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 (PICTRO for diagnostic questions)

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.

Clinical and research implications

No definite clinical implications can be made from the available evidence due to a lack of studies with a low risk of bias. There is a trend, however, that cognitive behavioural group therapies in both medicated, or mixed medicated/non-medicated participants, appear to be effective in comparison to medication alone, or other control treatments. The included studies suggest that clinicians should make an effort to offer patients this type of treatment, or that CBT for adults is a useful next strategy for patients who show continued symptoms despite treatment with medication.

Recommendations in the literature for further research are that studies should be larger, long-term, and should evaluate measures other than core ADHD symptoms, such as comorbid disorders, quality of life, and functional impairment. In addition, it was suggested that future studies should examine the effectiveness of CBT in individuals who may be unwilling or unable, for medical reasons, to take medication for ADHD – and to determine the relative efficacy of pharmacotherapy and psychosocial treatments, separately and together, for the treatment of ADHD. Future studies may also need to investigate whether different patients or settings may be more receptive or conducive to an individual versus a group therapy approach.

What does the evidence say?

Number of included studies/reviews (number of participants)
One systematic review (SR) included three potentially relevant trials with a total of 109 participants (Torgenson et al. 2009), and four randomised controlled trials (RCTs) (n=279) met the inclusion criteria for this BEST summary.

Main Findings
Three of the studies included in the SR appeared to show positive outcomes for psychotherapy treatments in terms of patient and physician rated response, and one study also reported a significant positive effect of CBT on measures of anxiety and depression. Detailed findings, however, were not provided in the text or tables of the SR, so that a full assessment of these results could not be made.

There is RCT evidence that CBT plus medication results in better outcomes than medication alone. The RCT by Emilsson (2011) reported significant improvements in core ADHD symptoms at the end of treatment, and significant improvements for a number of outcomes, including inattention ($p<0.01$), hyperactivity/impulsivity ($p<0.01$), anxiety ($p<0.05$), depression ($p<0.05$), and social functioning ($p<0.01$), at three months' follow-up.

One RCT evaluated ADHD symptoms in participants who received dialectical behaviour therapy-based skills compared with participants who were in a loosely structured discussion group (Hirvikoski et al 2011). The participants were on stable medical treatment or no medical treatment. For those participants who completed the study, there appeared to be significant improvements in ADHD symptoms in the DBT group, but between group differences were not clearly reported. Participants in both groups reported that their general well-being increased ($p\leq0.05$).

Another RCT (Safren et al 2011) compared CBT with relaxation and educational support in adults treated with medication. At post-treatment, participants who received CBT had significantly better ADHD rating scale scores (−4.63 [95% CI, −8.30 to −0.96], *P*=.02) and Clinical Global Impression Scale scores (−0.53 [95% CI, −1.01 to −0.05]; *P*=.03) than those in the control group.

The fourth RCT (Solanto et al 2011) compared a meta-cognitive therapy or supportive psychotherapy. The authors reported that meta-cognitive therapy provided significant benefit to patients with ADHD with respect to inattention symptoms, and to specific functions of time management, organization, and planning, but not for other measures, such as anxiety, depression, and self-esteem.

Authors Conclusions
Among all of the included studies, the conclusions consistently state that psychotherapy improves ADHD symptoms in adults on ADHD medication. The authors of the SR concluded that there is good support for both pharmacological and psychotherapeutic treatment of ADHD in adults. Emilsson (2011) concluded that CBT increased the effect of psychopharmacological treatment in reducing ADHD symptoms and comorbid problems, and demonstrated improvements in functions associated with impairment. Hirvikoski (2011) concluded that DBT-based skills training group program appeared feasible in an outpatient psychiatric context, well tolerated, and effective. Safren (2011) also concluded that among adults with persistent ADHD symptoms treated with medication, the use of

CBT compared with relaxation and educational support resulted in improved ADHD symptoms, which were maintained at 12 months. Lastly, Solanto (2010) concluded that meta-cognitive therapy yielded significantly greater improvements in dimensional and categorical estimates of severity of ADHD symptoms compared with supportive therapy – and stated that these findings support the efficacy of meta-cognitive therapy as a viable psychosocial intervention.

