparator: Treatment as usual

Outcome: Improving patient outcomes

Plain language summary

There is limited evidence comparing family therapy to standard treatment. Two randomised controlled trials were found which compared different types of family therapy in adolescents. The results showed a benefit of family therapy in improving family communication and reducing some patient symptoms. Both trials were small and had some weaknesses but overall there is evidence that this could be a true effect.

Clinical and research implications

No evidence was found comparing the efficacy of family therapy to standard treatment. Research into this clinical question is needed, and is highlighted as a recommendation for research in the form of RCTs in the NICE guidance for the treatment of psychosis in children and adolescents. Evidence from RCTs however, provided some evidence on the effectiveness of family therapy in improving patient outcomes, such as the negative symptoms of psychosis, decreasing relapse rates and enhancing family communication. This evidence can be used clinically to support the encouragement of patients and families in undertaking family therapy if they are experiencing difficulties in these areas. But there is no evidence to recommend the use of family therapy as single treatment for first episode psychosis in adolescents.

Overall it is evident that specific training in communication and problem solving techniques incorporated into family therapy are associated with improved patient outcomes. And there is a general consensus that an increased number of family therapy sessions is most beneficial. These findings could be used as criteria for standardising family therapy offered to adolescents with first episode psychosis.

What does the evidence say?

Number of included studies/reviews (number of participants)

Two randomised controlled trials (RCTs) were found for this clinical question (n = 184). One was undertaken in the United States (O'Brien et al (2014)) and randomised 129 participants between 12 and 35 years of age (mean age 16.9 years) at high risk of developing psychosis. This study compared an 18 session family focused therapy (FFT) with an emphasis on problem solving and communication, to the standard 3 session family psychoeducation intervention, referred to as enhanced care (EC).

The second RCT (Calvo et al (2014)) undertaken in Spain randomised 55 adolescents (between 14 and 18 years of age) in early onset psychosis to a 15 sessions of a group psychoeducational problem solving intervention or a non-structured support group. Each group ran separate sessions for both parents and adolescents but the sessions ran in parallel.

Main findings

The RCT by O'Brien et al (2014) found that high risk individuals and their families who received FFT showed significant improvements in constructive behaviour ($p < 0.01$) compared to those who took part in EC after 6 months. The FFT group also showed a greater decreases in critical-conflictual behaviour during family interactions after 6 months ($p < 0.01$), compared to those who took part in EC. Further analysis identified that the improvements in the FFT group were specifically due to an increase in "calm speaking" and "active listening" and a decrease in "irritability and anger," "complaints and criticism" and "comments made off task."

The RCT by Calvo et al (2014) found participants receiving group psychoeducation had a significantly greater reduction in negative symptoms measured on the PANSS scale than those in the non-

structured group ($p=0.039$) after one month. Although both groups had significant increases in positive PANSS scores there were no significant differences between them, or for the total PANSS score and Global Assessment of Functioning. Significantly fewer participants receiving group psychoeducation had visited the emergency department than in the non-structured group (15% vs 39%). However there were no significant differences between the groups in the number of patients hospitalised or the mean number of days in hospital.

Authors' conclusions

O'Brien et al (2014) concluded that a 6 month structured family skills training intervention can significantly improve family communication in populations at clinical high risk of developing psychosis. Further research needs to be undertaken to determine if this improvement can reduce the risk of psychosis developing and aid in social and functional recovery for these adolescents.

Calvo et al (2014) concluded that a structured psychoeducational program with a focus on problem solving strategies aimed at adolescents and their families could help to manage psychotic crises and decrease negative symptoms of schizophrenia. This is important for social and functional recovery of young people with psychosis.

Reliability of conclusions/Strength of evidence

We did not identify any studies that compared family interventions to standard pharmacological treatment in this patient group. The evidence summarised is comparing different variations of family therapy in the chosen population. The RCT by O'Brien et al. was at high risk of bias as the allocation concealment was unclear, participants couldn't have been blinded and only 50 % of the participants were included in the final analysis. Although there was some evidence to suggest that family training improved family communication this is limited by the high drop-out rate and small eventual sample size.

The smaller RCT by Calvo et al. was considered to be at moderate risk of bias and have fewer methodological flaws in the reporting of outcome data but it had a smaller sample size and was not powered to detect a difference between the intervention and comparator groups. However a medium effect size was observed for both significant outcomes identified, so overall we can conclude there is only some evidence for the role of psychoeducational family intervention in relapse prevention and the improvement of negative symptoms of psychosis.

