

APPENDIX A. SEARCH STRATEGY

OID MEDLINE AND EMBASE

1	exp Stress Disorders, Post-Traumatic/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
2	exp combat disorder/ or (post* stress dis* or ptsd or combat disord*).kw,tw.
3	exp Depression/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
4	exp Depressive Disorder/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
5	(depress* or dysthymi* or MDD or major-depress* dis* or TRD or TRS).tw,kw.
6	Substance-Related Disorders/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
7	((problem adj2 (alcohol or drink\$ or drug\$ or substance)) or (substance adj2 abuse) or substance adj2disorder or ((alcohol or drug or tobacco) adj2 (abuse or addiction or disorder))).mp.
8	((Subst* adj2 disorder*) or SUD).kw,tw.
9	Anxiety/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
10	Anxiety Disorders/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
11	(anxiety or anxio* or phobi* or agoraphobi* or panic or neurosis or neuroses or neurotic or psychoneuro* or post-trauma* or stress disorder or obsessi* or compuls* or OCD or obsessive compulsive disorde* or generalized anxiety disorder or GAD).tw,kw.
12	Bipolar Disorder/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
13	((bipolar adj2 dis*) or manic-depress*).kw,tw.
14	Brain Injuries, Traumatic/cl, di, dg, rh, th [Classification, Diagnosis, Diagnostic Imaging, Rehabilitation, Therapy]
15	(brain injur* or TBI or concuss* or head injur* or post-concuss*).tw,kw.
16	or/1-15
17	exp Functional Neuroimaging/ or functional neuroimaging.tw,kw.
18	exp Magnetic Resonance Imaging/ or (Magnetic Resonance Imaging or MRI or fMRI).tw,kw.
19	(diffusion tensor imag* or DTI).kw,tw.
20	(voxel-based morphometry or VBM).tw,kw.
21	(tractograph* or tractometr*).kw,tw.
22	(arterial spin label* or ASL).tw,kw.
23	exp tomography, emission-computed/ or ((positron* adj4 tomograph*) or emission-computed or single photon or SPECT).tw,kw.
24	exp magnetic resonance spectroscopy/ or (magnetic resonance spectroscopy or MR spectroscopy or MRS).tw,kw.
25	exp electroencephalography/ or (electroencephalograph* or EEG).tw,kw.
26	exp magnetoencephalography/ or (magnetoencephalograph* or MEG).tw,kw.
27	exp Evoked Potentials/ or (evoked response* or evoked potential*).tw,kw.
28	or/17-27
29	16 and 28

30	((animal or animals or canine* or cat or cats or dog or dogs or feline or goat or hamster* or horse or lamb or lambs or mice or monkey or monkeys or mouse or murine or pig or pigs or piglet* or porcine or primate* or rabbit* or rats or rat or rodent* or sheep* or veterinar*) not (human* or patient*)).ti,kf,jw.
31	(Animals/ or Models, Animal/ or Disease Models, Animal/) not Humans/
32	30 or 31
33	29 not 32
34	limit 33 to (english language and yr="2010 - 2022")
35	limit 34 to (addresses or autobiography or bibliography or biography or case reports or comment or dictionary or directory or editorial or interactive tutorial or interview or legal cases or legislation or news or newspaper article or patient education handout or periodical index or personal narratives or portraits or video-audio media or webcasts)
36	34 not 35
37	limit 36 to (juvenile or infan\$ or child\$)
38	36 not 37

