

Best Evidence Summaries of Topics in Mental Healthcare

BEST in MH clinical question-answering service

Question

How effective is CBT compared to SSRI (Selective Serotonin Reuptake Inhibitor) for treating Anxiety disorders in adults?

Clarification of question using PICO structure

Patients: Adults with Anxiety disorders

Intervention: CBT

Comparator: SSRI medication

Outcome: Any patient outcomes

Plain language summary

Most of the research found suggests that CBT and SSRI's have similar effects in improving symptoms of anxiety. One study suggests that SSRI's are significantly better than CBT at reducing frequency of panic attacks in people with Panic Disorder, however this particular study was of poor quality.

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Clinical and research implications

Overall there was a small amount of moderate quality evidence to suggest that CBT and SSRIs have similar effects in improving symptoms of hypochondriasis, anxiety and worry after up to 16 weeks of treatment in adults with anxiety disorders. However one poor quality RCT found that SSRIs were better than CBT in reducing the frequency of panic attacks in adults with panic disorder, with or without agoraphobia. It recommended that for those with moderate or severe agoraphobia combined CBT and SSRI is advised but that SSRIs alone could be used for milder cases.

As most of these RCTs only measured outcomes in the short-term (up to 16 weeks) further research is needed to evaluate whether the positive effects of CBT and SSRIs are maintained over a longer time period. One of the RCTs in older adults aged 60 years or more also stated that there has been a lack of research into the treatment of later life anxiety with SSRIs and more research is needed into other psychological interventions such as reminiscence therapy.

What does the evidence say?

Number of included studies/reviews (number of participants)

Four randomised controlled trials (RCTs) were included with a total of 323 participants (range 49 to 112); all were conducted in the Netherlands. All of the RCTs included additional control groups (placebo or waiting list controls). Participants were adults with hypochondriasis (one RCT); older adults aged 60 or over with panic disorder with or without agoraphobia, or other anxiety disorders (two RCTs); and adults with panic disorder with or without agoraphobia (one RCT).

Main findings

Three RCTs found no statistically significant differences between CBT and SSRIs. One in participants with hypochondriasis found no significant difference between CBT and paroxetine after 16 weeks of treatment on measures of hypochondriasis, anxiety and depression. Two RCTs in older adults also found no significant differences in anxiety, depression, severity of agoraphobia or worry after up to 15 weeks of treatment for CBT compared to paroxetine or sertraline.

The final RCT found that CBT was less effective than SSRIs (a choice of fluoxetine, paroxetine, sertraline, citalopram, or fluoxamine) in reducing the frequency of panic attacks in people with panic attacks with or without agoraphobia, with SSRIs being significantly better than CBT after 6 weeks of treatment.

Author's conclusions

The RCT in people with hypochondriasis concluded that: "CBT or paroxetine are effective in the treatment of hypochondriasis in a severe and heterogeneous outpatient population" (Greeven et al.)

The two RCTs in older adults concluded that: "Despite its drawbacks, the SSRI paroxetine and CBT are effective in the treatment of panic disorder in elderly patients" (Hendriks et al.) and "Both CBT and sertraline led to significant improvements on all outcomes, but sertraline completers had a greater improvement in symptoms of worry" (Schuurmans et al.)

The final RCT which included different SSRIs concluded that: "Patients with panic disorder responded well to each treatment (CBT, SSRI, CBT and SSRI) with a significant decline in panic attacks, CBT showed a slower rate of improvement compared to SSRI, and CBT and SSRI" (Van Apeldoorn et al).

Reliability of conclusions/Strength of evidence

Overall two RCTs were considered to be at a moderate risk of bias (Greeven et al. and Hendicks et al.) and two were at high risk of bias (Schuurmans et al. and Van Apeldoorn et al.). The two better quality trials both used appropriate methods of randomisation and allocation concealment, included all participants in the analysis and appeared to have clearly reported on all the outcome measures. The main limitation was the lack of blinding but it would not be possible to blind participants and therapists due to the nature of the CBT and SSRI treatments (although if a placebo was included that was blinded). It should be possible to blind the outcome assessors but in one trial this was not done and in the other it was not clear.

The two lower quality RCTs also did not use any blinding, and had high rates of participant drop-out who were excluded from the analyses. They also did not report all the outcome measures clearly, often focusing on the change within each treatment group rather than the difference between them. The numbers included in the analyses were also low (30 to 32 CBT, 17 to 24 SSRI).

Overall there was a small amount of moderate quality evidence to suggest that CBT and SSRIs have similar effects on hypochondriasis, anxiety and worry in adults with anxiety disorders after treatment for up to 16 weeks.

What do guidelines say?