In both studies as patient and family members had chosen to be part of the trial, it is likely that these families were those who were the most eager to implement change and therefore the results may only be generalizable to similarly motivated families. It is important to emphasise that youths who may be estranged from their families might not obtain the same benefits.

What do guidelines say?

NICE guidelines (CG155) make the following recommendations for children with first episode psychosis:

For children and young people with first episode psychosis offer:

- oral antipsychotic medication in conjunction with
- psychological interventions (family intervention with individual CBT)

- If the child or young person and their parents or carers wish to try psychological interventions (family intervention with individual CBT) alone without antipsychotic medication, advise that psychological interventions are more effective when delivered in conjunction with antipsychotic medication. If the child or young person and their parents or carers still wish to try psychological interventions alone, then offer family intervention with individual CBT. Agree a time limit (1 month or less) for reviewing treatment options, including introducing antipsychotic medication. Continue to monitor symptoms, level of distress, impairment and level of functioning, including educational engagement and achievement, regularly. NICE:CG155, pp16

Date question received: 11/07/2016

Date searches conducted: 11/07/2016

Date answer completed: 30/07/2016

References

Randomised controlled trials

Calvo, A., Moreno, M., Ruiz-Sancho, A., Rapado-Castro, M., Moreno, C., Sánchez-Gutiérrez, T., ... & Mayoral, M. (2014). Intervention for adolescents with early-onset psychosis and their families: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 53(6), 688-696.

O'Brien, M. P., Miklowitz, D. J., Candan, K. A., Marshall, C., Domingues, I., Walsh, B. C., ... & Cannon, T. D. (2014). A randomized trial of family focused therapy with populations at clinical high risk for psychosis: Effects on interactional behavior. *Journal of consulting and clinical psychology*, 82(1), 90.

Guidelines

National Institute for Clinical Excellence. (2013). Psychosis and schizophrenia in children and young people: Recognition and management. CG155. UK: NICE

<https://www.nice.org.uk/guidance/cg155/resources/psychosis-and-schizophrenia-in-children-and-young-people-recognition-and-management-35109632980933>

Results

Randomised controlled trials

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Calvo et al. (2014) Spain	<p>Participants: Adolescents (14-18 years) living at home with parents, carers or guardians, with the presence of at least 1 positive psychotic symptom before age 18 and one diagnosis from DSM-IV for a range of mental health conditions.</p> <p>Intervention: Psychoeducational problem-solving group intervention (PE). Given once a day for 15 days.</p> <p>Comparator: Non-structured group intervention. (NS)</p> <p>Outcome: Symptoms measured with the Positive and Negative Syndrome Scale (PANSS), functioning measured with the Children's Global Assessment of Functioning Scale (GAF), number of hospitalisations, days of hospitalisation and visits to the emergency department. Measured at baseline and post-treatment (within 1 month after the intervention or up to 9 months for those discontinuing treatment)</p>	N= 55 (psychoeducation n=27, non-structured groups n=28)	<p>The mean participant age was 16.5 years, 62% were male, 38% had schizophrenia spectrum psychosis, 29% had affective psychosis and 33% had another psychosis. Twenty five families completed baseline and post intervention assessments in the PE group and 26 families in the NS group. Seventeen (63.3%) PE and 11 (39.3%) NS participants completed the treatment (no significant difference, $p = 0.079$). The mean number of therapy sessions attended were similar at 7.37 for PE participants and 6.75 for NS participants. There were no statistically significant differences between the groups in the use of antipsychotic medication at baseline or post-treatment.</p> <p>At post-treatment PE participants had a significantly greater reduction in negative symptoms (PANSS) which decreased from a mean of 16.55 (SD 7.27) to 12.84 (SD 7.82) in the PE group and from 17.03 (SD 7.42) to 15.81 (SD 6.37) in the NS group ($p = 0.039$). Both groups had</p>	<p>Moderate</p> <p>Participants were randomised using a computer generated sequence.</p> <p>No details were provided about the methods of allocation concealment.</p> <p>Open label. The nature of the intervention prevented blinding of participants and personnel delivering the intervention.</p> <p>Outcome assessments were blinded to intervention as they were performed by psychiatrists experienced in child and adolescent</p>

