BEST 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 ADHD, what is the evidence that psychotherapy (including individual and group CBT, psychoeducation, psychosocial interventions) when compared to any other intervention (including medication, medication plus psychotherapy, no treatment) improves patient outcomes, including reduction in inattentive, hyperactive and impulsive symptoms, improvement in co-morbid symptoms such as anxiety, depression or anger, reduction or withdrawal from medication, and improving well-being or quality of life

Clarification of question using *PICO* structure

Patients: Adults with ADHD (either inattentive subtype / ADD, hyperactive subtype, or combined subtype)
Intervention: Psychotherapy
Comparator: Any other intervention
Outcome: Reduction in inattentive, hyperactive and impulsive symptoms, improvement in co-morbid symptoms such as anxiety, depression or anger, reduction or withdrawal from medication, and improving well-being or quality of life.

Plain language summary

Limited research suggests that combining CBT with pharmacological interventions is effective in reducing symptoms of ADHD. However, more high quality evidence is needed into the effectiveness of psychotherapy, particularly looking into other interventions than CBT, for improving outcomes in adults with ADHD.

Clinical and research implications

Most of the available evidence about psychological interventions for ADHD relates to cognitive behavioural therapy (CBT) and there is insufficient evidence to support the effectiveness of any other psychological intervention. The evidence about CBT is inconsistent; some small, poorly reported randomised controlled trials (RCTs) have found that adding group or individual CBT interventions to medication can improve ADHD symptoms and general functioning. However, a large four arm RCT, with 2.5 year follow-up, which compared group CBT to individual management and methylphenidate to placebo found that, whilst methylphenidate was superior to placebo, group CBT offered no significant advantage over individual clinical management.

The evidence in this summary is consistent with current guidance that drug therapy should be the first-line treatment for ADHD. Research is needed to adequately assess the effectiveness of psychological interventions other than CBT. Further large RCTs assessing the possible adjunctive value of CBT combined with pharmacotherapies other than methylphenidate may be of value.

What does the evidence say?

Number of included studies/reviews (number of participants)

We identified two systematic reviews[1,2] and two additional RCTs,[3,4] which were considered relevant to this evidence summary. Both systematic reviews were methodologically weak. The first compared the effectiveness of CBT and other psychological interventions and included nine studies; most of the evidence related to the effectiveness of adding CBT to medication.[1] The second systematic review covered all types of treatment for ADHD and included 33 RCTs, however, only three of these studies assessed psychological interventions and hence were relevant to this evidence summary; [2] two of the three relevant studies had already been described in the first systematic review. One additional small RCT (n=48) compared individual CBT and dextroamphetamine to individual CBT alone and assessed measures of ADHD symptoms and general functioning.[3] The final large RCT (n=1480) used a four arm design (group CBT + methylphenidate; group CBT + placebo; individual clinical management + methylphenidate; individual clinical management +placebo) to compare group CBT to individual clinical management and methylphenidate to placebo.[4] Outcomes assessed were ADHD symptoms, clinical global impression of change and depression.[4]

Main findings

Most of the small trials included in the two systematic reviews concerned the effects of adding CBT to medication in adults with ADHD.[1,2] Findings were inconsistent and poorly reported, but the majority of studies found that the addition of CBT was associated with some improvement in ADHD symptoms.[1,2] The small RCT, which compared individual CBT and dextroamphetamine to individual CBT alone, found no significant differences between the groups on any outcome measure.[3] Therefore, assuming observed effects were attributable to CBT, overall effect sizes (for all study participants were calculated; these were high (1.1) for ADHD symptoms and moderate (0.44) for functioning.[3] The large, four arm RCT found that improvements in ADHD symptoms did not differ significantly between participants who received group CBT and those who received individual clinical management (mean difference 1.1 (95% CI: 0.0 to 2.0), p=0.06), whereas methylphenidate was superior to placebo (mean difference -1.7 (95% CI: -2.8 to -0.6), p=0.003).[4] There were no significant differences in depression score between the treatment arms.[4]

Authors conclusions

Chandler 2013 – The authors concluded that pharmacotherapy is the first line treatment for ADHD, but alone may not be sufficient, and that when comparing the effectiveness of researched psychotherapies, cognitive behaviour therapy (CBT) is one of the most efficacious treatments.

