

Figure S1. Figure S1. Risk of bias assessment of included studies. (A) Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies. (B) Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

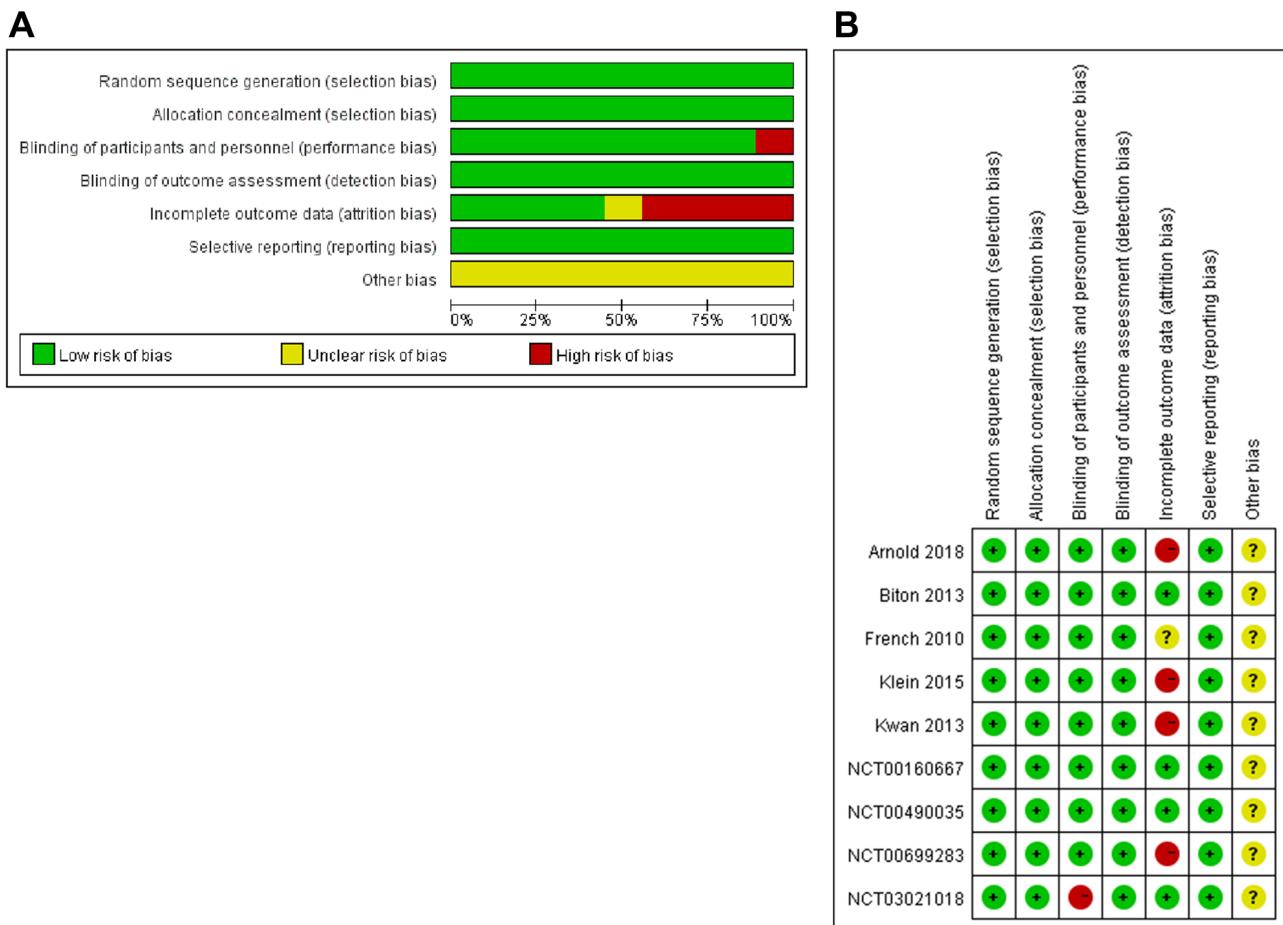


Figure S2. Funnel plots' publication bias of included studies. (A) Nervous system disorders; (B) psychiatric disorders; (C) infections.