Reliability of conclusions/Strength of evidence
The SR and three of the RCTs did not report on all aspects of quality criteria, so that their risk of bias could not be ascertained. Only one the RCTs appeared to be at low risk of bias (Safren 2010). It was noted, however, that all of the included trials had relatively small sample sizes. Thus overall, the reliability of the results from the included trials is uncertain.

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.

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Date answer completed: 30/07/2012

References

Systematic Reviews

1. Torgersen T, Gjervan B, Rasmussen K. Treatment of adult ADHD: Is current knowledge useful to clinicians? Neuropsychiatric Disease and Treatment 2008:4(1) 177–186

Randomised Controlled Trials

2. Emilsson B, Gudjonsson G, Sigurdsson J, Baldursson G, Einarsson E, Olafsdottir H, Young S. Cognitive behaviour therapy in medication treated
adults with ADHD and persistent Symptoms: A randomized controlled trial. BMC Psychiatry 2011, 11:116

3. Hirvikoski T, Waaler E, Alfredsson J, Pihlgren C, Holmström A, Johnson A, Rück J, Wiwe C, Bothén P, Nordström A. Reduced ADHD symptoms in adults with ADHD after structured skills training group: Results from a randomized controlled trial. Behaviour Research and Therapy 49 (2011) 175-185.

4. Safren S, Sprich S, Mimiaga M, Surman G, Knouse L, Groves M, Otto M. Cognitive Behavioral Therapy vs Relaxation With Educational Support for Medication-Treated Adults With ADHD and Persistent Symptoms. JAMA, August 25, 2010—Vol 304, No. 8.

5. Solanto M, Marks D, Wasserstein J, Mitchell K, Abikoff H, Alvir J, Kofman M. Efficacy of Meta-Cognitive Therapy for Adult ADHD. Am J Psychiatry 2010; 167:958–968

Guidelines

5. 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
Torgerson (2008)	January 2007	This study used the following inclusion criteria: *Study Design:* Randomised controlled trials. *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. *Comparison:* placebo or non-intervention control group. *Outcomes:* 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.	33 studies were included in this review, however only 3 were concerned with psychotherapy. (n= 109)	One relevant trial evaluated cognitive behavioural therapy (CBT) plus continued medication (Safren 2005), one evaluated a Cognitive Remediation Programme (CRP) (Stevenson 2002), and the last trial evaluated a psychosocial self-directed intervention (Stevenson 2003). In the latter two studies, some of the patients were also taking ADHD medication. The trial by Safren (2005) reported that combined treatment was more effective than medical treatment alone. Post treatment ADHD symptom specific outcome measures showed 56% (physician rated) responders in the combined treatment group versus 13% in the medication only group. This study also reported a significant positive effect of CBT on measures of anxiety and depression (no details provided). In two studies by Stevenson (2002; 2003) participants were randomly assigned to a treatment group or waiting list control. In both studies outcome measures showed improvement in ADHD symptoms. In one of the studies 36% of the patients had improved at the end of the treatment period (Stevenson et al 2002), and this increased to 50% at follow up after 12 months (effect size 1.4). In the other study (Stevenson et al 2003) 47% had improved at the end of treatment, but this rate decreased to 36% at follow-up two months later (no further details provided).	Unclear