Torgerson 2008 – The authors concluded that clinicians have good support for both pharmacological and psychotherapeutic treatment of ADHD in adults, but should take additional measures to deal with comorbidities as well as treatment adherence.

Weiss 2012 – The authors concluded that their study shows that CBT is an effective treatment for ADHD in adults. They further stated that, within the limits of this pilot, secondary analysis they were not able to demonstrate that medication significantly augments the outcome of CBT therapy for adults with ADHD.

Philipsen 2015 – The authors concluded that a highly structured group CBT intervention did not outperform individual clinical management, with respect to ADHD symptoms. They further stated that psychological interventions resulted in better outcomes, during a 1-year period, when combined with methylphenidate than with placebo.

Reliability of conclusions/Strength of evidence

The evidence included in this summary is derived from small RCTs reported in two poor quality systematic reviews, and two additional good quality RCTs (n=48 and n=1480). Most studies evaluate the effectiveness of CBT, however, the available evidence is inconsistent; the large, high quality RCT found that group CBT offered no significant benefit over individual clinical management.

What do guidelines say?

NICE guidance provides the following recommendations for adults with ADHD:
For adults with ADHD, drug treatment should be the first-line treatment unless the person would prefer a psychological approach.

Drug treatment for adults with ADHD should be started only under the guidance of a psychiatrist, nurse prescriber specialising in ADHD, or other clinical prescriber with training in the diagnosis and management of ADHD.

Before starting drug treatment for adults with ADHD a full assessment should be completed, which should include:

- full mental health and social assessment
- full history and physical examination, including: assessment of history of exercise syncope, undue breathlessness and other cardiovascular symptoms, heart rate and blood pressure (plotted on a centile chart), weight, family history of cardiac disease and examination of the cardiovascular system
- an ECG if there is past medical or family history of serious cardiac disease, a history of sudden death in young family members or abnormal findings on cardiac examination
- risk assessment for substance misuse and drug diversion.

At the time of publication, methylphenidate, dexamfetamine and atomoxetine did not have UK marketing authorisation for use in adults with ADHD. However atomoxetine is licensed for adults with ADHD when the drug has been started in childhood. Informed consent should be obtained and documented.

Summary of recommendations
Drug treatment for adults with ADHD should always form part of a comprehensive treatment programme that addresses psychological, behavioural and educational or occupational needs.

Following a decision to start drug treatment in adults with ADHD, methylphenidate should normally be tried first.

Atomoxetine or dexamfetamine should be considered in adults unresponsive or intolerant to an adequate trial of methylphenidate (this should usually be about 6 weeks). Caution should be exercised when prescribing dexamfetamine to those likely to be at risk of stimulant misuse or diversion.

When starting drug treatment, adults should be monitored for side effects. In particular, people treated with atomoxetine should be observed for agitation, irritability, suicidal thinking and self-harming behaviour, and unusual changes in behaviour, particularly during the initial months of treatment, or after a change in dose. They should also be warned of potential liver damage in rare cases (usually presenting as abdominal pain, unexplained nausea, malaise, darkening of the urine or jaundice). Younger adults aged 30 years or younger should also be warned of the potential of atomoxetine to increase agitation, anxiety, suicidal thinking and self-harming behaviour in some people, especially during the first few weeks of treatment.

For adults with ADHD stabilised on medication but with persisting functional impairment associated with the disorder, or where there has been no response to drug treatment, a course of either group or individual CBT to address the person's functional impairment should be considered. Group therapy is recommended as the first-line psychological treatment because it is the most cost effective.

For adults with ADHD, CBT may be considered when:
● the person has made an informed choice not to have drug treatment
● drug treatment has proved to be only partially effective or ineffective or the person is intolerant to it
● people have difficulty accepting the diagnosis of ADHD and accepting and adhering to drug treatment
● symptoms are remitting and psychological treatment is considered sufficient to target residual (mild to moderate) functional impairment.

Date question received: 26/02/2016
Date searches conducted: 26/02/2016
Date answer completed: 08/11/2016

References

Systematic reviews

1. Chandler, ML. (2013) Psychotherapy for Adult Attention Deficit/Hyperactivity Disorder: A Comparison with Cognitive Behaviour Therapy. *Journal of Psychiatric and Mental Health Nursing:* 20, pp814-820.