APPENDIX B. INCLUSION AND EXCLUSION CRITERIA

	Inclusion Criteria	Exclusion Criteria
Population	<p>N ≥ 30, ≥ 18 years of age or older, with the following conditions:</p> <ul style="list-style-type: none"> • Depression • Anxiety (including OCD, phobias and panic disorders) • Posttraumatic stress disorder (PTSD) • Substance use disorder (SUD) • Bipolar disorder • Traumatic brain injury (TBI) 	<ul style="list-style-type: none"> • Pediatric populations or mixed pediatric and adult populations without stratified data • Non-human studies • Stroke patients (CVA) • Multiple sclerosis • Intracranial hemorrhage (intracranial etiology, eg, burst aneurysm) • Neurodegenerative conditions (eg, dementia, Parkinson's disease) except if assessed as outcomes or subsets of eligible conditions
Test of interest	<ul style="list-style-type: none"> • Magnetic resonance imaging (MRI) • Functional magnetic resonance imaging (fMRI) • Diffusion tensor imaging (DTI) • Perfusion weighted imaging (PWI) • Magnetic resonance spectroscopy (MRS) • Positron emission tomography (PET) • Single photon emission computed tomography (SPECT) • Arterial spin labeling (ASL) • Magnetoencephalography (MEG) • Evoked potentials and electroencephalogram (EEG) • Paired pulse transcranial magnetic stimulation (ppTMS) 	
Outcomes	<p>Diagnostic accuracy compared with:</p> <ul style="list-style-type: none"> • Validated structured clinical interviews (eg, MINI, SCID-5, WHO WMH-CIDI) • Validated clinician reported instruments of symptoms (eg, CAPS, HDRS, HAM-A) • Patient-reported measures of mental health symptoms (eg, PCL-5, PHQ-9, HADS, BDI, GAD-7, AUDIT) • Measures of cognition, other psychiatric symptoms (eg, delusions, hallucinations) <p>Prognosis and treatment response:</p> <ul style="list-style-type: none"> • Change in symptoms, cognition, functioning (eg, SF-36, WHODAS) • Sobriety/abstinence or reduction in substance use (SUD only) • Recurrence or relapse (study must define criteria and use validated measures) • Sensitivity (vs lack of response) to treatment 	<p>Only between-group differences (eg, in neuroimaging findings) or cross-sectional correlations with symptom severity</p>

	<ul style="list-style-type: none"> • Self-harm behaviors or suicide risk • Adverse events and side effects 	
Timing	Published 2010 or later	Earlier than 2010
Setting	Any	
Study design	Observational studies, trials, and systematic reviews	Study protocols, case reports, abstracts, editorials; for prognosis and treatment response outcomes, cross-sectional studies

APPENDIX C. PEER REVIEW DISPOSITION

Comment #	Reviewer #	Comment	Author Response
<i>Are the objectives, scope, and methods for this review clearly described?</i>			
1	1	Yes	Thank you.
2	2	Yes	Thank you.
3	3	Yes	Thank you.
4	4	Yes	Thank you.
5	5	Yes	Thank you.
6	6	Yes	Thank you.
<i>Is there any indication of bias in our synthesis of the evidence?</i>			
7	1	No	Thank you.
8	2	No	Thank you.
9	3	No	Thank you.
10	4	No	Thank you.
11	5	No	Thank you.
12	6	No	Thank you.
<i>Are there any published or unpublished studies that we may have overlooked?</i>			
13	1	No	Thank you.
14	2	No	Thank you.
15	3	No	Thank you.
16	4	No	Thank you.
17	5	No	Thank you.
18	6	No	Thank you.
<i>Additional suggestions or comments can be provided below.</i>			
19	1	On page 9, the sentence should include the public law number: This evidence review was requested by the VA Working Group to implement the Commander John Scott Hannon Veterans Mental Health Care	Thank you, we have updated this in both the evidence summary and main body of the report.

