

## Additional file 1. Search strategies

Database	No	Search strategy	Results
Embase *	#1	('dementia'/exp OR 'dementia*':ab,ti OR 'Alzheimer*':ab,ti)	84,201
	#2	('coronavirus disease 2019'/exp OR 'pandemic'/exp OR 'COVID*':ti,ab OR 'SARS-CoV-2':ti,ab OR 'pandemic*':ti,ab OR 'corona*':ti,ab)	498,255
	#3	('psychotropic agent'/exp OR 'psychotropic*':ti,ab OR 'antipsychotic*':ti,ab OR 'anti-psychotic*':ti,ab OR 'psychoactive*':ti,ab OR 'tranquil*':ti,ab OR 'neuroleptic*':ti,ab)	27,323
	#4	('antianxi*':ti,ab OR 'anti-anxi*':ti,ab OR 'anxiolytic*':ti,ab)	3,537
	#5	('hypnotic sedative agent'/exp OR 'hypnotic*':ti,ab OR 'sedative*':ti,ab)	7,335
	#6	('benzodiazepine derivative'/exp OR 'benzodiazepine*':ti,ab)	8,227
	#7	('antidepress*':ti,ab OR 'anti-depress*':ti,ab OR 'mood stabili*':ti,ab)	15,995
	#8	('anticonvulsive agent'/exp OR 'anticonvulsant*':ti,ab OR 'anti-convulsant*':ti,ab OR 'antiepileptic*':ti,ab OR 'anti-epileptic*':ti,ab)	10,023
	#9	('cholinesterase inhibitor'/exp OR 'cholinesterase*':ti,ab OR 'anticholinesterase*':ti,ab OR 'anti-cholinesterase*':ti,ab OR 'acetylcholinesterase*':ti,ab OR 'memantine*':ti,ab)	8,850
	#10	('behavio*':ti,ab OR 'psycho*':ti,ab OR 'psychiatric*':ti,ab OR 'neuropsychiatric*':ti,ab OR 'disturbance*':ti,ab OR 'BPSD':ti,ab OR 'NPS':ti,ab)	653,202
	#11	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10	691,056
	#12	#1 AND #2 AND #11	762
PubMed †	#1	("Dementia"[Mesh] OR "dementia*"[Title/Abstract] OR "Alzheimer*"[Title/Abstract])	126,733
	#2	("COVID-19"[Mesh] OR "SARS-CoV-2"[Mesh] OR "Pandemics"[Mesh] OR "COVID*"[Title/Abstract] OR "SARS-CoV-2"[Title/Abstract] OR "pandemic*"[Title/Abstract] OR "corona*"[Title/Abstract])	614,354
	#3	("Psychotropic Drugs"[Mesh] OR "psychotropic*"[Title/Abstract] OR "antipsychotic*"[Title/Abstract] OR "anti-psychotic*"[Title/Abstract] OR "psychoactive*"[Title/Abstract] OR "tranquil*"[Title/Abstract] OR "neuroleptic*"[Title/Abstract])	196,463
	#4	("antianxi*"[Title/Abstract] OR "anti-anxi*"[Title/Abstract] OR "anxiolytic*"[Title/Abstract])	4,524
	#5	("Hypnotics and Sedatives"[Mesh] OR "hypnotic*"[Title/Abstract] OR "sedative*"[Title/Abstract])	97,784
	#6	("Benzodiazepines"[Mesh] OR "benzodiazepine*"[Title/Abstract])	50,514
	#7	("antidepress*"[Title/Abstract] OR "anti-depress*"[Title/Abstract] OR "mood stabili*"[Title/Abstract])	20,763
	#8	("Anticonvulsants"[Mesh] OR "anticonvulsant*"[Title/Abstract] OR "anti-convulsant*"[Title/Abstract] OR "antiepileptic*"[Title/Abstract] OR "anti-epileptic*"[Title/Abstract])	88,752
	#9	("Cholinesterase Inhibitors"[Mesh] OR "cholinesterase*"[Title/Abstract] OR "anticholinesterase*"[Title/Abstract] OR "anti-cholinesterase*"[Title/Abstract] OR "acetylcholinesterase*"[Title/Abstract] OR "memantine*"[Title/Abstract])	19,907
	#10	("behavio*"[Title/Abstract] OR "psycho*"[Title/Abstract] OR "psychiatric*"[Title/Abstract] OR "neuropsychiatric*"[Title/Abstract] OR "disturbance*"[Title/Abstract] OR "BPSD"[Title/Abstract] OR "NPS"[Title/Abstract])	707,504
	#11	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10	929,067
	#12	#1 AND #2 AND #11	1,837

Additional file 1. Search strategies (continued)