Neither NICE or SIGN guidelines comment on specific research conducted about CBT vs SSRI's for treating anxiety disorders in adults. However two NICE guidelines do make recommendations for how each intervention should be administered for Social or General anxiety disorders and recommendations on research that should be conducted on this topic.

Date question received: 27/10/15

Date searches conducted: 10/11/15, 24/11/15

Date answer completed: 08/12/15

References

Randomised controlled trials

- 1. Greeven, A., van Balkom, A. J., Visser, S., Merkelbach, J. W., van Rood, Y. R., Richard van Dyck, M. D., ... & Spinhoven, P. (2007). Cognitive behavior therapy and paroxetine in the treatment of hypochondriasis: a randomized controlled trial. *The American journal of psychiatry*, 164(1), 91-99.
- 2. Hendriks, G. J., Keijsers, G. P. J., Kampman, M., Oude Voshaar, R. C., Verbraak, M. J. P. M., Broekman, T. G., & Hoogduin, C. A. L. (2010). A randomized controlled study of paroxetine and cognitive-behavioural therapy for late-life panic disorder. *Acta psychiatrica Scandinavica*, 122(1), 11-19.
- 3. Schuurmans, J., Comijs, H., Emmelkamp, P. M., Gundy, C. M., Weijnen, I., Van Den Hout, M., & Van Dyck, R. (2006). A randomized, controlled trial of the effectiveness of cognitive—behavioral therapy and sertraline versus a waitlist control group for anxiety disorders in older adults. *The American journal of geriatric psychiatry*, 14(3), 255-263.
- 4. Van Apeldoorn, F. J., Van Hout, W. J., Timmerman, M. E., Mersch, P. P. A., & den Boer, J. A. (2013). Rate of improvement during and across three treatments for panic disorder with or without agoraphobia: Cognitive behavioral therapy, selective serotonin reuptake inhibitor or both combined. *Journal of affective disorders*, 150(2), 313-319.

Guidelines

The National Institute for Health Care Excellence (2013). Social anxiety disorder: recognition, assessment and treatment – guidance. NICE Clinical Guidance (CG159). http://www.nice.org.uk/guidance/cg159

The National Institute for Health Care Excellence (2011). Generalised Anxiety Disorder and Panic Disorder in adults: management guidance. NICE Clinical Guidance (CG113). http://www.nice.org.uk/guidance/cg113

Results

Randomised controlled trials

Author	Inclusion criteria	Number of	Summary of results	Risk of bias
(year)		participants		
Greeven et.	Participants:	N=112	At baseline 61% of the participants were female, with	Moderate
al. (2007)	Adults aged 18 years and older with a	(40 CBT, 37	a mean age of 42 years and a mean duration of	
	primary diagnosis of Hypochondriasis	paroxetine, 35	hypochondriasis of 10 years. More of the paroxetine	Randomisation and
	(health anxiety disorder- the fear of	placebo)	participants had hypochondriasis without comorbid	allocation
	being seriously ill)		psychiatric diagnoses (29.7% vs. 17.5% for CBT), but	concealment used
		Outpatients,	more CBT participants had major depressive disorder	appropriate
	Intervention:	Netherlands.	(27.5% vs. 16.2%) and social anxiety disorder (22.5%	methods.
	CBT: 6 to 16 weeks of individual CBT		vs. 8.1%), approximately 42% of participants overall	
			had panic disorder, and 23% had generalized anxiety	Although there was
	Comparators:		disorder. Ten patients withdrew from the CBT group	a placebo group,
	- Paroxetine: 10 mg daily in the first		(but only three were excluded from the analysis) and	participants and
	week, 20mg daily in the second		11 from the paroxetine group (all were included in the	researchers were
	week, then weekly increases in		analysis).	not blinded to the
	increments of 20 mg per day to a			CBT group.
	maximum dosage of 60 mg per day,		There was no statistically significant difference	
	for 16 weeks		between the CBT and paroxetine groups after 16	It was unclear if all
	- Placebo: for 16 weeks		weeks of treatment on any of the outcome measures.	outcome
			The mean differences for CBT compared to paroxetine	assessments were
	Outcome:		were: hypochondriasis measured by the Whiteley	made blind to
	Primary Outcome:		Index (-1.92, 95% CI -4.79 to 0.95; p = 0.19); Health	treatment.
	- Hypochondriasis (The Whiteley		Anxiety (-0.51, -4.00 to -2.98; p = 0.77); Illness	
	Index)		Behaviour (0.46, 95% CI -1.15 to 2.06; p = 0.58);	An ITT analysis was

