

APPENDIX A. SEARCH STRATEGIES

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to May 16, 2019

Date searched: May 17, 2019

#	Searches	Results
1	Kidney Failure, Chronic/	90023
2	((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab,kf.	173570
3	Renal Dialysis/ or Hemofiltration/ or Hemodiafiltration/ or Hemodialysis, Home/ or Peritoneal Dialysis/ or Peritoneal Dialysis, Continuous Ambulatory/	112477
4	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab,kf.	148887
5	or/1-4	306563
6	Depression/ or Depressive Disorder/ or Depressive Disorder, Major/ or Depressive Disorder, Treatment-Resistant/	196624
7	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab,kf.	461502
8	or/6-7	498556
9	and/5,8	4467
10	Brief Psychiatric Rating Scale/ or Diagnostic Self Evaluation/ or "Diagnostic Techniques and Procedures"/ or Mental Status Schedule/ or Neuropsychological Tests/ or Patient Health Questionnaire/ or Psychiatric Status Rating Scales/ or exp Psychological Tests/ or exp "Surveys and Questionnaires"/	1191872
11	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or	2055783

	QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab,kf.	
12	exp Behavior Therapy/ or exp Cognitive Behavioral Therapy/ or exp Mental Health Services/ or exp Psychotherapy/ or Psychosocial Support Systems/ or Social Support/ or Motivational Interviewing/ or Patient Participation/	348454
13	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab,kf.	7986725
14	Antidepressive Agents/ or Antidepressive Agents, Second-generation/ or Serotonin Uptake Inhibitors/ or "Serotonin and Noradrenaline Reuptake Inhibitors"/ or Adrenergic Uptake Inhibitors/ or 5-hydroxytryptophan/ or Amisulpride/ or Bupropion/ or Citalopram/ or Fluoxetine/ or Fluvoxamine/ or Maprotiline/ or Mianserin/ or Paroxetine/ or Quipazine/ or Ritanserin/ or Sulpiride/ or Trazodone/ or Tryptophan/ or Venlafaxine Hydrochloride/ or Viloxazine/	110464
15	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab,kf.	143600
16	Antidepressive Agents, Tricyclic/ or Amitriptyline/ or Amoxapine/ or Clomipramine/ or Desipramine/ or Dothiepin/ or Doxepin/ or Imipramine/ or Iprindole/ or Lofepamine/ or Nortriptyline/ or Opipramol/ or Protriptyline/ or Trimipramine/	30787
17	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofepamine or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab,kf,nm.	46116
18	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog*).ti,ab,kf.	19983
19	Exercise Therapy/ or Resistance Training/	43818
20	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab,kf.	59756
21	Music Therapy/	3247

22	music therapy.ti,ab,kf.	2112
23	or/10-22	9783531
24	and/9,23	3317
25	limit 24 to english language	2949

PsycINFO 1806 to May Week 1 2019

Date searched: May 16, 2019

	Searches	Results
1	Kidney Diseases/	2042
2	((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab.	2810
3	Dialysis/ or Hemodialysis/	1775
4	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab.	2862
5	or/1-4	5141
6	"Depression (Emotion)"/ or Major Depression/ or Reactive Depression/ or Recurrent Depression/ or Treatment Resistant Depression/	140804
7	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab.	317296
8	or/6-7	323277
9	and/5,8	865
10	exp Measurement/ or exp Attitude Measures/ or exp "Checklist (Testing)"/ or exp Inventories/ or exp Psychological Assessment/ or exp Questionnaires/ or exp Rating Scales/ or exp Screening/ or exp Screening Tests/ or exp Standardized Tests/ or exp "Stress and Coping Measures"/ or exp Testing/	338213
11	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple	742562

	Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab.	
12	("Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or PHQ-ADS or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).tm.	121323
13	exp Treatment/	713235
14	exp Behavior Modification/ or exp Behavior Therapy/ or Biofeedback Training/ or Contingency Management/ or Self-management/ or Anxiety Management/ or Cognitive Therapy/ or Readiness to Change/ or Relaxation Therapy/ or Self-help Techniques/ or Self-monitoring/ or Stress Management/	68176
15	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab.	2004054
16	Antidepressant Drugs/ or Serotonin Norepinephrine Reuptake Inhibitors/ or Serotonin Reuptake Inhibitors/ or Tricyclic Antidepressant Drugs/ or Bupropion/ or Citalopram/ or Fluoxetine/ or Fluvoxamine/ or "Hydroxytryptophan (5-)" or MAPROTILINE/ or Mianserin/ or Paroxetine/ or RITANSERIN/ or Sulpiride/ or Trazodone/ or Tryptophan/ or Venlafaxine/	32404
17	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and	55680



	Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab.	
18	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofepramine or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab.	12077
19	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog* or coping or psychosocial* or psycho-social* or "social support" or "social work*" or stress).ti,ab.	373419
20	exp Exercise/	24633
21	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab.	7962
22	Music Therapy/	4568
23	music therapy.ti,ab.	3920
24	or/10-23	2709627
25	and/9,24	813
26	limit 25 to english language	708