Database	No	Search strategy	Results
PsycINFO ‡	S1	subject("Dementia") OR tiab("dementia*" OR "Alzheimer*")	22,267
	S2	subject("COVID-19" OR "Pandemics") OR tiab("COVID*" OR "SARS-CoV-2" OR "pandemic*" OR "corona*")	46,549
	S3	subject("Psychotropic Drugs") OR tiab("psychotropic*" OR "antipsychotic*" OR "anti-psychotic*" OR "psychoactive*" OR "tranquil*" OR "neuroleptic*")	6,555
	S4	tiab("antianxi*" OR "anti-anxi*" OR "anxiolytic*")	970
	S5	subject("Hypnotic Drugs" OR "Sedatives") OR tiab("hypnotic*" OR "sedative*")	1,376
	S6	subject("Benzodiazepines") OR tiab("benzodiazepine*")	1,427
	S7	tiab("antidepress*" OR "anti-depress*" OR "mood stabili*")	5,445
	S8	subject("Anticonvulsive Drugs") OR tiab("anticonvulsant*" OR "anti-convulsant*" OR "antiepileptic*" OR "anti-epileptic*")	1,270
	S9	subject("cholinesterase inhibitors") tiab("cholinesterase*" OR "anticholinesterase*" OR "anti-cholinesterase*" OR "acetylcholinesterase*" OR "memantine*")	110
	S10	tiab("behavio*" OR "psycho*" OR "psychiatric*" OR "neuropsychiatric*" OR "disturbance*" OR "BPSD" OR "NPS")	204,798
	S11	[S3] OR [S4] OR [S5] OR [S6] OR [S7] OR [S8] OR [S9] OR [S10]	212,408
	S12	[S1] AND [S2] AND [S11]	234
CINAHL§	S1	MH "Dementia" OR TI "dementia*" AB "dementia*" OR TI "Alzheimer*" OR AB "Alzheimer*"	17,565
	S2	MH "COVID-19" OR MH "COVID-19 Pandemic" OR TI "COVID*" OR TI "SARS-CoV-2" OR TI "pandemic*" OR TI "corona*" OR AB "COVID*" OR AB "SARS-CoV-2" OR AB "pandemic*" OR AB "corona*"	179,391
	S3	MH "Psychotropic Drugs" OR TI "psychotropic*" OR TI "antipsychotic*" OR TI "anti-psychotic*" OR TI "psychoactive*" OR TI "tranquil*" OR TI "neuroleptic*" OR AB "psychotropic*" OR AB "antipsychotic*" OR AB "anti-psychotic*" OR AB "psychoactive*" OR AB "tranquil*" OR AB "neuroleptic*"	5,415
	S4	TI "antianxi*" OR TI "anti-anxi*" OR TI "anxiolytic*" OR AB "antianxi*" OR AB "anti-anxi*" OR AB "anxiolytic*"	717
	S5	MH "Hypnotics and Sedatives" OR TI "hypnotic*" OR TI "sedative*" OR AB "hypnotic*" OR AB "sedative*"	2,211
	S6	MH "Benzodiazepines" OR TI "benzodiazepine*" OR AB "benzodiazepine*"	1,854
	S7	TI "antidepress*" OR TI "anti-depress*" OR TI "mood stabili*" OR AB "antidepress*" OR AB "anti-depress*" OR AB "mood stabili*"	3,658
	S8	MH "Anticonvulsants" OR TI "anticonvulsant*" OR TI "anti-convulsant*" OR TI "antiepileptic*" OR TI "anti-epileptic*" OR AB "anticonvulsant*" OR AB "anti-convulsant*" OR AB "antiepileptic*" OR AB "anti-epileptic*"	2,087
	S9	MH "Cholinesterase Inhibitors" OR TI "cholinesterase*" OR TI "anticholinesterase*" OR TI "anti-cholinesterase*" OR TI "acetylcholinesterase*" OR TI "memantine*" OR AB "cholinesterase*" OR AB "anticholinesterase*" OR AB "anti-cholinesterase*" OR AB "acetylcholinesterase*" OR AB "memantine*"	973
	S10	TI "behavio*" OR TI "psycho*" OR TI "psychiatric*" OR TI "neuropsychiatric*" OR TI "disturbance*" OR TI "BPSD" OR TI "NPS" OR AB "behavio*" OR AB "psycho*" OR AB "psychiatric*" OR AB "neuropsychiatric*" OR AB "disturbance*" OR AB "BPSD" OR AB "NPS"	176,496

## Additional file 1. Search strategies (continued)

Database	No	Search strategy	Results
CINAHL <sup>§</sup>	S11	S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10	185,136
(continued)	S12	S1 AND S2 AND S11	108
Cochrane Library <sup>  </sup>	#1	[mh "dementia"] OR ((dementia*) OR (Alzheimer*)):ti,ab,kw	7,868
	#2	[mh "COVID-19"] OR [mh "SARS-Cov-2"] OR [mh "Pandemics"] OR ((COVID*) OR (SARS-Cov-2) OR (pandemic*) OR (corona*)):ti,ab,kw	7,390
	#3	[mh "Psychotropic Drugs"] OR ((psychotropic*) OR (antipsychotic*) OR (anti-psychotic*) OR (psychoactive*) OR (tranquil*) OR (neuroleptic*)):ti,ab,kw	4,156
	#4	((antianxi*) OR (anti-anxi*) OR (anxiolytic*)):ti,ab,kw	829
	#5	[mh "Hypnotics and Sedatives"] OR ((hypnotic*) OR (sedative*)):ti,ab,kw	2,984
	#6	[mh "Benzodiazepines"] OR (benzodiazepine*):ti,ab,kw	1,828
	#7	((antidepress*) OR (anti-depress*) OR (mood NEXT stabili*)):ti,ab,kw	3,631
	#8	[mh "Anticonvulsants"] OR ((anticonvulsant*) OR (anti-convulsant*) OR (antiepileptic*) OR (anti-epileptic*)):ti,ab,kw	1,116
	#9	[mh "Cholinesterase Inhibitors"] OR ((cholinesterase*) OR (anticholinesterase*) OR (anti-cholinesterase*) OR (acetylcholinesterase*) OR (memantine*)):ti,ab,kw	688
	#10	((behavio*) OR (psycho*) OR (psychiatric*) OR (neuropsychiatric*) OR (disturbance*) OR (BPSD) OR (NPS)):ti,ab,kw	88,274
	#11	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10	95,137
	#12	#1 AND #2 AND #11	182

\* Filters: from 2020/1/1 - 2023/12/31

† Each query ends with “AND [2020-2023]/py”.

‡ Additional limits - Date: From January 01 2020 to December 31 2023

§ Limits - Publication data: 20200101-20231231

|| with Cochrane Library publication data from Jan 2020 to Dec 2023