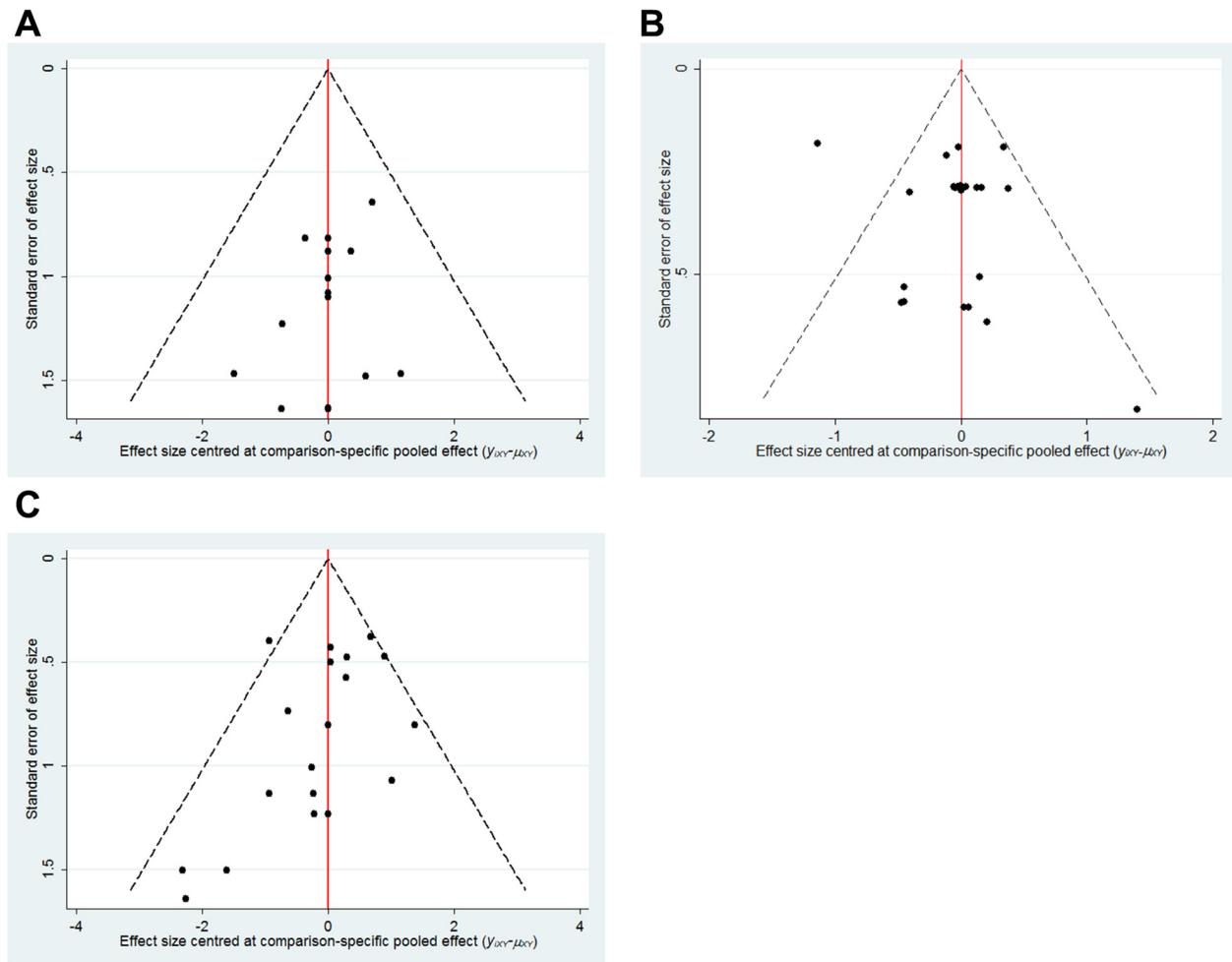


Figure S3. Sensitivity analysis of included studies. (A) Nervous system disorders; (B) psychiatric disorders; (C) infections.