Embase.com

Date search: May 17, 2019

#	Search	Result
#26	#25 AND [embase]/lim NOT ([embase]/lim AND [medline]/lim)	<u>2,398</u>
#25	#9 AND #23 AND [english]/lim	<u>5,827</u>
#24	#9 AND #23	<u>6,404</u>
#23	#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	<u>11,480,368</u>
#22	'music therapy':ti,ab,kw	<u>3,312</u>
#21	'music therapy'/de	<u>6,432</u>
#20	((((aerobic OR resistance) NEAR/2 (exercis* OR program* OR therap* OR train*)):ti,ab,kw) OR ((exercise NEAR/2 (program* OR therap* OR train*)):ti,ab,kw) OR 'cross training':ti,ab,kw	<u>85,478</u>
#19	'kinesiotherapy'/de OR 'resistance training'/de	<u>46,613</u>
#18	nondrug:ti,ab,kw OR 'non drug':ti,ab,kw OR nonpharmacolog*:ti,ab,kw OR 'non pharmacolog*':ti,ab,kw	<u>28,848</u>
#17	amitriptyline:ti,ab,kw OR amoxapine:ti,ab,kw OR clomipramine:ti,ab,kw OR desipramine:ti,ab,kw	<u>49,716</u>

	OR dothiepin:ti,ab,kw OR doxepin:ti,ab,kw OR imipramine:ti,ab,kw OR iprindole:ti,ab,kw OR lofepramine:ti,ab,kw OR nortriptyline:ti,ab,kw OR opipramol:ti,ab,kw OR protriptyline:ti,ab,kw OR trimipramine:ti,ab,kw OR gabapentin:ti,ab,kw OR sildenafil:ti,ab,kw OR vardenafil:ti,ab,kw	
#16	'tricyclic antidepressant agent'/de OR 'amitriptyline'/de OR 'clomipramine'/de OR 'desipramine'/de OR 'dosulepin'/de OR 'doxepin'/de OR 'imipramine'/de OR 'iprindole'/de OR 'lofepramine'/de OR 'nortriptyline'/de OR 'opipramol'/de OR 'protriptyline'/de OR 'trimipramine'/de	<u>108,601</u>
#15	((antidepress*:ti,ab,kw OR 'anti depress*':ti,ab,kw OR '5 hydroxytryptophan':ti,ab,kw OR amisulpride:ti,ab,kw OR bupropion:ti,ab,kw OR citalopram:ti,ab,kw OR escitalopram:ti,ab,kw OR fluoxetine:ti,ab,kw OR fluvoxamine:ti,ab,kw OR maprotiline:ti,ab,kw OR mianserin:ti,ab,kw OR paroxetine:ti,ab,kw OR quipazine:ti,ab,kw OR ritanserin:ti,ab,kw OR sulpiride:ti,ab,kw OR trazodone:ti,ab,kw OR tryptophan:ti,ab,kw OR 'venlafaxine hydrochloride':ti,ab,kw OR viloxazine:ti,ab,kw OR ssri:ti,ab,kw OR ssris:ti,ab,kw OR 'selective serotonin reuptake':ti,ab,kw OR 'selective serotonin re-uptake':ti,ab,kw OR snri:ti,ab,kw OR snris:ti,ab,kw OR serotonin:ti,ab,kw) AND 'noradrenaline reuptake inhibitor':ti,ab,kw OR serotonin:ti,ab,kw) AND 'noradrenaline reuptake inhibitors':ti,ab,kw OR nri:ti,ab,kw OR nris:ti,ab,kw OR 'norepinephrine reuptake inhibitor':ti,ab,kw OR 'norepinephrine reuptake inhibitors':ti,ab,kw	<u>5,610</u>
#14	'antidepressant agent'/de OR 'serotonin uptake inhibitor'/de OR 'serotonin noradrenalin reuptake inhibitor'/de OR 'adrenergic receptor affecting agent'/de OR '5 hydroxytryptophan'/de OR 'amisulpride'/de OR 'amfebutamone'/de OR 'citalopram'/de OR 'fluoxetine'/de OR 'fluvoxamine'/de OR 'maprotiline'/de OR 'mianserin'/de OR 'paroxetine'/de OR 'quipazine'/de OR 'ritanserin'/de OR 'sulpiride'/de OR 'trazodone'/de OR 'tryptophan'/de OR 'venlafaxine'/de OR 'viloxazine'/de	<u>252,721</u>
#13	'cognitive behavior*':ti,ab,kw OR 'cognitive behaviour*':ti,ab,kw OR intervention:ti,ab,kw OR interventions:ti,ab,kw OR nondrug:ti,ab,kw OR 'non drug':ti,ab,kw OR nonpharmac*:ti,ab,kw OR 'non pharmac*':ti,ab,kw OR pharmac*:ti,ab,kw OR program*:ti,ab,kw OR psych*:ti,ab,kw OR psychosocial:ti,ab,kw OR 'psycho social':ti,ab,kw OR rehabilitation:ti,ab,kw OR therapy:ti,ab,kw OR therapies:ti,ab,kw OR treat*:ti,ab,kw	<u>10,743,323</u>
#12	'behavior therapy'/de OR 'cognitive behavioral therapy'/de OR 'mental health service'/de OR 'psychotherapy'/de OR 'psychosocial care'/de	<u>309,109</u>