Comment #	Reviewer #	Comment	Author Response
20	3	<p>Improvement Act (P.L. 116-171), Section 305: “Precision Medicine for Veterans Initiative” (SHA305).</p> <p>The authors provide a comprehensive, careful and thoughtful review of studies addressing potential neuroimaging biomarkers for neuropsychiatric conditions.</p> <p>This may be in the report, but it is not emphasized: the authors did not assess the various studies for risk of bias since this was not a quantitative review. Therefore, some studies reviewed may provide higher quality data relevant to the questions asked but are treated equally with lower quality studies. I truly don’t think this will change the conclusions, but this is an important caveat that should better highlighted.</p> <p>Given the impracticality of incorporating MRI into clinical practice (unless effect sizes are large, which they aren’t), would it be worth encouraging more investment on easier-to-implement imaging methods, such as EEG?</p> <p>I could have missed this, but does fMRI refer only to resting state fMRI, or did some studies attempt to use task fMRI? This would be helpful to highlight and clarify.</p> <p>On page 14 of the PDF (pg 11 of the report), lines 9-10: I think one of the words “prognosis” should be diagnosis.</p>	<p>Thank you.</p> <p>We have noted this in both the Methods and Discussion (Limitations) sections. We have also added the need for a future systematic review (that would include formal assessment of studies for risk of bias) to the Discussion.</p> <p>We have added additional comment on the potential utility of EEG to the Discussion. There is a much small evidence base on EEG, and it has the same limitations as MRI-based studies. While the apparatus for obtaining EEG is less costly and more portable, it is probably still quite expensive when added on to the clinical assessments that are currently standard care. As we did not directly include evidence on costs (or cost-effectiveness) of these techniques in clinical settings, we do not further differentiate on this basis when discussing Implications for VA policy. Our recommendations for future studies also mainly focus on sample size and better characterization of participants over time; this would require very substantial financial resources even for EEG-based studies.</p> <p>We have added information about use of resting and/or task-specific fMRI to the Results.</p> <p>We have corrected this.</p>

Comment #	Reviewer #	Comment	Author Response
21	6	<p>I had a comment/question about the maturity of evidence for implementing MRI for depression diagnosis/prognosis. I have submitted a copy of report with the comment inserted.</p> <p>Pg 20 Line 42: This statement sounds like there is evidence to implement MRI for depression. Was that the intent?</p> <p>Pg 49 Lines 43/44: Does this mean the evidence is mature enough to start implementing MRI in the clinic for depression diagnosis and prognosis?</p>	<p>We have revised these statements to make sure we were not implying that the evidence supports using MRI in clinical care for depression. We have also clarified the implications specifically for MRI and EEG in depression care.</p>