			<p>significant improvements in positive symptoms but there was no statistically significant difference between the PE and NS groups ($p = 0.163$). There was also no difference between groups in the total PANSS score ($p = 0.264$) or GAF score ($p = 0.163$).</p> <p>At post-treatment participants who received PE had visited the emergency department significantly fewer times (15% vs 39%, $p = 0.039$) There were no significant differences between groups in the number of participants hospitalised (11% PE vs. 32% NS, $p = 0.057$) or the mean (SD) number of days hospitalised (4.08 (13.03) PE vs. 7.42 (13.64) NS, $p = 0.142$).</p> <p>For ratings of the family environment before and after the intervention, there was only one statistically significant outcome observed. This was a recorded increase in “active recreational orientation” after the PE intervention.</p>	<p>psychiatric disorder who were blinded to the groups. Objective outcomes such as hospitalisation were corroborated from medical records.</p> <p>Analyses were performed on an intention to treat basis, including treatment completers and non-completers. Two families in each group did not complete all the assessments.</p> <p>All outcomes stated in the methods were reported.</p>
O'Brien et al. (2014) USA	Participants: Individuals in California aged 12-35 years who met the criteria for one of three prodromal syndromes according to the Structured Interview for Prodromal Symptoms (SIPS.) Eligible symptoms include attenuated positive symptoms, brief intermittent psychosis and genetic	N= 129 (family focused therapy n=66, enhanced care n=63)	The mean participant age was 16.9 years, 56% were male and the mean number of years of education was 10.2. In terms of symptoms, 88% had attenuated positive symptoms, 9% had genetic risk and deterioration and 3% had brief intermittent psychosis and 25% were on antipsychotic medication.	High Randomisation used a biased coin toss procedure stratified by study site and use of anti-psychotic medication.

	<p>risk and deterioration.</p> <p>Intervention: Family-focussed therapy (FFT), an 18-session intervention that consisted of psychoeducation and training in communication and problem solving.</p> <p>Comparator: Enhanced care (EC), a 3-session psychoeducational intervention.</p> <p>Outcome: Clinical symptoms measured using the Scale of Prodromal Symptoms (SOPS), family communication during problem solving. Measured at baseline and 6 months.</p>		<p>For the 66 families randomised to FFT, 51 took part in the baseline interaction task but only 38 (75%) completed the 6 month assessment. For the 63 families randomised to EC, 50 took part in the baseline interaction task but only 28 (64%) completed the 6 month assessment. The mean durations of interactions were 9.64 minutes (range 3.4 to 10.8) at baseline and 9.2 minutes (range 3.5 to 11.0) at 6 months and there were no significant differences between groups on either occasion.</p> <p>Family communication was categorised into calm-constructive and critical-conflictual behaviours. Families in FFT showed a significant increase in overall constructive behaviour (mean increase from 0.29 to 0.87) compared to EC families after 6 months (mean increase from 0.46 to 0.47). FFT families also showed significant improvements in active listening compared to EC families (from 0.19 to 0.26 FFT vs. 0.21 to 0.19 EC) and calm speaking (from 0.56 to 0.74 FFT vs. 0.60 to 0.61 EC). All results were significant at the $p < 0.01$ level.</p> <p>For critical-conflictual behaviours, FFT families had significant decreases overall in mean scores</p>	<p>No details were provided about the methods of allocation concealment.</p> <p>Open label. The nature of the intervention prevented blinding of participants and personnel delivering the intervention.</p> <p>Outcome assessors were blinded and measures were undertaken to show this was effective.</p> <p>Losses to follow up were disclosed and analyses were performed comparing those lost to follow up and those that remained in the trial. However, of the 129 initially randomised only 66 families were included in the analysis and no intention to treat analysis was performed.</p>
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		<p>compared to EC families (from 0.57 to 0.24 FFT vs. 0.49 to 0.48 EC). This result was mostly driven by significant reductions in irritability and anger (from 0.23 to 0.08 FFT vs. 0.15 to 0.14 EC), complaints and criticism (from 0.08 to 0.03 FFT vs. 0.07 to 0.07 EC) and off-task comments (from 0.08 to 0.04 FFT vs. 0.07 to 0.11 EC). All results were significant at the $p < 0.01$ level.</p> <p>Analysis showed that the improved communication behaviour patterns occurred equally across adolescents and family members. EC families did not show any significant change in coded behaviour from baseline to follow up.</p>	<p>All outcomes stated within the methods were reported.</p>
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Risk of bias

Randomised controlled trials

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Calvo et al. (2014)						
O'Brien et al. (2014)						