2. Torgersen T, Gjervan B, Rasmussen K. (2008) Treatment of adult ADHD: Is current knowledge useful to clinicians? *Neuropsychiatric Disease and Treatment:* 4(1), pp177–186.

Randomised controlled trials

3. Weiss, M., Murray, C., Wasdell, M., Greenfield, B., Giles, L., Hechtman, L. (2012) A Randomised Controlled Trial of CBT Therapy for Adults with ADHD with and without Medication. *Biomedical Central:* 12(30).

4. Philipsen et al (2015) Effects of Group Psychotherapy, Individual Counseling, Methylphenidate, and placebo in the treatment of adult attention-deficit/hyperactivity disorder: A randomised clinical trial. *JAMA Psychiatry:* 72(12), pp1199-1210.

Guidelines

National Institute for Health and Clinical Excellence (2009), Diagnosis and management of ADHD in children, young people and adults.
(http://www.nice.org.uk/nicemedia/live/12061/42060/42060.pdf)

Results

Systematic reviews

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Chandler (2013)	2011	***Participants*****:** Adults with ADHD ***Intervention*****:** CBT, individual and group; dialectical behaviour therapy (DBT); meta-cognitive therapy; cognitive therapy (CT) ***Comparator*****:** Computerised systematic training; relaxation therapy; supportive therapy group; control (medication only, treatment as usual, or wait list) ***Outcome*****:** measures of ADHD symptoms, anxiety, depression, self-esteem, quality of life and behavioural functioning. ***Study design*****:** The inclusion criteria did not specify study design; the review included six RCTs Including one pilot study), two non-randomised controlled studies and one un-controlled study.	n=9 studies (total 457 participants)	This systematic review aimed to compare the effects of CBT versus other psychotherapy options on symptoms of ADHD in adults. *CBT versus control*: Four studies reported comparisons of CBT to a control condition. One RCT of group CBT found that participants reported significant improvements in ADHD symptoms, organizational skills, self-esteem and anger, which were maintained at two months and one year (no numerical results or comparisons with the control group were reported). A second RCT found that participants who received medication plus CBT (individual, work book-based) had significantly lower ADHD symptom scores and CGI scores than those who received medication only (effect size 1.2 and 1.4, no measure of variance or follow-up period reported). This study also found that 57% of participants in the medication plus CBT	The research objective was clearly stated, however, inclusion criteria were poorly defined and the majority of included studies compared CBT to a control condition rather than to an alternative psychotherapy (i.e. they did not address the stated objective). Searches were limited to MEDLINE, CINAHL and Google Scholar and used date, study design and

				group were responders, compared to 13% in the medication only group (no definition of response was provided) and that participants in the CBT plus medication group had lower depression and anxiety scores (no numerical results reported). A further small RCT comparing medication plus individual CBT to individual CBT alone found no statistically significant differences between the treatment groups. Finally, one RCT, which compared mixed group and individual CBT/medication to treatment as usual, found that the CBT group had significantly lower ADHD symptom scores post-treatment and at un-specified follow-up (no numerical results reported). *CBT versus other therapies*: One RCT reported a comparison between CBT and computerised systematic training (no details provided) and found no statistically significant differences between the two interventions. A second RCT, comparing individual CBT to relaxation with education, found that participants in the CBT group achieved lower ADHD symptom scores and lower CGI scores than those in the relaxation group; for ADHD symptoms, the	English language limits. The search yield was low and it seems likely that relevant studies were missed. No details about number of reviewers involved in study selection and data extraction were reported, therefore, the potential for error and bias in the review process cannot be assessed. No assessment of the methodological quality of included studies was reported. The use of a narrative synthesis was appropriate,

				response rate (defined as a 30% decrease) was 67%, versus 33% in the relaxation group. *DBT versus control*: One RCT compared group DBT to a control discussion group. This study reported that the DBT treatment appeared to be effective in reducing ADHD symptoms only for those who completed the treatment and remained on stable or no medication; there were no reductions in co-morbidities (depression or anxiety) in either the treatment or control groups. A non-randomised controlled trial compared DBT to a wait list control and found that the DBT group showed significant improvements in depression (BDI effect size 0.99) and ADHD symptoms (ADHD CL effect size 2.22), whereas the control group showed no significant improvements on any measure. An uncontrolled study of DBT reported improvements in depression and ADHD symptoms (no numerical results provided). *Meta-cognitive therapy versus supportive groups:* A significantly greater response on the Adult Investigator Symptom Rating Scale (ARIS) and 'self-reported measures' was reported	however, the participants, interventions, comparators and results of individual studies were not adequately described.