APPENDIX D. ELIGIBLE PRIMARY STUDIES

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Achalia, 2020 ¹⁶³		X					
Adinoff, 2015 ¹¹⁷							X
Almeida, 2013 ³⁴	X	X					
Altuglu, 2020 ¹³⁹				X			
Ambrosi, 2017 ¹⁶⁴	X	X					
Amen, 2017 ⁶¹	X						
Amen, 2015 ⁹²					X	X	
Arns, 2014 ¹⁶⁵	X						
Arns, 2012 ¹⁶⁶	X						
Arribas, 2010 ¹⁶⁷		X					
Bachmann, 2017 ¹⁶⁸	X						
Bailey, 2018 ¹⁶⁹	X						
Baranger, 2021 ¹⁷⁰	X						
Bares, 2019 ¹⁷¹	X						
Bares, 2017 ¹⁷²	X						
Bares, 2015 ¹⁷³	X						
Bartlett, 2018 ¹⁷⁴	X						
Baskaran, 2018 ¹⁷⁵	X						
Bi, 2019 ²⁸	X						
Bi, 2018 ¹⁷⁶	X						
Bi, 2016 ³¹	X						
Brandt, 2021 ¹⁷⁷	X						
Braund, 2022 ³⁶	X						
Brezova, 2014 ¹⁰²						X	
Bruin, 2021 ⁷⁵	X	X					
Burger, 2017 ¹⁷⁸	X	X					
Camchong, 2021 ¹⁰⁴							X
Cash, 2019 ¹⁷⁹	X						
Chen, 2022 ¹⁸⁰	X						
Chen, 2022 ¹⁰¹						X	
Chen, 2021 ¹²³				X			
Chen, 2020 ¹⁸¹	X						
Chen, 2021 ¹⁸²	X						
Cheng, 2017 ¹⁸³	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Chin Fatt, 2020 ¹⁸⁴	X						
Colle, 2015 ¹⁸⁵	X						
Cook, 2020 ¹⁸⁶	X						
Cook, 2013 ⁵⁴	X						
Costafreda, 2011 ¹⁸⁷		X					
Crane, 2017 ¹⁸⁸	X						
Crowther, 2015 ¹⁸⁹	X						
Cui, 2020 ¹³⁷				X			
Dai, 2021 ¹⁰⁵							X
de la Salle, 2020 ¹⁹⁰	X						
Deng, 2018 ²⁹	X	X					
Ding, 2019 ⁴⁸	X						
Drysdale, 2017 ⁴¹	X						
Duan, 2020 ¹⁹¹	X						
Dunlop, 2017 ¹⁹²	X						
Durazzo, 2017 ¹¹¹							X
Ellard, 2018 ¹⁹³	X	X					
Erguzel, 2020 ¹¹⁸							X
Erguzel, 2019 ¹¹⁹							X
Erguzel, 2015 ¹⁹⁴	X						
Erguzel, 2014 ¹⁹⁵	X						
Etkin, 2019 ⁸⁴					X		
Fan, 2022 ⁴⁹	X						
Fang, 2012 ¹⁹⁶	X						
Farb, 2022 ¹⁹⁷	X						
Feder, 2017 ¹⁹⁸	X						
Fonzo, 2017 ⁸⁵					X		
Frangou, 2017 ⁶⁹	X	X					
Frick, 2020 ¹⁴⁶			X				
Gao, 2021 ¹⁹⁹	X						
Gao, 2022 ²⁰⁰	X						
Gartner, 2018 ²⁰¹	X						
Ge, 2020 ²⁰²	X						
Ge, 2019 ²⁰³	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Georgopoulos, 2010 ⁹¹					X		
Godlewska, 2018 ²⁰⁴	X						
Godlewska, 2016 ²⁰⁵	X						
Goldstein-Piekarski, 2018 ²⁰⁶	X						
Gong, 2014 ²⁰⁷					X		
Gong, 2014 ²⁰⁸					X		
Gong, 2011 ²⁰⁹	X						
Gosnell, 2019 ²¹⁰	X						
Gowin, 2015 ¹²²							X
Grieve, 2016 ²¹¹	X						
Grotegerd, 2014 ²¹²	X	X					
Guo, 2020 ²¹³	X						
Guo, 2018 ²¹⁴	X						
Guo, 2012 ²¹⁵	X						
Guo, 2012 ²¹⁶	X						
Gyurak, 2016 ³⁸	X						
Hahn, 2015 ¹⁵⁰			X				
Hahn, 2011 ²¹⁷	X						
Hanks, 2019 ⁹⁸						X	
Hasanzadeh, 2020 ²¹⁸	X						
Hasanzadeh, 2019 ²¹⁹	X						
He, 2019 ³³	X	X					
Hellewell, 2019 ²²⁰	X						
Hopman, 2021 ²²¹	X						
Hou, 2021 ²²²	X						
Hou, 2018 ²²³	X						
Hou, 2018 ²²⁴	X						
Hou, 2016 ²²⁵	X						
Hu, 2019 ²²⁶	X						
Hu, 2019 ¹³⁶				X			
Hu, 2016 ¹²⁶				X			
Huang, 2015 ⁹⁹						X	