	OR 'social support'/de OR 'motivational interviewing'/de OR 'patient participation'/de	
#11	(checklist*:ti,ab,kw OR 'check list*:ti,ab,kw OR questionnaire:ti,ab,kw OR questionnaires:ti,ab,kw OR instrument:ti,ab,kw OR instruments:ti,ab,kw OR inventory:ti,ab,kw OR inventories:ti,ab,kw OR scale:ti,ab,kw OR scales:ti,ab,kw OR schedule:ti,ab,kw OR schedules:ti,ab,kw OR screen:ti,ab,kw OR screened:ti,ab,kw OR screening:ti,ab,kw OR 'beck depression':ti,ab,kw OR bdi:ti,ab,kw OR bdi2:ti,ab,kw OR 'geriatric depression scale':ti,ab,kw OR gds:ti,ab,kw OR 'hamilton rating scale for depression':ti,ab,kw OR 'hospital anxiety':ti,ab,kw) AND 'depression scale':ti,ab,kw OR hads:ti,ab,kw OR 'kidney disease quality of life':ti,ab,kw OR kdqol:ti,ab,kw OR 'medical outcomes study short form health survey 36':ti,ab,kw OR 'mos sf36':ti,ab,kw OR 'minnesota multiphasic personality inventory':ti,ab,kw OR mmpi:ti,ab,kw OR 'multiple affect adjective check list':ti,ab,kw OR maac1:ti,ab,kw OR 'patient health questionnaire':ti,ab,kw OR phq2:ti,ab,kw OR 'phq 2':ti,ab,kw OR phq9:ti,ab,kw OR 'phq 9':ti,ab,kw OR 'prime-md':ti,ab,kw OR 'epidemiologic studies depression scale':ti,ab,kw OR ced:ti,ab,kw OR cesd:ti,ab,kw OR bref:ti,ab,kw OR dass21:ti,ab,kw OR idid:ti,ab,kw OR 'quick inventory of depressive symptomatology self-report':ti,ab,kw OR 'qids sr':ti,ab,kw OR 'rand 36-item health survey':ti,ab,kw OR 'rand 36':ti,ab,kw OR 'short form 36':ti,ab,kw OR 'sf 36':ti,ab,kw OR 'structured clinical interview':ti,ab,kw OR scid:ti,ab,kw OR 'self-rating depression scale':ti,ab,kw OR sds:ti,ab,kw OR 'short form health survey 36':ti,ab,kw OR sf36:ti,ab,kw	<u>219,556</u>
#10	'brief psychiatric rating scale'/de OR 'diagnostic procedure'/de OR 'neuropsychological test'/de OR 'patient health questionnaire'/de OR 'psychological rating scale'/de OR 'psychologic test'/de OR 'questionnaire'/de	<u>825,223</u>
#9	#5 AND #8	<u>8,835</u>
#8	#6 OR #7	<u>773,952</u>
#7	depressed:ti,ab,kw OR depressive:ti,ab,kw OR depression*:ti,ab,kw OR suicidal:ti,ab,kw OR suicide:ti,ab,kw OR suicides:ti,ab,kw	<u>620,970</u>
#6	'depression'/exp	<u>459,806</u>
#5	#1 OR #2 OR #3 OR #4	<u>445,287</u>
#4	dialysis:ti,ab,kw OR haemodiafiltration:ti,ab,kw OR hemodiafiltration:ti,ab,kw OR 'haemo diafiltration':ti,ab,kw OR 'hemo diafiltration':ti,ab,kw OR haemofiltration:ti,ab,kw OR hemofiltration:ti,ab,kw OR 'haemo filtration':ti,ab,kw OR 'hemo filtration':ti,ab,kw OR haemodialysis:ti,ab,kw OR hemodialysis:ti,ab,kw OR 'haemo dialysis':ti,ab,kw OR 'hemo dialysis':ti,ab,kw	<u>206,562</u>

#3	'hemodialysis'/exp OR 'hemofiltration'/exp OR 'hemodiafiltration'/exp OR 'peritoneal dialysis'/exp	<u>140,123</u>
#2	((((chronic OR endstage OR 'end stage' OR endstate OR 'end state' OR failure OR 'long term' OR maintenance) NEAR/2 (kidney OR renal)):ti,ab,kw) OR eskd:ti,ab,kw OR eskf:ti,ab,kw OR esrd:ti,ab,kw OR esrf:ti,ab,kw	<u>259,194</u>
#1	'chronic kidney failure'/exp	<u>136,333</u>

EBM Reviews:**Cochrane Central Register of Controlled Trials April 2019****Cochrane Database of Systematic Reviews 2005 to May 2, 2019****Database of Abstracts of Reviews of Effects 1st Quarter 2016****Health Technology Assessment 4th Quarter 2016**

Date searched: May 16, 2019

#	Searches	Results
1	((((chronic or endstage or end-stage or endstate or end-state or failure or long-term or maintenance) adj2 (kidney or renal)) or ESKD or ESKF or ESRD or ESRF).ti,ab.	18139
2	(dialysis or haemodiafiltration or hemodiafiltration or haemo-diafiltration or hemo-diafiltration or haemofiltration or hemofiltration or haemo-filtration or hemo-filtration or haemodialysis or hemodialysis or haemo-dialysis or hemo-dialysis).ti,ab.	16708
3	or/1-2	28646
4	(depressed or depressive or depression* or suicidal or suicide or suicides).ti,ab.	70284
5	and/3-4	564
6	(checklist* or check-list* or questionnaire or questionnaires or instrument or instruments or inventory or inventories or scale or scales or schedule or schedules or screen or screened or screening or "Beck Depression" or BDI or BDI2 or "geriatric depression scale" or GDS or "Hamilton Rating Scale for Depression" or "Hospital Anxiety and Depression Scale" or HADS or "Kidney Disease Quality of Life" or KDQOL or "Medical Outcomes Study Short Form Health Survey 36" or MOS-SF36 or "Minnesota Multiphasic Personality Inventory" or MMPI or "Multiple Affect Adjective Check List" or MAACL or "Patient Health Questionnaire" or PHQ2 or PHQ-2 or PHQ9 or PHQ-9 or "PRIME-MD" or "Epidemiologic Studies Depression Scale" or CED or CESD or BREF or DASS21 or IDID or "Quick Inventory of Depressive Symptomatology Self-Report" or QIDS-SR or "RAND 36-Item Health Survey" or RAND-36 or "short form 36" or SF-36 or "Structured Clinical Interview" or SCID or "self-rating depression scale" or SDS or "Short Form Health Survey 36" or SF36).ti,ab.	286914