	Secondary Outcomes:		Symptom Checklist-90 (-1.26, 95% CI -18.68 to 16.16;	performed, and all
	- Health Anxiety and illness behaviour		p = 0.89); Montgomery Asberg Depression Rating	outcomes were
	(Illness attitudes scales – Dutch		Scale (-4.68, 95% CI -9.52 to 0.61; p = 0.06) and the	reported.
	Version)		Brief Anxiety Scale (-0.77, 95% CI -2.89 to 1.35; 0.47).	
			Responders were classified as those with a change in	
			Whiteley Index score greater than one standard	
			deviation, but there was no significant difference	
			between CBT and paroxetine (45% vs. 30%; p = 0.17).	
Hendricks	Participants:	N=49	The mean participant age was 69 years, 57% were	Moderate
et.al. (2010)	Adults aged 60 years and older with a	(20 CBT, 17	female, and the mean duration of anxiety was 12.3	
	diagnosis of Panic disorder with	paroxetine, 12	years. The numbers with a co-morbid psychiatric	Randomisation and
	Agoraphobia (PDA).	waiting list	diagnosis were lower in the CBT group (10% vs. 47%	allocation
		control)	paroxetine) and also for a co-morbid somatic disorder	concealment used
	Intervention:		(60% vs. 76.5%). Three patients withdrew from the	appropriate
	CBT – 14 weekly sessions of individual	Specialist	CBT group and one from the paroxetine group.	methods.
	CBT which was then tapered off within a	outpatient	After 44 and a selection of the control of	B. distance of
	maximum of six sessions during the 12-	anxiety clinic,	After 14 weeks of treatment there were no	Participants and
	week follow-up period.	Netherlands	statistically significant differences between CBT and	researchers were
	Companyatory		paroxetine on any outcome measure. Mean (standard	not blinded to the
	Comparator:		deviation) scores were: ACQ (CBT 1.4 (0.4),	treatment group,
	- Paroxetine: 10mg daily in the first		paroxetine 1.4 (0.4)); MI-A (CBT 1.7 (0.9), paroxetine	and as outcomes
	week then increased in 10mg		1.9 (0.7)); and SCL-90 (CBT 145.4 (32.8), paroxetine	were self-reported, these were also not
	weekly increments to 40mg/day		135.9 (24.8)). At the 26 week follow-up assessment	
	including 30 minute weekly		there were also no statistically significant differences	blinded.
	consultations. From weeks 5 to 14,		between CBT and paroxetine for any outcome	The englishing
	all patients attended five 30 min		measures.	The analysis

	medical consultations once every 2			method meant that
	weeks. Paroxetine was maintained			all participants
	at 40 mg/day during weeks 14–26.			were included, and
	- Waiting list control: could get CBT			all the outcomes
	or paroxetine after week 14.			were reported.
	Outcome:			
	- Severity of agoraphobic/anxiety			
	cognitions; Agoraphobic Cognitions			
	Questionnaire (ACQ) Dutch version			
	- Severity of phobic avoidance;			
	Mobility Inventory Avoidance scale			
	(MI-A) Dutch Version			
	Outcomes were measured at baseline, 8,			
	14 and 26 weeks.			
Schuurmans	Participants:	N=84	The mean participant age was 70 years, 75% were	High
et. al.	Adults aged 60 years and older with a	(42 CBT, 29	female, and the mean duration of anxiety was 25	
(2006)	diagnosis of generalized anxiety disorder	sertraline, 13	years. The most common disorder was panic disorder	Treatment
	(GAD), panic disorder (with or without	waiting list	(40.5% CBT, 55.2% sertraline), followed by generalized	allocations were
	agoraphobia), agoraphobia without a	control)	anxiety disorder (33.3% CBT, 34.5% sertraline),	selected blindly and
	history of panic disorder or social phobia		agoraphobia (16.7%, 3.4% sertraline) and social	at random by a
		Referrals to	phobia (9.5% CBT, 6.9% sertraline).	researcher.
	Intervention:	GPs,		
	CBT – 15 weekly sessions of individual	community	Drop-out rates were high with 12 (29%) CBT and 12	Due to the nature
	CBT lasting 1 hour each consisting of	mental health	(41%) sertraline participants being excluded from the	of the interventions
	relaxation, cognitive restructuring and	centres and	analyses.	it was not possible
	exposure.	outpatient		to blind the
		clinics in the	Both the CBT and sertraline groups showed significant	participants or