RCTs

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Emilsson et al (2011)	*Participants:* participants were required to have a diagnosis of ADHD, and to be stable on a prescribed medication for ADHD for at least a month (i.e. stimulants, atomoxetine or bupropion). *Intervention:* 15 sessions of manualised CBT, developed for youths and adults with ADHD, combined with usual psychopharmacological treatment. The CBT intervention (R&R2ADHD) is a structured manual programme that aims to decrease the core symptoms of ADHD and improve social, problem solving and organisational skills. This intervention uses both group and individual treatment. *Comparison:* Psychopharmacological treatment only. *Outcome:* Both independent and self rated measures were used. Outcomes were measured using the Kiddie-Schedule for Affective Disorders and Schizophrenia (K-SADS-PL), the clinical global impression scale, the Barclay ADHD Current Symptoms Scale, the Beck Anxiety Inventory, and the Beck Depression Inventory.	N= 54 (27 in both groups)	At end of treatment, significant results in favour of treatment compared to medication alone were observed for K-SADS ADHD ($p<0.01$), BCS inattention ($p<0.05$), BCS hyperactivity/impulsivity ($p<0.05$), BCS total score ($p<0.001$), and RATE Antisocial Scale ($p<0.05$). No significant differences between groups were observed for CGI, BAI Anxiety, BDI Depression, RATE ADHD symptoms, RATE Emotional Control, RATE Social Functioning or RATE total score. At 3 months' follow-up, however, all outcomes measures were statistically improved in favour of the treatment group.	Unclear
Hirvikoski	*Participants:* the inclusion criteria were	N = 51 (26	Per protocol analysis demonstrated a significant reduction of ADHD	Unclear

2010	that the participants were <18 years old, ADHD was the main neurodevelopmental diagnosis, if being prescribed any psychoactive drug treatment this should have been stable for at least three months three months. Participants were excluded if there had ongoing substance abuse, mental retardation, diagnosed organic brain injury, or autism spectrum disorder. *Intervention:* The experimental treatment group received DBT skills training adapted from the original manual (Hesslinger et al 2004) to adapt the material to a Swedish context. The therapy was also adapted to include mindfulness meditation techniques, and one session with a theme of 'homework' was added. Group sizes ranged between 4-8 individuals, and were 2 hours in duration. The groups were chaired by two clinical Psychologists trained in the delivery of CBT or DBT, who were supervised by a clinical psychologist or a licensed psychotherapist. *Comparator*: The control group consisted of a loosely structured discussion group, supported by 2 clinical psychologists. The groups were 2 hours in duration. The participants chose an ADHD related theme that was discussed during the session. *Outcome:* Assessment took place at	experimental group & 25 control group)	symptoms in the dialectical behaviour therapy-based skills training group but not in the loosely structured discussion group (control) ($p \leq 0.05$). Between group statistical analyses are not clear. This result was not significant when all individuals were included in the analysis (ITT analysis). Participants in both groups reported that their general well-being increased ($p \leq 0.05$).	(small sample sizes)

	baseline, after treatment, 3 months follow-up and 1 year follow-up. The primary outcome measure of the study was a self-rating of ADHD symptoms using the Current ADHD Symptom Scale – Self Report Form (Barkley and Murphy, 1998). Secondary outcomes included a number of other self rated scales; the Beck Depression Inventory, the Beck Anxiety Inventory, the Karolinska Sleep Questionnaire, the Swedish version of the Perceived Stress Scale, and the Sheehan Disability Scale.			
Safren et al 2010	*Population:* Adults meeting the DSM-IV criteria for ADHD, who were taking medications, however still reporting clinically significant symptoms were included in this study. The participants were required to have a principle diagnosis of ADHD, and a Clinical Global Impression Scale score for a severity of 3 or greater. The participants were between the ages of 18 and 65, able to provide informed consent and comply with study procedures, and stabilised on psychotropic medications. *Intervention:* The experimental group treatment consisted of CBT. The therapy consisted of 11 sessions, focussing upon psychoeducation of ADHD and training	N = 86 (43 experimental group, & 43 control group)	At post-treatment, participants who received cognitive behavioural therapy had significantly better ADHD rating scale scores (−4.63 [95% CI, −8.30 to −0.96], *P*=.02) and Clinical Global Impression scale scores (−0.53 [95% CI, −1.01 to −0.05]; *P*=.03) than those who were assigned to relaxation with educational support. Throughout treatment, self-reported symptoms were also significantly more improved for cognitive behavioral therapy (β=−0.41; 95% CI, −0.64 to −0.17; *P*<0.001), and there were more treatment responders in cognitive behavioral therapy for both the Clinical Global Impression scale (53% vs 23%; OR 3.80; 95% CI, 1.50 to 9.59; *P*=0.01) and the ADHD rating scale (67% vs 33%; OR, 4.29; 95% CI, 1.74 to 10.58; *P*=0.002). Responders and partial responders in the cognitive behavioral therapy condition maintained their gains over 6 and 12 months.	Low