				for meta-cognitive therapy compared to supportive groups (no numerical results provided).	
Torgerson et al (2008)	January 2007	***Participants*:** Adults (>18 years old) with a diagnosis of ADHD according to DSM-IV or ICD 10 criteria. ***Intervention*:** This review examined both pharmacological and psychotherapeutic interventions these included; methylphenidate, dexamphetamine/amphetamine, atomoxetine, bupropion, imipramine, and any type of psychotherapy. ***Comparator*:** placebo or non-intervention control group. ***Outcome*:** Any outcome of clinical importance was included in this review, such as reduction of symptoms of ADHD and other aspects of mental health. Trials which focused upon outcomes such as driving performance or neuroimaging effects were not included in this review. ***Study design*:** RCTs	n=33 studies (n=3 studies of psychotherapy)	This article states that it 'reviews the literature on pharmacological and psychotherapeutic treatment in adults with ADHD.' Although some appropriate methods are reported, the article does not state that it reports a systematic review. Three of the 33 studies included in this systematic review assessed a psychotherapy intervention and hence were relevant to this evidence summary). Two of these studies were also included in the Chandler systematic review (described above) and this review did not provide any additional information. The one additional RCT, described in this review, compared a cognitive remediation programme (CRP) plus continued medication to medication alone or no medication. This study reported that 36% of participants were classified as post-treatment responders, with respect to patient reported ADHD symptoms (no threshold for response provided) and	A research objective was stated and inclusion criteria were fully defined. MEDLINE, EMBASE, PsycINFO and the Cochrane database were searched for relevant studies and the bibliographies of identified articles were screened for further studies. No details about number of reviewers involved in study selection and data extraction were reported, therefore, the potential for error

				50% were classified as responders at 12 month follow-up. No comparative results were reported.	and bias in the review process cannot be assessed. No assessment of the methodological quality of included studies was reported. The use of a narrative synthesis was appropriate, however, the participants, interventions, comparators and results of individual studies were not adequately described.

Randomised controlled trials

Author (year)	**Inclusion criteria**	**Number of participants**	**Summary of results**	**Risk of bias**

Weiss et al (2012)	***Participants*****:** All participants were between 18 and 66 years of age with a primary diagnosis of ADHD confirmed by the Conners' ADHD Diagnostic Interview ***Intervention*****:** Individual CBT and dextroamphetamine (initiated at 5 mg p.o. b.i.d. and increased to a maximum of 20 mg p.o. b.i.d.) ***Comparator*****:** Individual CBT and placebo ***Outcome*****:** Change in ADHD symptoms (ADHD-RS-Inv) and functioning (Sheehan Disability Scale). Outcomes were assessed at baseline and at 15 and 20 weeks.	n=48 (I=23 C=25)	This secondary analysis from an RCT aimed to assess whether the use of medication improves the outcomes of therapy. CBT was administered individually, over nine sessions, with the first session taking place following completion of medication titration to a stable dose. Participants received an acute phase treatment of seven 2-weekly sessions, followed by two further sessions (at weeks 15 and 20) during follow-up. There were no statistically significant differences in baseline measures of ADHD symptoms or functioning between the two groups; it was not clear whether there were any other significant differences between the participants in the two groups. Both groups showed significant improvements in ADHD symptoms and functioning over time and there were no statistically significant differences between the groups at any time point, for either outcome measure. The overall Cohen's d effect size for ADHD symptoms in all study participants was large 1.1 at both 15 and 20 weeks. The overall Cohen's d effect size for functioning in all study participants was moderate 0.5 at 15 weeks and 0.44 at 20 weeks.	Participants were block randomised, by a pharmacist independent of the study protocol, using a computer generated randomisation sequence. Participants and investigators were blind to group allocation. Results were reported for all specified outcomes. It was not clear whether all randomised participants