	Comparator:	Netherlands.	improvements on all outcome measures over time.	therapists. As some
	- Sertraline : 8, 20 minute sessions		There was a significant difference between all three	outcomes were
	over 15 weeks with a starting dose		treatment groups for anxiety measured by the HARS	self-reported their
	of less than 25mg up to a minimum		(p <0.05) but there was no significant difference	assessment would
	dose of 100mg and maximum of		between sertraline and CBT, only between sertraline	also be un-blinded.
	150mg within 4 weeks.		and the waiting list control. No significant between	
	- Wait-list control: 15 week waiting		group differences were seen for worry or depressive	Dropout rates were
	period, who could then receive		symptoms.	high, and although
	either treatment.			an intent-to-treat
			After 15 weeks of treatment 44% of CBT participants	analysis was
	Outcome:		and 57% of sertraline participants were treatment	reported, full
	Primary Outcomes		responders (an improvement of 20% on the BAI and	details were not
	- Anxiety: Hamilton Anxiety Rating		HARS). There was no significant difference between	given and it was not
	Scale (HARS), Beck Anxiety		CBT and sertraline (p = 0.33). A considerable number	the main analysis.
	Inventory (BAI)		of moderate to severe adverse effects were reported	
	Secondary Outcomes		with sertraline.	Results were poorly
	- Worry: Worry Domain			reported and
	Questionnaire (WDQ)			focussed on the
	- Depressive Symptoms;: Centre of			changes within
	Epidemiological Studies Depression			groups.
	Scale (CES-D)			
	Outcomes were measured at baseline,			
	post-treatment (15 weeks) and at 3			
	months follow-up.			
Van	Participants:	N=160	Only those participants who completed treatment	High
Apeldoorn	Adults (18 to 65 years old) who met the	(55 CBT, 53	were included in the analysis (32 CBT, 24 SSRI, 22 CBT	
et.al. (2013)	diagnosis criteria for panic disorder (PD)	SSRI, 52 CBT +	+ SSRI). The mean participant age was 36.6 years,	No details were
	with or without agoraphobia (AG).	SSRI)	56.6% were female, and they had suffered from panic	reported about the

Intervention:

CBT – up to 21 treatment sessions of approximately 50 minutes each over the course of 12 months.

Comparator:

- SSRI medication alone: SSRI's used were chosen by clinicians out of the following; Fluoxetine, paroxetine, sertraline, citalopram or fluvoxamine. Participants had 9 sessions lasting 20 minutes with clinicians during the 12 month treatment period.
- CBT and SSRI combined: Both treatments started simultaneously and were delivered alongside each other.

Outcome:

Frequency of panic attacks (recorded by patients in panic plots and used to calculate weekly frequencies).

University research centres/clinics and mental health clinics in the Netherlands.

disorder for a mean of 7.4 years. Around 50% had moderate or severe agoraphobia.

The rate of improvement in panic attacks was significantly faster for SSRI and CBT + SSRI compared with CBT alone. Significant differences between all three treatments emerged after week 6 showing that SSRI was significantly better than CBT at specific timepoints.

methods of randomisation and allocation concealment.

Participants, therapists and outcome assessors (the participants) were not blinded to treatment.

The analysis only included those who completed treatment (55%) so is likely to have been biased..

Results were poorly reported without any descriptive summaries of the main outcome.

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		
Greeven et al. (2007)	©	©	8	?	©	©		
Hendricks et.al. (2012)	©	<u></u>	8	8	<u>©</u>	<u></u>		
Schuurmans et al. (2015)	\odot	©	8	8	8	8		
Van Apeldoorn et al. (2013)	?	?	8	8	8	8		





? Unclear risk

Search details

Source	Search Strategy	Number of hits	Relevant evidence
		OI IIILS	identified
Guidelines			
NICE	CBT, SSRI, ANXIETY	14	2
SIGN	CBT, SSRI, ANXIETY	9	0
Systematic Rev	iews0		•
MEDLINE	1 exp Serotonin Uptake Inhibitors/ (33265)	169	0
	2 exp Citalopram/ (4086)		
	3 exp Fluoxetine/ (8127)		
	4 exp Fluvoxamine/ (1769)		
	5 exp Paroxetine/ (3674)		
	6 exp Sertraline/ (2606)		
	7 SSRI.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word,		
	protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (5036)		
	8 (serotonin adj2 reuptake*).mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
	keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique		
	identifier] (12594)		
	9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (38285)		
	10 exp Eating Disorders/ (23937)		
	11 Anorexia Nervosa/ (11276)		
	12 exp Bulimia/ (5046)		
	13 exp Suicide, Attempted/ (16073)		
	14 exp Self Mutilation/ (3134)		
	15 exp Self-Injurious Behavior/ (57859)		
	16 exp Mood Disorders/ (124875)		
	17 exp Bipolar Disorder/ (34263)		
	18 exp Neurotic Disorders/ (16012)		
	19 exp Depressive Disorder/ (87497)		