7	(cognitive-behavior* or cognitive-behaviour* or intervention or interventions or nondrug or non-drug or nonpharmac* or non-pharmac* or pharmac* or program* or psych* or psychosocial or psycho-social or rehabilitation or therapy or therapies or treat*).ti,ab.	1033100
8	(antidepress* or anti-depress* or 5-hydroxytryptophan or Amisulpride or Bupropion or Citalopram or Escitalopram or Fluoxetine or Fluvoxamine or Maprotiline or Mianserin or Paroxetine or Quipazine or Ritanserin or Sulpiride or Trazodone or Tryptophan or Venlafaxine Hydrochloride or Viloxazine or SSRI or SSRIs or "selective serotonin reuptake" or "selective serotonin re-uptake" or SNRI or SNRIs or "Serotonin and Noradrenaline Reuptake Inhibitor" or "Serotonin and Noradrenaline Reuptake Inhibitors" or NRI or NRIs or "norepinephrine reuptake inhibitor" or "norepinephrine reuptake inhibitors").ti,ab.	23770
9	(Amitriptyline or Amoxapine or Clomipramine or Desipramine or Dothiepin or Doxepin or Imipramine or Iprindole or Lofepamine or Nortriptyline or Opipramol or Protriptyline or Trimipramine or Gabapentin or Sildenafil or Vardenafil).ti,ab.	10032
10	(nondrug or non-drug or nonpharmacolog* or non-pharmacolog*).ti,ab.	4995
11	((((aerobic or resistance) adj2 (exercis* or program* or therap* or train*)) or (exercise adj2 (program* or therap* or train*)) or cross-training).ti,ab.	29280
12	music therapy.ti,ab.	1091
13	or/6-12	1100240
14	and/5,13	533

ClinicalTrials.gov

Date searched: May 16, 2019

(depressed OR depressive OR depression* OR suicidal OR suicide OR suicides) AND INFLECT EXACT ("Active, not recruiting" OR "Completed" OR "Suspended" OR "Terminated" OR "Withdrawn" OR "Unknown status") [OVERALL-STATUS] AND ((chronic OR endstage OR end-stage OR failure) AND (kidney OR renal) OR ESKD OR ESKF OR ESRD OR ESRF OR dialysis OR haemodiafiltration OR hemodiafiltration OR haemo-diafiltration OR hemo-diafiltration OR haemofiltration OR hemofiltration OR haemo-fi) [DISEASE] = 83 results

WHO ICTRP

Date searched: May 16, 2019

((((chronic OR endstage OR end-stage OR failure) AND (kidney OR renal)) OR ESKD OR ESKF OR ESRD OR ESRF) AND (depress* OR suicid*)) = 7 trials

VA HSR&D

<https://www.hsr.d.research.va.gov/research/>

Date searched: May 16, 2019

Separately searched terms: kidney and renal. Reviewed result lists = 0 studies found.

APPENDIX B. STUDY SELECTION

Inclusion/Exclusion Criteria for Full Text Review

1. **Language:** Is the full text of the article in English?
 Yes.....Proceed to #2
 NoCode **X1**. STOP
2. **Population:** Does the study include adults with ESRD or CKD (or CKF, CRF) undergoing maintenance dialysis?
 YesProceed to #3
 NoCode **X2**. Add code **B** (example: X2 – B) if retaining for background/discussion. STOP
3. **Population:** Does the study include adults screened, diagnosed with, or treated for depression?
 Yes.....Proceed to #4
 No...Code **X2**. Add code **B** if retaining for background/discussion. STOP
4. **KQ1:** Does the study examine screening tool(s) for depression?
 Yes.....Proceed to Q5
 NoCode **0** for **KQ1**. Proceed to Q6
5. **KQ1:** Does the study compare a screening tool against the gold standard (eg, clinical interview – eg, SCID) or another validated depression assessment tool?
 Yes, gold standard (eg, clinician interview/SCID)...Code **I** for "**I or X Code**" and **1** for **KQ1**. STOP
 Yes, another depression tool.....Code **I** for "**I or X Code**" and **1 - Tool** for **KQ1**. STOP
 NoProceed to Q6 (and code **0** for **KQ1**)
6. **Study Design:** Is the study original quantitative research, a systematic review (SR) or meta-analysis (MA; exclude other literature reviews, editorials, qualitative research, etc.)?
 Yes..... If **SR or MA** code **X3 - PEARL**.
 If other quantitative, Proceed to Q7
 No.....Code **X3**. Add code **B** (example: X3 – B) if retaining for background/discussion. Code **0** for all **KQs**. STOP
7. **Comparator:** The study has a comparison group (other screening tool, no screening, other intervention, waitlist controls, etc.). Pre-post studies are excluded.
 Yes Proceed to Q8
 No.....Code **X4**. Add code **B** if retaining for background/discussion. Code **0** for all **KQs** STOP
8. **Outcomes:** Does the study report 1 or more of the following outcomes **specifically for the population of interest** (ESRD/CKD maintenance dialysis) Diagnostic test performance: sensitivity, specificity, positive predictive value, and negative predictive value; Therapeutic impact: timing, setting, or type of treatment.; Intermediate and Patient outcomes: depressive symptoms, mortality, suicide attempts or completion, hospitalization, ED/urgent care utilization, patient satisfaction, adherence to dialysis, medication, or treatment, pain medication reduction, BP/metabolic control, quality of life, other outcomes (eg, employment); Adverse effects or unintended consequences. Prevalence and correlational studies are excluded.
 YesProceed to Q9