 Low risk

 High risk

 Unclear risk

Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>Guidelines</i>			
NICE	Child Psychosis	18	
MEDLINE	15. Medline; (adolescen* adj2 (psycho*)).ti,ab; 4280 results. 16. Medline; psycho*.ti,ab; 465864 results. 17. Medline; schizophren*.ti,ab; 100607 results. 18. Medline; (first adj2 (episode) adj2 (psycho*)).ti,ab; 2665 results. 19. Medline; (first-episode adj2 (psycho*)).ti,ab; 2440 results. 20. Medline; (child* adj2 (psycho*)).ti,ab; 11564 results. 21. Medline; exp FAMILY THERAPY/; 8067 results. 22. Medline; (famil* adj2 (counselling OR therap* OR intervent* OR psychotherap* OR treatment)).ti,ab; 16897 results. 23. Medline; (famil* adj3 (systemic) adj2 (psychotherap*)).ti,ab; 6 results. 24. Medline; 21 OR 22 OR 23; 21268 results. 25. Medline; exp PSYCHOTIC DISORDERS/; 45135 results. 26. Medline; 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 25; 553747 results. 27. Medline; 24 AND 26; 5547 results. 28. Medline; 27 [Limit to: (Document type Clinical Trial or Meta-analysis or Randomized Controlled Trial or Review or Scientific Integrity Review)]; 1847 results.	1847	
EMBASE	1. EMBASE; exp ACUTE PSYCHOSIS/ OR exp PSYCHOSIS/ OR exp SCHIZOAFFECTIVE PSYCHOSIS/; 239763 results. 2. EMBASE; (adolescen* adj2 (psycho*)).ti,ab; 3197 results. 3. EMBASE; psycho*.ti,ab; 658235 results. 4. EMBASE; schizophren*.ti,ab; 132680 results. 5. EMBASE; (first adj2 (episode) adj2 (psycho*)).ti,ab; 5013 results. 6. EMBASE; (first-episode adj2 (psycho*)).ti,ab; 4482 results. 7. EMBASE; (child* adj2 (psycho*)).ti,ab; 8386 results. 8. EMBASE; 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7; 819587 results.	168	

	<p>9. EMBASE; exp FAMILY THERAPY/; 11333 results.</p> <p>10. EMBASE; (famil* adj2 (counselling OR therap* OR intervent* OR psychotherap* OR treatment)).ti,ab; 14203 results.</p> <p>11. EMBASE; (famil* adj3 (systemic) adj2 (psychotherap*)).ti,ab; 10 results.</p> <p>12. EMBASE; 9 OR 10 OR 11; 20281 results.</p> <p>13. EMBASE; 8 AND 12; 7058 results.</p> <p>14. EMBASE; 13 [Limit to: (EBM-Evidence Based Medicine Evidence Based Medicine or Meta Analysis or Systematic Review) and (Clinical Trials Clinical Trial or Randomized Controlled Trial)]; 168 results.</p>		
PsycINFO/CINAHL	<p>29. PsycInfo; (adolescen* adj2 (psycho*)).ti,ab; 8462 results.</p> <p>30. PsycInfo; psycho*.ti,ab; 844596 results.</p> <p>31. PsycInfo; schizophren*.ti,ab; 104822 results.</p> <p>32. PsycInfo; (first adj2 (episode) adj2 (psycho*)).ti,ab; 2786 results.</p> <p>33. PsycInfo; (first-episode adj2 (psycho*)).ti,ab; 2556 results.</p> <p>34. PsycInfo; (child* adj2 (psycho*)).ti,ab; 23406 results.</p> <p>35. PsycInfo; exp FAMILY THERAPY/; 20277 results.</p> <p>36. PsycInfo; (famil* adj2 (counselling OR therap* OR intervent* OR psychotherap* OR treatment)).ti,ab; 31714 results.</p> <p>37. PsycInfo; (famil* adj3 (systemic) adj2 (psychotherap*)).ti,ab; 41 results.</p> <p>38. PsycInfo; 35 OR 36 OR 37; 36946 results.</p> <p>39. PsycInfo; exp ACUTE PSYCHOSIS/ OR exp CHILDHOOD PSYCHOSIS/ OR exp PSYCHOSIS/; 100797 results.</p> <p>40. PsycInfo; 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 39; 913177 results.</p> <p>41. PsycInfo; 38 AND 40; 13204 results.</p> <p>42. PsycInfo; 41 [Limit to: (Methodology Meta Analysis or Systematic Review or Treatment Outcome/Clinical Trial)]; 408 results.</p>	408	

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