				were included in the analyses.
Philipsen et al (2015)	***Participants*:** Aged 18-58, outpatients with ADHD from 7 German study centres ***Intervention*:** Group psychotherapy and methylphenidate ***Comparator*:** 1. Group psychotherapy and placebo 2. Individual clinical management with methylphenidate 3. Individual clinical management with placebo ***Outcome*:** Change in the observer-rated CAARS ADHD Index. CAARS subscales, the ADHD-DC, the Beck Depression Inventory and CGI Subscales. Outcomes were assessed at baseline, after 12 weeks of intensive treatment, during maintenance (24 weeks), at the end of treatment (52 weeks), and at 2.5 year follow-up.	n=1480 (I=107 C1=109 C2=110 C3=107)	This large RCT aimed to compare the effects of group CBT versus individual clinical management and methylphenidate versus placebo, in adults with ADHD. Study participants were allocated to one of four treatment groups: group CBT + methylphenidate; group CBT + placebo; individual clinical management + methylphenidate; individual clinical management + placebo. The test for group CBT x methylphenidate interaction was non-significant and hence a 2 x2 (group CBT versus individual clinical management and methylphenidate versus placebo) was used, rather than a 4 arm approach. The mean age of study participants was 35 years (range 18 to 57) and 50% were male. There were no significant differences in sociodemographic characteristics, previous treatment history, ADHD subtypes, or psychiatric comorbidities, between the four groups at baseline. There was no statistically significant difference in the change in observer-rated ADHD Index score, from baseline to 12 weeks, between participants receiving group CBT and those receiving individual clinical management; mean difference 1.1 (95% CI: 0.0 to 2.0), *p*=0.06. Symptoms decreased significantly more, over the same time period, in patients treated with methylphenidate compared to those treated	Block randomisation, with block size kept confidential to help ensure concealment. Study participants and personnel were blind to medication assignment but were aware of CBT/clinical management allocation. Outcome assessors were blind to group allocation. Analyses were

			with placebo; mean difference -1.7 (95% CI: -2.8 to -0.6), *p*=0.003. Methylphenidate remained superior to placebo, when subgroup analyses were conducted for patients assigned to group CBT and those receiving individual clinical management. These treatment effects remained stable throughout follow-up. Response rates were similar in all four treatment arms. No significant differences in depression were found between the treatment arms. Comparison of CGI severity score favoured group CBT over individual clinical management at all time points, but this difference was only statistically significant at 2.5 year follow-up. Similarly, methylphenidate performed better than placebo at all time points, but the difference was only statistically significant at 52 weeks.	conducted on an intention-to-treat basis. Results were reported for all specified outcomes.

Risk of bias

Systematic reviews

Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Chandler (2013)	☹	☹	?	☹	☹
Torgerson et al (2008)	☺	☺	?	☹	☹

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
Weiss (2012)	☺	?	☺	☺	?	☺
Philipsen et al (2015)	☺	☺	☹	☺	☺	☺

☺ Low risk ☹ High risk ? Unclear risk

Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
NICE	ADHD AND (psychotherap* OR CBT)	22	
MEDLINE	21. MEDLINE; "attention deficit hyperactivity disorder".ti,ab; 11841 results. 23. MEDLINE; CBT.ti,ab; 3873 results. 24. MEDLINE; "cognitive behavio$r* therapy".ti,ab; 4006 results. 25. MEDLINE; psychoeducation.ti,ab; 957 results. 26. MEDLINE; "psychosocial intervention*".ti,ab; 2466 results. 22. MEDLINE; adult*.ti,ab; 707655 results. 27. MEDLINE; ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY/; 17469 results. 28. MEDLINE; ADHD.ti,ab; 11330 results. 29. MEDLINE; 21 OR 27 OR 28; 20888 results. 30. MEDLINE; 29 [Limit to: (Age Groups Adult 19 to 44 years or Young Adult and Adult 19-24 and 19-44 or Middle Aged 45 plus years or All Aged 65 and Over)]; 4488 results. 31. MEDLINE; exp PSYCHOTHERAPY/; 139649 results. 32. MEDLINE; COGNITIVE THERAPY/; 13163 results. 33. MEDLINE; 23 OR 24 OR 32; 15466 results. 34. MEDLINE; individual.ti,ab; 451248 results. 35. MEDLINE; 33 AND 34; 1353 results. 36. MEDLINE; group.ti,ab; 1532377 results. 37. MEDLINE; 33 AND 36; 4279 results. 38. MEDLINE; exp SOCIOENVIRONMENTAL THERAPY/; 26507 results. 39. MEDLINE; 23 OR 24 OR 25 OR 26 OR 31 OR 32 OR 33 OR 35 OR 37 OR 38; 143420 results. 40. MEDLINE; 30 AND 39 [Limit to: (Age Groups Adult 19 to 44 years or Young Adult and Adult 19-24 and 19-44 or Middle Aged 45 plus years or All Aged 65 and Over)]; 274 results. 41. MEDLINE; "randomized controlled trial".pt; 332056 results. 43. MEDLINE; randomized.ab; 247363 results.	116	