No.....Code **X5**. Add code **B** if retaining for background/discussion. **Code 0 for all KQs STOP**

9. Does the article or main study (from which the data were gathered) examine the impact of screening or the effectiveness of treatment for depression (including subgroup differences or harms)?

Yes, screeningProceed to Q10

Yes, treatment:

Is depression an inclusion criterion, or is the average depression score of participants equivalent to at least moderate depression? (Cutoffs: PHQ-9 \geq 10;¹⁶ CES-D \geq 18;¹⁷ HAM-D \geq 12;¹⁸ BDI-II \geq 16;^{17,18} BDI-II \geq 13;¹⁸ HADS \geq 8^{19,20})

No.....Code **X2**

Yes.....Proceed to Q10

NoCode **X5**. Add code **B** if retaining for background/discussion. **STOP**

10. **Harms:** Does the article examine the harms of screening or treatment?

Yes.....**Code I for "I or X Code" and 1 for KQ4.** Proceed to Q11.

No.....**Code 0 for KQ4.** Proceed to Q11.

11. **Study Design:** Does the article describe data collected as part of an RCT or NRCT?

Yes.....Proceed to Q12.

No.....**Code X3. Code 0 for KQs 2, 3. STOP.**

12. **KQs 2 and 3:** Does the study examine the impact of screening or treatment?

Yes.....**Code I for "I or X Code" and 1 for KQ2 if screening and/or 1 for KQ3 if treatment. Code 0 for KQ 2 or 3 if NA. STOP.**

No.....**Code 0 for KQs 2 and 3. STOP.**

All articles should have at least 1 code. If not, re-review. Be sure that all articles are coded 0 for all KQs that are not relevant.

APPENDIX C. QUALITY AND APPLICABILITY ASSESSMENT OF DIAGNOSTIC STUDIES

Study	Rating Criteria*																					
	Could the selection of patients have introduced bias?				Could the conduct or interpretation of the index test have introduced bias?				Could the conduct or interpretation of the reference standard have introduced bias?				Could the patient flow have introduced bias?				Applicability					
	1	2	3	ROB	4	5	6	7	ROB	8	9	10	11	ROB	12	13	14	ROB	15	16	17	ROB
Alsuwaida, 2006 ⁵²	U	Y	U	Unclear	Y	U	U	Y	Unclear	Y	Y	U	Y	Unclear	Y	NA	U	Unclear	N	N	N	Low
Balogun, 2011 ³⁹	U	Y	Y	Unclear	Y	U	U	Y	Unclear	Y	U	U	U	Unclear	Y	Y	N	High	N	N	N	Low
Bautovich, 2018 ⁴⁸	U	Y	Y	Unclear	Y	U	NA	Y	Unclear	Y	Y	N	Y	High	Y	NA	Y	Low	N	N	N	Low
Chilcot, 2008 ⁵³	U	Y	Y	Unclear	U	U	NA	Y	Unclear	U	Y	U	U	Unclear	Y	NA	Y	Low	N	N	N	Low
Collister, 2019 ⁴⁹	Y	Y	Y	Low	U	U	U	Y	Unclear	U	U	U	U	Unclear	Y	NA	Y	Low	N	N	N	Low
Genco, 2007 ⁴²	Y	Y	U	Unclear	Y	Y	Y	Y	Low	Y	U	Y	U	Unclear	Y	Y	Y	Low	N	N	N	Low
Giordano, 2007 ⁴⁰	Y	U	Y	Unclear	U	Y	Y	Y	Unclear	Y	Y	U	Y	Unclear	Y	NA	N	High	N	N	N	Low
Grant, 2008 ⁵⁰	U	Y	Y	Unclear	U	U	NA	Y	Unclear	U	Y	U	Y	Unclear	Y	NA	Y	Low	N	N	N	Low
Hedayati, 2006 ³³	U	Y	Y	Unclear	Y	U	NA	Y	Unclear	U	Y	U	Y	Unclear	Y	NA	Y	Low	N	N	N	Low
Loosman, 2010 ³⁵	U	Y	Y	Unclear	Y	U	NA	Y	Unclear	Y	Y	Y	Y	Low	Y	NA	Y	Low	N	N	N	Low
Neitzer, 2012 ⁴⁶	U	Y	Y	Unclear	U	U	NA	Y	Unclear	U	U	NA	Y	Unclear	Y	NA	Y	Low	N	N	N	Low
Prelicjevic, 2012 ³⁶	U	Y	Y	Unclear	Y	U	NA	Y	Unclear	Y	U	Y	Y	Unclear	Y	NA	N	Low	N	N	N	Low
Troidle, 2003 ⁴⁷	Y	Y	Y	Low	N	U	U	Y	High	U	U	U	U	Unclear	Y	NA	Y	Low	N	N	N	Low
Van den Beukel, 2012 ⁵¹	U	Y	Y	Unclear	U	U	U	Y	Unclear	U	U	U	Y	Unclear	Y	NA	Y	Low	N	N	N	Low
Wang, 2019 ⁴⁵	Y	Y	Y	Low	Y	U	U	Y	Unclear	Y	U	U	Y	Unclear	Y	NA	Y	Low	N	N	N	Low
Watnick, 2005 ⁴⁴	U	Y	Y	Unclear	Y	U	NA	Y	Unclear	Y	Y	U	Y	Unclear	Y	NA	Y	Low	N	N	N	Low