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exp Dysthymic Disorder/ (1060)
21 exp Depression/ or exp Depression, Postpartum/ (89741)
22 exp Seasonal Affective Disorder/ (1128)
23 exp Anxiety/ or exp Anxiety Disorders/ (131423)
24 exp Panic Disorder/ or exp Panic/ (8630)
25 exp Phobic Disorders/ (9720)
26 exp Stress Disorders, Post-Traumatic/ or exp Combat Disorders/ or exp Stress, Psychological/ (124505)
27 exp Somatoform Disorders/ (13657)
28 exp Obsessive-Compulsive Disorder/ (12165)
29 exp Hypochondriasis/ (2180)
30 exp Conversion Disorder/ (2020)
31 exp Munchausen Syndrome by Proxy/ or exp Munchausen Syndrome/ (1726)
32 exp Neurasthenia/ (1329)
33 exp Fatigue Syndrome, Chronic/ (4738)
34 exp Obsessive-Compulsive Disorder/ (12165)
35 exp Compulsive Behavior/ (8532)
36 exp Mental Disorders/ (1026799)
37 exp Schizophrenia/ (90913)
38 exp Paranoid Disorders/ (3858)
39 "schizo*".ab,ti. (115590)
40 "hebephrenic*".ab,ti. (201)
41 "oligophreni*".ab,ti. (910)
42 "psychotic*".ab,ti. (27502)
43 "psychos*".ab,ti. (119819)
44 "chronic* adj3 mental*".ab,ti. (0)
45 "sever* adj3 mental".ab,ti. (0)
46 "mental* adj3 disorder*".ab,ti. (0)
47 "mental* adj3 ill*".ab,ti. (0)
     "emotion* adj3 disorder*".ab,ti. (0)
49 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 (1312065)
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	protocol supplementary concept word, ra 53 (cognitive* adj2 (behaviour* or behaviour*)	I title, name of substance word, subject heading word, keyword head are disease supplementary concept word, unique identifier] (6324) avior*) adj2 therap*).mp. [mp=title, abstract, original title, name of s ading word, protocol supplementary concept word, rare disease supp	ubstance		
	55 50 and 54 (1296)				
	. ,	75 Systematic Review Filters applied (919745)			
	76 55 and 75 (169)				
EMBASE	1 exp Serotonin Uptake Inhibitors	5/	33395	86	0
	2 exp Citalopram/		4108		
	3 exp Fluoxetine/		8158		
	4 exp Fluvoxamine/		1774		
	5 exp Paroxetine/		3682		
	6 exp Sertraline/		2621		
		riginal title, name of substance word, subject heading word, keyword			
	7 heading word, protocol supplem unique identifier]	mentary concept word, rare disease supplementary concept word,	5071		
	(serotonin adj2 reuptake*).mp.	[mp=title, abstract, original title, name of substance word, subject			
	8 heading word, keyword heading supplementary concept word, u	g word, protocol supplementary concept word, rare disease unique identifier]	12668		
	9 1 or 2 or 3 or 4 or 5 or 6 or 7 or	- 8	38453		

10	exp Cognitive Therapy/	18953	
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11	heading word, protocol supplementary concept word, rare disease supplementary concept word,	6378	
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12	substance word, subject heading word, keyword heading word, protocol supplementary concept word,	10709	
	rare disease supplementary concept word, unique identifier]		
13	10 or 11 or 12	24187	
14	9 and 13	1444	
15	exp eating disorder/	24009	
16	exp anorexia nervosa/	11310	
17	exp bulimia/	5056	
18	exp suicide attempt/	16121	
19	exp mood disorder/	125359	
20	exp bipolar disorder/	34385	
21	exp neurosis/	0	
22	exp depression/	86793	
23	exp dysthymia/	0	
24	exp seasonal affective disorder/	1131	
25	exp anxiety/ or exp anxiety disorder/ or exp generalized anxiety disorder/	132038	

				1
26	exp panic/	2489		
27	exp phobia/	9757		
28	exp posttraumatic stress disorder/	23973		
29	exp somatoform disorder/	13684		
30	exp hypochondriasis/	2183		
31	exp hysteria/	3464		
32	exp hysteria/ or exp conversion disorder/	5275		
33	exp Munchausen syndrome/	1252		
34	exp Munchausen syndrome by proxy/	523		
35	exp neurasthenia/	1330		
36	chronic fatigue syndrome/	4749		
37	exp obsessive compulsive disorder/	12209		
38	exp obsession/	1104		
39	exp compulsion/	0		
40	exp mental stress/	0		
41	exp paranoid schizophrenia/ or exp schizophrenia/	91243		
42	exp paranoid psychosis/	0		
43	*Mental Disorders/	98111		
44	schizo\$.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word,	144140		