	44. MEDLINE; placebo.ab; 137714 results. 45. MEDLINE; "drug therapy".fs; 1549552 results. 46. MEDLINE; randomly.ab; 181327 results. 47. MEDLINE; trial.ab; 256643 results. 48. MEDLINE; groups.ab; 1182024 results. 49. MEDLINE; 41 OR 42 OR 43 OR 44 OR 45 OR 46 OR 47 OR 48; 2972545 results. 42. MEDLINE; "controlled clinical trial".pt; 84622 results. 50. MEDLINE; 40 AND 49 [Limit to: (Age Groups Adult 19 to 44 years or Young Adult and Adult 19-24 and 19-44 or Middle Aged 45 plus years or All Aged 65 and Over)]; 116 results.		
EMBASE	1. EMBASE; ATTENTION DEFICIT DISORDER/ OR ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY/ OR ATTENTION DEFICIT HYPERACTIVITY DISORDER/; 30728 results. 2. EMBASE; ADHD.ti,ab; 14964 results. 3. EMBASE; "attention deficit hyperactivity disorder".ti,ab; 14541 results. 4. EMBASE; 1 OR 2 OR 3; 32579 results. 5. EMBASE; adult*.ti,ab; 818062 results. 6. EMBASE; ADULT/; 4197835 results. 7. EMBASE; 5 OR 6; 4654601 results. 8. EMBASE; 4 AND 7; 8718 results. 9. EMBASE; exp PSYCHOTHERAPY/; 166260 results. 10. EMBASE; COGNITIVE THERAPY/; 27780 results. 11. EMBASE; CBT.ti,ab; 5676 results. 12. EMBASE; "cognitive behavio$r* therapy".ti,ab; 5615 results. 13. EMBASE; 10 OR 11 OR 12; 30032 results. 14. EMBASE; individual.ti,ab; 519955 results. 15. EMBASE; 13 AND 14; 2380 results. 16. EMBASE; group.ti,ab; 1897369 results. 17. EMBASE; 13 AND 16; 6494 results. 18. EMBASE; PSYCHOEDUCATION/; 2554 results. 19. EMBASE; psychoeducation.ti,ab; 1533 results.	137	

	20. EMBASE; 18 OR 19; 3328 results. 21. EMBASE; "psychosocial intervention*".ti,ab; 3473 results. 22. EMBASE; PSYCHOSOCIAL CARE/; 9294 results. 23. EMBASE; 9 OR 13 OR 15 OR 17 OR 20 OR 21 OR 22; 177512 results. 24. EMBASE; 8 AND 23; 760 results. 25. EMBASE; random*.ti,ab; 737623 results. 27. EMBASE; (crossover* OR cross-over*).ti,ab; 61638 results. 28. EMBASE; placebo*.ti,ab; 176409 results. 29. EMBASE; (doubl* ADJ blind*).ti,ab; 128878 results. 30. EMBASE; (singl* ADJ blind*).ti,ab; 12310 results. 26. EMBASE; factorial*.ti,ab; 19071 results. 32. EMBASE; allocat*.ti,ab; 69060 results. 33. EMBASE; volunteer*.ti,ab; 157451 results. 34. EMBASE; CROSSOVER PROCEDURE/; 34368 results. 35. EMBASE; DOUBLE BLIND PROCEDURE/; 109663 results. 36. EMBASE; RANDOMIZED CONTROLLED TRIAL/; 324959 results. 37. EMBASE; SINGLE BLIND PROCEDURE/; 16095 results. 38. EMBASE; 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37; 1214770 results. 31. EMBASE; assign*.ti,ab; 205322 results. 39. EMBASE; 24 AND 38; 137 results.		
PsycINFO/CINAHL	1. PsycINFO; ATTENTION DEFICIT DISORDER WITH HYPERACTIVITY/; 11304 results. 2. PsycINFO; ADHD.ti,ab; 14523 results. 3. PsycINFO; "attention deficit hyperactivity disorder".ti,ab; 13879 results. 4. PsycINFO; 1 OR 2 OR 3; 17806 results. 5. PsycINFO; adult*.ti,ab; 259979 results. 6. PsycINFO; 4 AND 5; 3473 results. 7. PsycINFO; 4 [Limit to: (Age Groups 300 Adulthood age 18 yrs and older)]; 5054 results. 8. PsycINFO; 6 OR 7 [Limit to: (Age Groups 300 Adulthood age 18 yrs and older)]; 5054 results.	93	