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Ichikawa, 2020 ²²⁷	X						
Im, 2017 ⁷⁹					X		
Isserles, 2018 ⁵¹	X						
James, 2022 ⁹⁰					X		
Januszko, 2021 ¹¹³							X
Jaworska, 2018 ⁵²	X						
Jaworska, 2014 ²²⁸	X						
Jaworska, 2013 ²²⁹	X						
Jiang, 2021 ²³⁰	X						
Jiang, 2020 ²³¹	X						
Jiang, 2018 ²³²	X						
Kamarajan, 2020 ¹⁰⁶							X
Karim, 2018 ²³	X						
Kaufman, 2015 ⁵⁹	X						
Kim, 2020 ⁸⁷					X		
Kinreich, 2021 ¹⁰⁷							X
Kipli, 2015 ²³³	X						
Klumpp, 2020 ⁸³	X		X		X		
Klumpp, 2017 ¹⁴⁹			X				
Koller-Schlaud, 2020 ²³⁴	X						
Koo, 2019 ²³⁵	X						
Korgaonkar, 2020 ³⁷	X						
Korgaonkar, 2015 ²³⁶	X						
Korgaonkar, 2014 ²³⁷	X						
Korgaonkar, 2012 ³²	X						
Kraus, 2019 ²³⁸	X						
Kwak, 2020 ¹³²				X			
Lanka, 2020 ⁷⁶					X		
Laxminarayan, 2020 ⁸⁶					X		
Leaver, 2018 ²³⁹	X						
Lebedeva, 2017 ²⁴	X						
Lee, 2011 ²⁴⁰	X						
Li, 2021 ²⁴¹	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Li, 2021 ²⁴²	X						
Li, 2021 ²⁴³	X						
Li, 2020 ²⁴⁴	X						
Li, 2020 ²⁴⁵		X					
Li, 2020 ²⁴⁶	X						
Li, 2019 ⁴⁵	X						
Li, 2019 ¹²¹							X
Li, 2017 ²⁴⁷	X	X					
Li, 2016 ⁵³	X						
Li, 2014 ¹³⁸				X			
Li, 2021 ²⁴⁸	X						
Liao, 2018 ²⁴⁹	X						
Liu, 2022 ⁴⁴	X						
Liu, 2021 ¹²⁷				X			
Liu, 2021 ¹³¹				X			
Liu, 2020 ¹²⁴				X			
Liu, 2020 ²⁵⁰	X						
Liu, 2020 ²⁵¹	X						
Liu, 2015 ²⁵²					X		
Liu, 2015 ¹⁴²			X				
Liu, 2014 ⁵⁶	X	X					
Liu, 2012 ²⁵³	X						
Lord, 2012 ²⁵⁴	X						
Lu, 2021 ²⁵⁵		X					
Lu, 2013 ²⁵⁶	X						
Luo, 2021 ¹³⁰				X			
Lv, 2021 ¹²⁸				X			
Main, 2017 ¹⁰⁰						X	
Manelis, 2020 ²⁵⁷	X	X					
Matsuo, 2019 ²⁵⁸	X						
Matsuoka, 2017 ²⁵⁹	X						
McBride, 2013 ¹⁰³						X	
McHugh, 2014 ¹¹⁶							X
Meng, 2020 ²⁶⁰	X						
Meyer, 2019 ²⁶¹	X						
Mishra, 2020 ¹⁰⁸							X