	and planning, learning skills to reduce distractability, and cognitive restructuring. *Comparator:* Participants in the control group received relaxation training in progressive muscle relaxation and other relaxation techniques, as well as education about ADHD and supportive psychotherapy. *Outcomes:* The relevant outcomes were assessed at baseline, 15 weeks, 6 months, and 12 months. The primary outcomes were measured through the ADHD rating scale, the Clinical Global Impression Scale and the Current Symptoms Scale were used to assess the severity of ADHD symptoms.			
Solanto 2010	*Participant:* Eligible participants were between the ages of 18 & 65 and meet the DSM-IV criteria for ADHD, predominantly the inattentive or combined subtypes. Participants receiving psychotropic medication were required to be stabilised on the medication for a period of at least 2 months before the study began. *Intervention:* Those in the experimental group received 12 sessions of meta cognitive therapy delivered by 1 of 2 experienced psychologists. *Comparator:* Participants in the control group received a supportive therapy,	N=88 (45 experimental group, 43 to control)	At post-treatment, participants who received Meta-cognitive therapy had significantly better scores compared with supportive therapy for: Adult ADHD Investigator Symptom Rating Scale: Inattention subscale (mean difference 2.7 [95% CI 0.9, 4.6] ($p<0.001$); Time management, organisation, and planning subscale (mean difference 2.2 [95% CI 0.9, 3.5] ($p<0.001$); Conners Adult ADHD Rating Scales-Observer: Long Version, inattention/memory subscale (mean difference 4.8 [95% CI 0.8, 8.7] ($p<0.05$). There were no significant differences between groups for: Brown Attention-Deficit Disorder Scale (total score); Behaviour Rating Inventory of Executive Function-Adult Version, meta-cognition index), On Time Management Organisation and Planning scale ($p<0.05$), Beck Depression Inventory, Hamilton Anxiety Rating Scale,	Unclear

	designed to control for the non specific elements of the meta-CBT programme, including group support and validation, therapist attention, and psychoeducation. Those in the control group received 12 sessions. *Outcome:* The primary outcome measures were the blind structured interview (AISRS) and the CAARS-S inattention/memory subscale score.		total anxiety or observed anxiety, or Rosenberg Self-Esteem Inventory.	

Risk of Bias: SRs

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Torgersen et al (2008)	☺	☺	?	?	☺

RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Emilsson et al (2011)	?	?	NA	☺	☹	?
Hirvikoski et al (2011)	☺	☺	NA	NA (self-assessed)	☺	?
Safren et al (2010)	☺	?	NA	☺	☺	?
Solanto et al (2010)	?	?	NA	☺	☹	?

☺Low Risk ☹High Risk ? Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
SRs and Guidelines			
NICE	ADHD AND (psychotherap* OR CBT)	22	1
DARE	1 (attention deficit disorder) IN DARE 60 2 (attention adj3 deficit*) IN DARE 116 3 (adhd) IN DARE 69 4 (addh) IN DARE 1 5 (adhs) IN DARE 0 6 (hyperactiv*) IN DARE 127 7 (hyperkin*) IN DARE 14 8 (inattentive) IN DARE 5 9 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 151	151	1
Primary studies			
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 #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	37	4

	#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		
PsycINFO	Search History: 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. 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.	93	

	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.		
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	116	

	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. 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.	137	

	19. EMBASE; psychoeducation.ti,ab; 1533 results. 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.		
Summary	**NA**	**NA**	

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