Abbreviations: N = no; NA = not applicable; ROB = risk of bias; U = unclear; Y = yes

*Questions (QUADAS-2²⁵):

1. Consecutive or random sample of patients enrolled?
2. Was a case-control design avoided?
3. Did the study avoid inappropriate exclusions?
4. Was the index test interpreted without knowledge of the reference standard results?
5. Was staff trained in the use of the index test?
6. Was the fidelity of the index test monitored and/or reported?
7. Is the reference standard likely to correctly classify the target condition?
8. Was the reference standard interpreted without knowledge of the index test results?



9. Was staff trained in the assessment of the reference standard?
10. Was the fidelity of the reference test monitored and/or reported?
11. Was there an appropriate interval between the index test and reference standard?
12. Did all patients receive the same reference standard?
13. If a partial selection of patients received the reference standard, was it adjusted?
14. Were all patients included in the analysis?
15. Are there concerns that the study population differs from the review question?
16. Are there concerns that the index test, its conduct, or its interpretation differ from the review question?
17. Are there concerns that the reference standard, its conduct, or its interpretation differ from the review question?

APPENDIX D. QUALITY AND APPLICABILITY ASSESSMENT OF RANDOMIZED CONTROLLED TRIALS

Author, Year	Rating Criteria*																	Funding source	Overall Quality Rating	Applicability
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
Al Saraireh, 2018 ⁶⁸	Y	NR	N	NA	Y	U	U	N	Y	N	Y	N	Y	U	Y	NA	N	Investigator	Poor	Fair
Babamohamadi, 2017 ⁷⁹	NR	NR	N	U	Y	U	U	N	Y	N	U	N	Y	Y	U	U	N	NR	Poor	Poor
Beizaee, 2018 ⁷⁵	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	U	Y	NA	Y	University	Fair	Fair
Blumenfield, 1997 ⁶⁰	NR	Y	U	U	N	U	Y	Y	Y	N	N	N	Y	U	Y	N	N	Industry grant	Poor	Fair
Cukor, 2014 ⁶⁹	NR	NR	Y	U	Y	Y	Y	Y	Y	N	N	Y	Y	U	Y	N	N	NIDDK	Fair	Fair
Duarte, 2009 ⁶⁷	Y	Y	N	U	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	Government	Fair	Fair
Friedli, 2017 ⁶¹	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	U	Y	N	N	NIH grant	Fair	Good
Gharekhani, 2014 ⁶⁶	Y	U	Y	N	Y	N	N	Y	Y	Y	N	N	Y	Y	Y	N	N	University	Poor	Good
Heshmatifar, 2015 ⁷³	NR	NR	Y	U	Y	U	U	N	Y	N	N	Y	Y	U	U	N	U	NR	Poor	Fair
Hosseini, 2012 ⁶⁴	U	NR	Y	Y	Y	U	U	N	Y	N	N	Y	Y	U	Y	N	N	Government	Poor	Fair
Kalani, 2019 ⁷¹	N	U	Y	U	Y	U	U	U	Y	U	Y	N	Y	Y	Y	U	N	University	Poor	Fair
Kouidi, 2010 ⁷⁴	NR	NR	Y	U	Y	U	U	N	Y	N	N	Y	Y	U	Y	N	N	NR	Poor	Fair
Lerma, 2017 ⁷⁰	Y	NR	Y	U	Y	Y	Y	N	Y	N	N	N	Y	Y	Y	N	N	Government	Fair	Fair
Mehrotra, 2019 ⁶³	Y	Y	U	Y	Y	Y	N	N	Y	N	Y	N	Y	Y	Y	Y	N	Government, University, NIDDK, DCI	Fair	Fair
Rahimipour, 2015 ⁷⁶	U	NR	U	U	Y	U	U	U	N	U	U	U	Y	U	Y	U	N	NR	Poor	Fair
Taraz, 2013 ⁶²	Y	U	Y	Y	Y	U	U	Y	Y	N	N	N	Y	Y	Y	N	N	University grant	Fair	Good
Thomas, 2017 ⁷⁸	Y	NR	N	U	Y	Y	U	N	Y	N	Y	N	Y	Y	Y	N	N	University grant	Fair	Fair
Tsay, 2004 ⁷²	NR	NR	Y	U	Y	U	U	N	Y	N	N	Y	Y	U	Y	N	N	Government	Poor	Fair
Wang, 2016 ⁶⁵	Y	Y	Y	Y	Y	U	Y	Y	Y	N	N	U	Y	Y	Y	N	N	NR	Fair	Poor
Widyaningrum, 2013 ⁷⁷	NR	NR	Y	U	Y	U	U	U	N	U	U	U	Y	U	Y	U	N	NR	Poor	Poor