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Modinos, 2013 ²⁶²	X						
Mohammadi, 2015 ²⁶³	X						
Mourao-Miranda, 2012 ²⁶⁴	X						
Mulders, 2020 ²⁶⁵	X						
Mumtaz, 2019 ²⁶⁶	X						
Mumtaz, 2018 ²⁶⁷	X						
Mumtaz, 2018 ¹¹⁰							X
Mumtaz, 2018 ²⁶⁸	X						
Mumtaz, 2017 ²⁶⁹	X						
Mumtaz, 2017 ¹¹²							X
Mumtaz, 2017 ²⁷⁰	X						
Mwangi, 2016 ⁶⁶		X					
Neumeister, 2013 ⁹⁴					X		
Nguyen, 2019 ²⁷¹	X						
Nicholson, 2019 ²⁷²					X		
Niida, 2018 ⁶⁸		X					
Niida, 2012 ²⁷	X	X					
Nogovitsyn, 2020 ²⁷³	X						
Nord, 2019 ²⁷⁴	X						
Olbrich, 2012 ²⁷⁵	X						
Oliveira-Maia, 2017 ²⁷⁶	X						
Palaniyappan, 2022 ²⁷⁷	X						
Pang, 2020 ²⁷⁸	X	X					
Pantazatos, 2014 ¹⁴⁵			X				
Patel, 2015 ²⁵	X						
Pillai, 2019 ⁵⁸	X						
Price, 2018 ¹⁴⁸			X				
Qiao, 2017 ¹⁴⁴			X				
Qin, 2022 ²⁷⁹	X						
Qin, 2015 ²⁸⁰	X						
Qin, 2014 ²⁸¹	X						
Qiu, 2014 ²⁸²	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Rabinoff, 2011 ²⁸³	X						
Raji, 2015 ⁹³					X	X	
Rangaprakash, 2018 ⁹⁵					X	X	
Rangaprakash, 2017 ⁹⁶					X	X	
Rangaprakash, 2019 ⁹⁷					X	X	
Redlich, 2014 ²⁸⁴	X	X					
Reggente, 2018 ¹⁴¹				X			
Rentsch, 2014 ²⁸⁵	X						
Richieri, 2018 ⁶²	X	X					
Richieri, 2011 ⁶³	X	X					
Rive, 2016 ²⁸⁶	X	X					
Rocha-Rego, 2014 ²⁸⁷		X					
Rottstaedt, 2018 ²⁸⁸	X						
Rubin-Falcone, 2018 ²⁸⁹	X	X					
Sacchet, 2015 ²⁹⁰	X	X					
Sadat Shahabi, 2021 ²⁹¹	X						
Sankar, 2016 ²⁹²	X						
Schmaal, 2015 ³⁵	X						
Schnack, 2014 ⁶⁵		X					
Schnyer, 2017 ³⁰	X						
Schultz, 2018 ²⁹³	X						
Sekutowicz, 2019 ¹⁰⁹							X
Serpa, 2014 ⁷¹	X	X					
Shalhaf, 2018 ²⁹⁴	X						
Shan, 2020 ²⁹⁵		X					
Shan, 2021 ²⁹⁶	X						
Shao, 2019 ²⁹⁷	X	X					
Shi, 2021 ²⁹⁸	X						
Shi, 2018 ⁷⁰	X	X					
Shim, 2019 ⁴⁷	X				X		
Shimizu, 2015 ²⁹⁹	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Shu, 2014 ⁸⁹					X	X	
Siegle, 2012 ³⁰⁰	X						
Squarcina, 2019 ³⁰¹		X					
Stange, 2020 ³⁰²	X	X					
Stout, 2021 ⁸²					X		X
Stoyanov, 2019 ³⁰³	X						
Sun, 2021 ³⁰⁴	X						
Sun, 2022 ³⁰⁵	X						
Sun, 2022 ³⁰⁶	X	X					
Sun, 2020 ⁷³	X	X					
Suo, 2020 ⁷⁸					X		
Sverdlov, 2021 ³⁰⁷	X						
Tahmasian, 2017 ⁸⁸					X		
Takagi, 2017 ¹³⁵				X			
Tang, 2022 ³⁰⁸	X	X					
Taylor, 2014 ²⁶	X						
Tekin Erguzel, 2015 ⁶⁴	X	X					
Tenke, 2011 ³⁰⁹	X						
Tian, 2020 ⁴³	X						
Tsolaki, 2021 ⁷²	X	X					
Uyulan, 2022 ³¹⁰	X						
van Rooij, 2016 ⁸¹					X		
van Waarde, 2015 ³¹¹	X						
Voineskos, 2019 ³¹²	X						
Wade, 2017 ³¹³	X						
Wade, 2016 ⁷⁴	X	X					
Wade, 2017 ³¹⁴	X						
Wang, 2022 ⁵⁵	X						
Wang, 2021 ³¹⁵	X						
Wang, 2020 ³¹⁶		X					
Wang, 2019 ¹³³				X			
Wang, 2019 ⁵⁷	X						
Wang, 2017 ³¹⁷	X						
Wang, 2017 ³¹⁸	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Whitfield-Gabrieli, 2016 ¹⁴⁷			X				
Williams, 2015 ³⁹	X						
Wu, 2020 ³¹⁹	X						
Wu, 2021 ³²⁰	X						
Wu, 2021 ⁴⁶	X						
Wu, 2017 ³²¹		X					
Xi, 2022 ³²²	X	X					
Xiao, 2021 ³²³	X						
Xing, 2020 ¹⁴³			X				
Xue, 2021 ³²⁴	X						
Yan, 2020 ³²⁵	X						
Yan, 2022 ³²⁶	X						
Yan, 2021 ³²⁷	X						
Yan, 2021 ¹²⁰							X
Yan, 2021 ³²⁸	X						
Yang, 2022 ¹²⁹				X			
Yang, 2019 ¹³⁴				X			
Yang, 2018 ³²⁹	X						
Yang, 2018 ³³⁰	X						
Yang, 2019 ³³¹		X					
Yang, 2016 ³³²	X						
Yang, 2021 ⁶⁷	X	X					
Yeh, 2015 ⁶⁰	X						
Yoshida, 2017 ³³³	X						
Yu, 2018 ³³⁴	X						
Yun, 2015 ¹⁴⁰				X			
Zehong, 2019 ⁵⁰	X						
Zeng, 2012 ³³⁵	X						
Zhai, 2021 ¹¹⁵							X
Zhang, 2022 ³³⁶	X						
Zhang, 2022 ³³⁷	X						
Zhang, 2021 ⁴²	X						
Zhang, 2020 ⁷⁷					X		
Zhang, 2016 ³³⁸					X		
Zhao, 2020 ³³⁹	X						