	unique identifier]		
	hebephreni\$.mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
45	keyword heading word, protocol supplementary concept word, rare disease supplementary concept	277	
	word, unique identifier]		
	oligophreni\$.mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
46	keyword heading word, protocol supplementary concept word, rare disease supplementary concept	1109	
	word, unique identifier]		
	psychotic\$.mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
47	keyword heading word, protocol supplementary concept word, rare disease supplementary concept	53186	
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	psychos#s.mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
48	keyword heading word, protocol supplementary concept word, rare disease supplementary concept	43611	
	word, unique identifier]		
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49	word, keyword heading word, protocol supplementary concept word, rare disease supplementary	1802	
	concept word, unique identifier]		
	(sever\$ adj mental).mp. [mp=title, abstract, original title, name of substance word, subject heading		
50	word, keyword heading word, protocol supplementary concept word, rare disease supplementary	6570	
	concept word, unique identifier]		
	(mental\$ adj disorder\$).mp. [mp=title, abstract, original title, name of substance word, subject		
51	heading word, keyword heading word, protocol supplementary concept word, rare disease	157678	
	supplementary concept word, unique identifier]		

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	52	(mental\$ adj ill\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	34449		
	53	(emotion\$ adj disorder\$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	2038		
	54	15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53	637152		
	55 - 84	Systematic Review Filter applied	458760		
	85	limit 84 to yr="2010 -Current"	226707		
	86	14 and 54 and 85	86		
PsycINFO/CINAHL	2 CBT.I protocol 3 (cogr word, surconcept of the conference) 4 1 or 5 exp of 6 exp of 7 exp of 8 exp of 9 exp of 5	Cognitive Therapy/ (18928) mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, supplementary concept word, rare disease supplementary concept word, unique identifier] (6349) nitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, original title, name of substable bject heading word, keyword heading word, protocol supplementary concept word, rare disease suppler word, unique identifier] (10670) 2 or 3 (24126) Citalopram/ (4104) Fluoxetine/ (8153) Fluvoxamine/ (1773) Paroxetine/ (3681) Sertraline/ (2618) I.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading	ance nentary	83	0

protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (5064) 11 (serotonin adj2 reuptake*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (12648) 12 exp Serotonin Reuptake Inhibitors/ or exp Serotonin/ (94034) 13 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 (98626) 14 4 and 13 (1463) 15 exp Eating Disorders/ (24000) 16 exp Anorexia Nervosa/ (11307) 17 exp Bulimia/ (5056) 18 exp Attempted Suicide/ (16109) 19 exp Self Mutilation/ (3140) 20 exp Self Injurious Behavior/ (58004) 21 exp Bipolar Disorder/ (34357) 22 exp Affective Disorders/ (125250) 23 exp Major Depression/ (0) 24 exp Dysthymic Disorder/ (1061) 25 exp Neurosis/ (0) 26 exp Seasonal Affective Disorder/ (1130) 27 exp Anxiety Disorders/ (74811) 28 exp Panic Disorder/ (6306) 29 exp Phobias/ (9748) 30 exp Posttraumatic Stress Disorder/ (23947) exp Somatoform Disorders/ (13676) 32 exp Hypochondriasis/ (2183) 33 exp Hysteria/ (3464) 34 exp Conversion Disorder/ (2023) 35 exp Munchausen Syndrome/ (1252) exp Munchausen Syndrome by Proxy/ (523) exp Neurasthenia/ (1330) 38 exp Chronic Fatigue Syndrome/ (4746)

- 39 exp Obsessive Compulsive Disorder/ (12200)
- 40 exp Psychological Stress/ (101996)
- 41 exp Schizophrenia/ (91191)
- 42 (Mood adj disorder*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (21459)
- 43 (Mental adj6 Disorders).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (160289)
- schizo*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (143963)
- hebephrenic*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (202)
- oligophreni*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (1109)
- psychotic*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (53117)
- psychos*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (141502)
- 49 (chronic* adj mental*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (1801)
- 50 (severe* adj mental*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (7139)
- 51 (mental* adj disorder*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (157500)
- 52 (mental* adj ill*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (34372)

	53 (emotion* adj disorder*).mp. [mp=title, abstract, original title, name of substance word, subject heading word,		
	keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique		
	identifier] (2036)		
	54 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 (730397)		
	55 14 and 54 (1231)		
	56 – 65 Systematic Review Filters applied (366857) 66 55 and 65 (83)		
Primary Studies	66 55 and 65 (83)		
MEDLINE	1 exp Serotonin Uptake Inhibitors/ (33265)	387	0
	2 exp Citalopram/ (4086)		
	3 exp Fluoxetine/ (8127)		
	4 exp Fluvoxamine/ (1769)		
	5 exp Paroxetine/ (3674)		
	6 exp Sertraline/ (2606)		
	7 SSRI.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading		
	word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier] (5036)		
	8 (serotonin adj2 reuptake*).mp. [mp=title, abstract, original title, name of substance word, subject heading		
	word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word,		
	unique identifier] (12594)		
	9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (38285)		
	10 exp Eating Disorders/ (23937)		
	11 Anorexia Nervosa/ (11276)		
	12 exp Bulimia/ (5046)		
	13 exp Suicide, Attempted/ (16073)		
	14 exp Self Mutilation/ (3134)		