Abbreviations: DCI = Dialysis Clinic Inc.; N = no; NA = not applicable; NIDDK = National Institute of Diabetes and Digestive and Kidney Diseases; NR = not reported; U = unclear; Y = yes

*Quality Rating Criteria:

1. Randomization adequate?
2. Allocation concealment adequate?
3. Groups similar at baseline?



4. Maintain comparable groups?
5. Eligibility criteria specified?
6. Outcome assessors masked?
7. Care provider masked?
8. Patient masked?
9. Reporting of attrition, crossovers, adherence, and contamination?
10. Important differential loss to follow-up or overall high loss to follow-up?
11. Intention-to-treat (ITT) analysis?
12. Post-randomization exclusions?
13. Were outcomes pre-specified and defined, and ascertained using accurate methods?
14. Intervention fidelity?
15. Follow-up long enough for outcomes to occur? (minimum 4 weeks for drugs)
16. Appropriate handling of missing data?
17. Evidence of selective outcome reporting?

APPENDIX E. ADVERSE EVENTS REPORTED IN DEPRESSION TREATMENT TRIALS IN PATIENTS WITH END-STAGE RENAL DISEASE

Severity	System	Adverse Event	Blumenfield, 1997 ⁶⁰		Friedli, 2017 ^{61*}		Mehrotra, 2019 ⁶³		Taraz, 2013 ^{62†}	
			Fluoxetine (N = 6)	Placebo (N = 7)	Sertraline (N = 15)	Placebo (N = 15)	CBT (N = 60)	Sertraline (N = 60)	Sertraline (N = 21)	Placebo (N = 22)
Non-Serious	Autonomic	Dry mouth	0	1	---	---	---	---	---	---
	Cardiovascular	Cardiac unspecified	---	---	---	---	3	9	---	---
		Hypotension	4	1	---	---	---	---	---	---
		Palpitations	---	---	1	0*	---	---	---	---
	Gastrointestinal	Abdominal pain	1	2	---	---	---	---	---	---
		Constipation	0	1	---	---	---	---	---	---
		Diarrhea	1	1	---	---	---	---	---	---
		Dyspepsia	1	0	---	---	---	---	6	4
		Gastro-enteritis	0	2	---	---	---	---	---	---
		Gastrointestinal unspecified	---	---	---	---	11	22	---	---
		Nausea	5	2	1	0*	---	---	7	3
	Vomiting	3	3	---	---	---	---	---	---	
	Musculoskeletal	Myalgia	1	1	---	---	---	---	---	---
	Neurological	Dizziness	1	0	1	0*	---	---	5	3
		Headache	3	0	1	0*	---	---	4	2
		Insomnia	2	1	1	0*	---	---	---	---
		Nervous system unspecified	---	---	---	---	0	8	---	---
		Sensation disturbance	1	0	---	---	---	---	---	---
		Tremors	1	0	---	---	---	---	---	---
	Psychiatric	Abnormal thought	1	0	---	---	---	---	---	---
Anorexia		---	---	---	---	---	---	2	4	
Anxiety		0	1	---	---	---	---	---	---	
Nervousness		1	1	---	---	---	---	---	---	

Respiratory	Bronchitis	1	0	---	---	---	---	---	---	
	Cough	0	2	---	---	---	---	---	---	
	Dyspnea	1	0	---	---	---	---	---	---	
	Pharyngitis	1	0	---	---	---	---	---	---	
	Rhinitis	1	0	---	---	---	---	---	---	
	Upper respiratory tract infection	1	0	---	---	---	---	---	---	
Skin	Furunculosis	1	0	---	---	---	---	---	---	
	Pruritus	1	0	---	---	---	---	---	---	
	Skin ulcer	0	1	---	---	---	---	---	---	
	Sweating	---	---	1	0*	---	---	---	---	
Other	Dehydration	0	1	---	---	---	---	---	---	
	Edema	0	1	---	---	---	---	---	---	
	Flu syndrome	1	0	---	---	---	---	---	---	
	Hair Loss	---	---	---	---	---	---	1	1	
	Other unspecified	---	---	---	---	3	17	---	---	
	Sexual dysfunction	---	---	---	---	---	---	2	1	
	Tooth infection	1	0	---	---	---	---	---	---	
Serious	Gastrointestinal	Gastrointestinal unspecified	---	---	---	---	1	1	---	---
		Cardiovascular	Cardiac unspecified	---	---	---	---	4	4	---
	Other	Death	---	---	1	0	2	0	---	---
		Major bleeding	---	---	---	---	1	2	---	---
		Other unspecified	---	---	---	---	2	9	---	---

*The events reported in this table are only those that resulted in study dropout. There were other adverse events reported narratively, but it was not clear from the text which category or study arm they occurred in, so they are not recorded in this table.

†It is unclear whether the events of study dropouts were included in these totals. There was 1 death in each group and some attrition due to AEs, but the dropouts were not analyzed in this per-protocol study.