Author, Year	Condition Studied						
	Depression	Bipolar	Anxiety Disorders	OCD	PTSD	TBI	Substance Use Disorders
Zhao, 2017 ³⁴⁰	X	X					
Zhdanov, 2020 ³⁴¹	X						
Zheng, 2019 ³⁴²	X						
Zhong, 2017 ³⁴³	X						
Zhou, 2018 ¹²⁵				X			
Zhu, 2021 ³⁴⁴					X		
Zhu, 2021 ³⁴⁵	X						
Zhu, 2020 ³⁴⁶					X		
Zhu, 2018 ¹¹⁴							X
Zhu, 2018 ³⁴⁷	X						
Zhu, 2019 ³⁴⁸	X						
Zhutovsky, 2019 ⁸⁰					X		

APPENDIX E. ELIGIBLE SYSTEMATIC REVIEWS

Condition	Author, Year	# Included studies	Diagnosis	Prognosis	
				Response to Treatment	Change in Symptoms or Functioning
Depression	Bruun, 2021 ³⁴⁹	24	X		
	Cohen, 2021 ³⁵⁰	27		X	
	De Crescenzo, 2017 ³⁵¹	11		X	
	Dichter, 2015 ³⁵²	21		X	
	Enneking, 2020 ³⁵³	50		X	
	Fu, 2013 ³⁵⁴	20		X	
	Gillett, 2020 ³⁵⁵	21		X	
	Khosla, 2022 ¹⁵²	132	X	X	
	Levy, 2019 ³⁵⁶	19		X	
	Long, 2020 ³⁵⁷	17		X	
	Masse-Sibille, 2018 ³⁵⁸	58		X	
	Scheepens, 2020 ¹⁵³	14	X	X	
	Siegel-Ramsay, 2022 ³⁵⁹	88	X		
	Simon, 2021 ³⁶⁰	12	X		
	Sinha, 2020 ¹⁵⁴	13	X		X
van der Vinne, 2017 ³⁶¹	16	X			
Widge, 2019 ³⁶²	76	X			
Bipolar disorders	Hozer, 2016 ¹⁵¹	63	X	X	
	Librenza-Garcia, 2017 ³⁶³	51	X		
	Seeberg, 2018 ³⁶⁴	60		X	
	Whalley, 2012 ³⁶⁵	21	X		
PTSD	Colvonen, 2017 ³⁶⁶	20		X	
	Nelson, 2017 ³⁶⁷	37			X
TBI	Hagbayan, 2017 ³⁶⁸	58			X
	Hulkower, 2013 ³⁶⁹	100	X		
	Raji, 2014 ³⁷⁰	71	X		
OCD	Fullana, 2020 ¹⁵⁵	352*	X		
Anxiety disorders	Qing, 2021 ³⁷¹	11	X		
	Santos, 2019 ³⁷²	24		X	
	Xu, 2019 ³⁷³	29	X		

Notes. *Umbrella review that identified 24 systematic reviews including 352 primary publications.

Abbreviations. OCD=obsessive compulsive disorder; PTSD=posttraumatic stress disorder; TBI=traumatic brain injury.