T I		
15	exp Self-Injurious Behavior/ (57859)	
16	exp Mood Disorders/ (124875)	
17	exp Bipolar Disorder/ (34263)	
18	exp Neurotic Disorders/ (16012)	
19	exp Depressive Disorder/ (87497)	
20	exp Dysthymic Disorder/ (1060)	
21	exp Depression/ or exp Depression, Postpartum/ (89741)	
22	exp Seasonal Affective Disorder/ (1128)	
23	exp Anxiety/ or exp Anxiety Disorders/ (131423)	
24	exp Panic Disorder/ or exp Panic/ (8630)	
25	exp Phobic Disorders/ (9720)	
26	exp Stress Disorders, Post-Traumatic/ or exp Combat Disorders/ or exp Stress, Psychological/ (124505)	
27	exp Somatoform Disorders/ (13657)	
28	exp Obsessive-Compulsive Disorder/ (12165)	
29	exp Hypochondriasis/ (2180)	
30	exp Conversion Disorder/ (2020)	
31	exp Munchausen Syndrome by Proxy/ or exp Munchausen Syndrome/ (1726)	
32	exp Neurasthenia/ (1329)	
33	exp Fatigue Syndrome, Chronic/ (4738)	
34	exp Obsessive-Compulsive Disorder/ (12165)	
35	exp Compulsive Behavior/ (8532)	
36	exp Mental Disorders/ (1026799)	
37	exp Schizophrenia/ (90913)	
38	exp Paranoid Disorders/ (3858)	

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"schizo*".ab,ti. (115590)
     "hebephrenic*".ab,ti. (201)
40
     "oligophreni*".ab,ti. (910)
41
     "psychotic*".ab,ti. (27502)
43
     "psychos*".ab,ti. (119819)
44
     "chronic* adj3 mental*".ab,ti. (0)
     "sever* adj3 mental".ab,ti. (0)
     "mental* adj3 disorder*".ab,ti. (0)
     "mental* adj3 ill*".ab,ti. (0)
47
     "emotion* adj3 disorder*".ab,ti. (0)
     10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or
47 or 48 (1312065)
     9 and 49 (21561)
     exp Cognitive Therapy/ (18840)
     CBT.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword
heading word, protocol supplementary concept word, rare disease supplementary concept word, unique
identifier] (6324)
     (cognitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, original title, name of
substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare
disease supplementary concept word, unique identifier] (10617)
     51 or 52 or 53 (24015)
     50 and 54 (1296)
                                      56 - 63 RCT Filters applied (737923)
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	64 55 and 63 (387)		
EMBASE	1 exp Serotonin Uptake Inhibitors/ (156582)	1263	4
	2 exp Citalopram/ (18874)		
	3 exp Fluoxetine/ (39538)		
	4 exp Fluvoxamine/ (11712)		
	5 exp Paroxetine/ (24134)		
	6 exp Sertraline/ (21248)		
	7 SSRI.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer,		
	device trade name, keyword] (8703)		
	8 (serotonin adj2 reuptake*).mp. [mp=title, abstract, heading word, drug trade name, original title, device		
	manufacturer, drug manufacturer, device trade name, keyword] (19922)		
	9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (158398)		
	10 exp Cognitive Therapy/ (39373)		
	11 CBT.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer,		
	device trade name, keyword] (9891)		
	12 (cognitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, heading word, drug trade name,		
	original title, device manufacturer, drug manufacturer, device trade name, keyword] (16625)		
	13 10 or 11 or 12 (44286)		
	14 9 and 13 (7697)		
	15 exp eating disorder/ (39903)		
	16 exp anorexia nervosa/ (17043)		
	17 exp bulimia/ (11630)		
	18 exp suicide attempt/ (23256)		
	19 exp mood disorder/ (385070)		
	20 exp bipolar disorder/ (46143)		
	21 exp neurosis/ (56790)		
	22 exp depression/ (352066)		
	23 exp dysthymia/ (6769)		
	24 exp seasonal affective disorder/ (1048)		
	25 exp anxiety/ or exp anxiety disorder/ or exp generalized anxiety disorder/ (285191)		
	26 exp panic/ (19027)		