APPENDIX F. PEER REVIEW COMMENTS/AUTHOR RESPONSES

Reviewer Number	Reviewer Comment	Author Response
Are the objectives, scope, and methods for this review clearly described?		
2	Yes	Thank you.
3	Yes	Thank you.
5	Yes	Thank you.
6	Yes	Thank you.
Is there any indication of bias in our synthesis of the evidence?		
2	No	Thank you.
3	No	Thank you.
5	No	Thank you.
6	No	Thank you.
Are there any <u>published</u> or <u>unpublished</u> studies that we may have overlooked?		
2	No	Thank you.
3	No	Thank you.
5	No	Thank you.
6	No	Thank you.
Additional suggestions or comments can be provided below. If applicable, please indicate the page and line numbers from the draft report.		
3	Minor: Amend page "iv" of Table of Contents (line 59) to include KQ3: Effectiveness of Depression Treatment in Patients with ESRD and Depression	Thank you. We have resolved this omission.
5	<p>This report is thorough, and unfortunately comprehensive. I say 'unfortunately comprehensive' because this highlights the lack of research in the area.</p> <p>I think it is critical for the VA to fund studies to consider not only screening and treatment, but also the potential sequelae and resources available to address a large number of positive screening tests. This work is not to be underestimated, as tremendous resources would need to be employed at local facilities where screening may occur, given the high rates of depressive symptoms in patients on dialysis.</p>	Thank you.

5	<p>I have now read through the entire report, but do not have time today to write more extensively on the details within the report.</p> <p>I would urge the team to include more details about treatment in the executive summary. A table about screening is including in that initial summary. I think it would serve the future readers well to have a similar summary of the findings on treatment in this population. Most readers will not have time to review the entire 80+ page report.</p>	Thank you. We have added a table to both the executive summary and the discussion.
5	Page 1, line 2 'tools' not 'tool'.	Thank you, corrected.
5	Page 6, line 14 'United States' not 'United State'.	Thank you, corrected.
6	Overall, I think that this VA ESP systematic review is very comprehensive and organized. It will be an invaluable report and resource for VA. Congratulations to the team.	Thank you.
6	1. executive summary (p.1, line 2). It should be tools and not tool	Thank you, corrected.
6	2. executive summary (p.1, line 6). I would provide also the start date for the electronic database search	Thank you, revised.
6	3. executive summary, results. I would consider reorganizing the results with subcategories for each question - KQ1 to KQ6. Since this is a summary, many readers will not review the remainder of the document and will be unaware of the items addressed. Therefore, I think it is important to include each question and the results for each. Currently, KQ2, KQ4, and KQ5 are not addressed in this section.	Thank you, revised.
6	4. Throughout the report, kidney is preferred to be used instead of renal	We have replaced renal with kidney in cases that aren't proper nouns, diagnoses, etc. (eg, we replaced renal failure with kidney failure).
6	5. p. 8 - I could not understand what the circles with number are referring to. Please elaborate	Thank you. We have added a footnote: "Note. Associated key questions are noted in the shaded circles."
6	6. p. 9 - the comparators row should be revised b/c no screening or other screening tool is not the comparator for all of the studies for the questions	Thank you! Revised.
6	7. p. 13 - please footnote and provide definitions for patient selection, index test, reference test, and flow and timing	Thank you. We added a footnote referencing Appendix C.
6	8. Table 2 - under the column "study setting sample characteristics and demographics" - please list the characteristics/criteria throughout and	Thank you. Edited.



	report as NR if not reported. This provides a better sense of what was missing	
6	9. Page 28 - as above, the lack of studies addressing KQ2 is significant and should be reported in the executive summary. Please also state here whether there are any ongoing studies addressing this topic.	Thank you. We added this to the executive summary. We did not identify any ongoing studies addressing this topic. Our database search includes PubMed, in which ClinicalTrials.gov trials are indexed.
6	10. Table 8 - please footnote and define "quality" - how it was determined and the criteria used to make such determination. I think you could cite appendix C and D	Thank you. We have added a reference to Appendix D in the footer.
6	11. Table 9 - please footnote and define meaning of "k" that is included throughout the table	Thank you, we have added definitions for both k and n to the footer.
6	12. Table 9 - please footnote and define "strength of evidence" - how it was determined and the criteria used to make such determination.	Thank you. This information is in the footer. We have reorganized it for clarity.
6	13. p. 51 - if available, would list frequencies of adverse events	Thank you. We have added a table to with reported AE frequencies to the appendix.
6	14. Discussion. P. 53 - as with the executive summary, I would consider organizing the discussion around the KQs so that when one reads the summary, they are aware of all of the domains addressed.	Thank you, to insure all key questions are addressed in the discussion, we have added a statement that there were no studies found examining outcomes related to screening.
6	15. Discussion, p. 53 - I would elaborate upon how the populations studies bear little resemblance to Veterans. Is it differences in age, race, SES, etc? Also, how might this limit generalizability of the findings from studies?	Thank you, we have updated this section.
6	16. Discussion, p. 53, line 30. "positive predictive value is less than ideal" - please elaborate on what is considered "ideal"	Thank you. We clarified this.
6	17. Discussion, p. 54, line 24. would give an example of a short screening tool	Thank you. The next sentence in that paragraph provides an example (<i>ie</i> , BDI-FS).
6	18. Discussion. I would elaborate on the difference between quality of evidence and strength of evidence.	Thank you. We did not distinguish these differences in the discussion. However, these concepts are described in detail in Methods and Appendices.
6	19. p. 55, line 3 - spell out "ROB"	Thank you, edited.
6	20. I would consider including in "research gaps/future research" section the opportunity to explore the unaddressed questions (e.g., KQ2, etc.)	Thank you. We have edited this section.