	9. PsycINFO; exp PSYCHOTHERAPY/; 160274 results. 10. PsycINFO; CBT.ti,ab; 5978 results. 11. PsycINFO; "cognitive behavio$r* therapy".ti,ab; 8217 results. 12. PsycINFO; 9 OR 10 OR 11; 163801 results. 13. PsycINFO; individual.ti,ab; 229948 results. 14. PsycINFO; 12 AND 13; 16372 results. 15. PsycINFO; group.ti,ab; 375898 results. 16. PsycINFO; 12 AND 15; 29828 results. 17. PsycINFO; PSYCHOEDUCATION/; 2753 results. 18. PsycINFO; psychoeducation.ti,ab; 1722 results. 19. PsycINFO; 17 OR 18; 3708 results. 20. PsycINFO; "psychosocial intervention*".ti,ab; 2874 results. 21. PsycINFO; 9 OR 12 OR 14 OR 16 OR 19 OR 20; 168456 results. 22. PsycINFO; 8 AND 21 [Limit to: (Age Groups 300 Adulthood age 18 yrs and older)]; 237 results. 23. PsycINFO; CLINICAL TRIALS/; 6176 results. 25. PsycINFO; groups.ti,ab; 326955 results. 26. PsycINFO; (double adj3 blind).ti,ab; 16091 results. 27. PsycINFO; (single adj3 blind).ti,ab; 1197 results. 24. PsycINFO; random*.ti,ab; 110473 results. 29. PsycINFO; controlled.ti,ab; 68947 results. 30. PsycINFO; (clinical adj3 study).ti,ab; 6882 results. 31. PsycINFO; trial.ti,ab; 58167 results. 32. PsycINFO; "treatment outcome clinical trial".md; 22237 results. 33. PsycINFO; 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32; 502156 results. 28. PsycINFO; EXPERIMENTAL DESIGN/; 8277 results. 34. PsycINFO; 22 AND 33 [Limit to: (Age Groups 300 Adulthood age 18 yrs and older)]; 93 results.		
CENTRAL	1 MeSH descriptor Attention Deficit Disorder with Hyperactivity explode all trees 1379 edit delete #2 ADHD 1342 edit delete #3 "Attention deficit hyperactivity disorder" 665 edit delete #4 (#1 OR #2 OR #3) 1851 edit delete #5 MeSH descriptor Psychotherapy explode all trees 13018 edit delete	37	

	#6 MeSH descriptor Cognitive Therapy explode all trees 3910 edit delete #7 (psychotherap*) 7444 edit delete #8 CBT 1882 edit delete #9 "cognitive behaviour* therapy" 646 edit delete #10 "cognitive behavior* therapy" 577 edit delete #11 individual 44857 edit delete #12 (#6 OR #8 OR #9 OR #10) 5002 edit delete #13 (#11 AND #12) 1355 edit delete #14 group 628097 edit delete #15 (#14 AND #12) 4592 edit delete #16 psychoeducation 455 edit delete #17 "psychosocial intervention*" 482 edit delete #18 (#5 OR #6 OR #7 OR #12 OR #13 OR #15 OR #16 OR #17) 17187 edit delete #19 (#4 AND #18) 272 edit delete #20 adult 289703 edit delete #21 (#19 AND #20) 88 edit delete Central only 37		

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