- 27 exp phobia/ (24240)
- 28 exp posttraumatic stress disorder/ (40221)
- 29 exp somatoform disorder/ (20085)
- 30 exp hypochondriasis/ (3807)
- 31 exp hysteria/ (6139)
- 32 exp hysteria/ or exp conversion disorder/ (7783)
- 33 exp Munchausen syndrome/ (1711)
- 34 exp Munchausen syndrome by proxy/ (438)
- 35 exp neurasthenia/ (1647)
- 36 chronic fatigue syndrome/ (7873)
- 37 exp obsessive compulsive disorder/ (31000)
- 38 exp obsession/ (8784)
- 39 exp compulsion/ (8530)
- 40 exp mental stress/ (64361)
- 41 exp paranoid schizophrenia/ or exp schizophrenia/ (156550)
- 42 exp paranoid psychosis/ (14529)
- 43 *Mental Disorders/ (86106)
- schizo\$.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (194322)
- hebephreni\$.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (887)
- oligophreni\$.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1756)
- psychotic\$.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (42831)
- 48 psychos#s.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (111065)
- 49 (chronic\$ adj mental\$).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (2213)
- 50 (sever\$ adj mental).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (8929)

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55 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (1149409)		
56 (animals not humans).sh. (566)		
57 exp Clinical Trials/ (171079)		
58 random*.mp. (1200355)		
59 57 not 58 (72677)		
60 55 not (56 or 59) (1147333)		
61 14 and 54 and 60 (1263)		
1 exp Cognitive Therapy/ (12164)	306	
2 CBT.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (9388)		
3 (cognitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, heading word, table of contents, key		
concepts, original title, tests & measures] (22373)		
4 1 or 2 or 3 (30988)		
5 exp Citalopram/ (1133)		
6 exp Fluoxetine/ (3442)		
7 exp Fluvoxamine/ (783)		
8 exp Paroxetine/ (1583)		
9 exp Sertraline/ (1151)		
10 SSRI.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3253)		
11 (serotonin adj2 reuptake*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests		
& measures] (9206)		
12 exp Serotonin Reuptake Inhibitors/ or exp Serotonin/ (24162)		
13 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 (28127)		
	manufacturer, drug manufacturer, device trade name, keyword] (14682) 54 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 (977579) 55 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (1149409) 66 (animals not humans).sh. (566) 67 exp Clinical Trials/ (171079) 68 random*.mp. (1200355) 69 57 not 58 (72677) 60 55 not (56 or 59) (1147333) 61 14 and 54 and 60 (1263) 61 exp Cognitive Therapy/ (12164) 62 CBT.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (9388) 63 (cognitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (22373) 64 1 or 2 or 3 (30988) 65 exp Citalopram/ (1133) 66 exp Fluoxetine/ (3442) 77 exp Fluoxetine/ (1583) 88 exp Paroxetine/ (1583) 99 exp Sertraline/ (1151) 10 SSRI.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3253) 11 (serotonin adj2 reuptake*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (9206) 12 exp Serotonin Reuptake Inhibitors/ or exp Serotonin/ (24162)	drug manufacturer, device trade name, keyword] (58976) 52 (mental\$ adj ill\$).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (34911) 53 (emotion\$ adj disorder\$).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (14682) 54 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 (977579) 55 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (1149409) 60 (animals not humans).sh. (566) 61 exp Clinical Trials/ (171079) 61 random*.mp. (1200355) 62 57 not 58 (72677) 63 55 not (56 or 59) (1147333) 61 14 and 54 and 60 (1263) 61 exp Cognitive Therapy/ (12164) 62 CBT.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (9388) 63 (cognitive* adj2 (behaviour* or behavior*) adj2 therap*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (22373) 64 1 or 2 or 3 (30988) 65 exp Citalopram/ (1133) 66 exp Fluoxamine/ (783) 86 exp Fluoxamine/ (783) 87 exp Sertraline/ (1151) 87 exp SRI.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3253) 10 (serotonin adj2 reuptake*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3253) 11 (serotonin adj2 reuptake*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3253) 12 exp Serotonin Reuptake Inhibitors/ or exp Serotonin/ (24162)

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me	easures] (13575)	
43		
me	easures] (109388)	

- schizo*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (116556)
- hebephrenic*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (419)
- oligophreni*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (520)
- psychotic*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (40013)
- psychos*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (187137)
- 49 (chronic* adj mental*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (3710)
- 50 (severe* adj mental*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (8249)
- 51 (mental* adj disorder*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (109052)
- 52 (mental* adj ill*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (45693)
- (emotion* adj disorder*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (4180)
- 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 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 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 (586872)
- 55 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (170279)
- 56 (animals not humans).sh. (6195)
- 57 exp Clinical Trials/ (9180)
- 58 random*.mp. (149023)
- 59 57 not 58 (3967)
- 60 55 not (56 or 59) (169675)
- 61 14 and 54 and 60 (306)

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