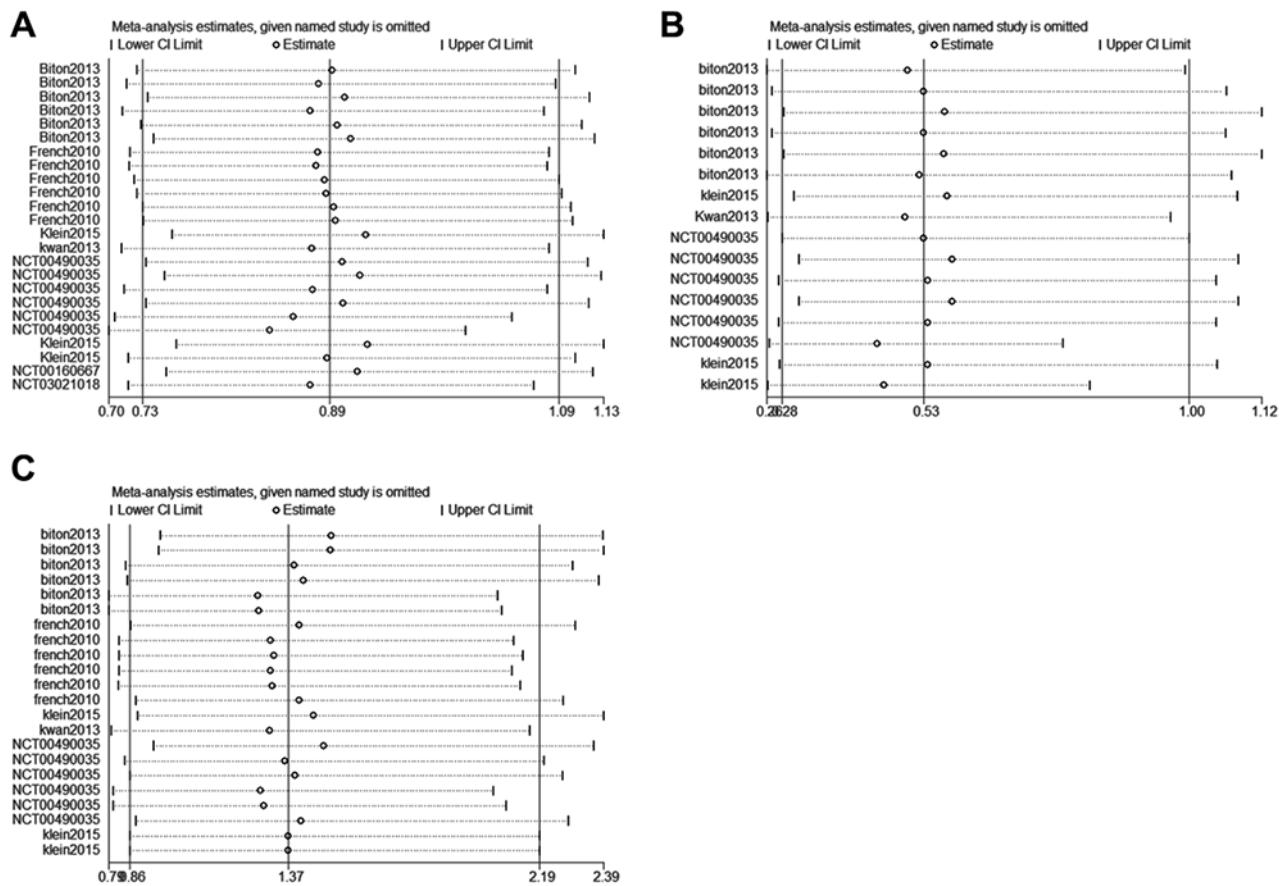


Table SI. Characteristics of the included studies.

Author (year)	NCT code	Age (mean, SD), years	Drug (dose), mg/day	Condition	Number of patients	Treatment period (weeks)	(Refs.)
Arnold (2018)	NCT00698581	39.0 (12.2)	BRV (50) BRV (100)	Epilepsy	88	17	(15)
Biton (2013)	NCT00464269	38.2 (12.5)	Placebo BRV (5) BRV (20) BRV (50)	Epilepsy	400	12	(16)
French (2010)	NCT00175825	33.15 (12.2)	Placebo BRV (5) BRV (20) BRV (50)	Epilepsy	210	7	(17)
Klein (2015)	NCT01261325	39.5 (13.0)	Placebo BRV (100) BRV (200)	Epilepsy	768	12	(18)
Kwan (2013)	NCT00504881	35.85 (11.5)	Placebo BRV (20)	Epilepsy	480	16	(19)
-	NCT00699283	40.3 (14.4)	BRV (50) BRV (100)	Epilepsy	62	17	-
-	NCT00490035	37.24 (13.1)	Placebo BRV (20) BRV (50) BRV (100)	Epilepsy	399	12	-
-	NCT00160667	65.6 (10.8)	Placebo BRV (200)	Epilepsy	101	4	-
-	NCT03021018	42.7 (14.1)	BRV (100) BRV (200)	Epilepsy	30	-	-

BRV, brivaracetam. SD, Standard deviation.

Table SII. Conventional meta-analysis result of odds ratios and 95% CI, and the result for risk of adverse events associated with BRV at various dosage or vs. control.

A, Nervous system disorders

Treatment	OR	95% CI	P-value
BRV 50mg/day vs. BRV 100mg/day	1.83	0.93-3.58	0.077
Placebo vs. BRV 5mg/day	0.96	0.58-1.60	0.891
Placebo vs. BRV 20mg/day	1.05	0.79-1.39	0.716
Placebo vs. BRV 50mg/day	0.62	0.43-0.90	0.014
Placebo vs. BRV 100mg/day	0.79	0.35-1.82	0.586
Placebo vs. BRV 200mg/day	0.46	0.32-0.65	<0.001
BRV 5mg/day vs. BRV 20mg/day	1.25	0.75-2.09	0.396
BRV 5mg/day vs. BRV 50mg/day	0.78	0.47-1.28	0.321
BRV 20mg/day vs. BRV 50mg/day	0.85	0.45-0.95	0.026
BRV 100mg/day vs. BRV 200mg/day	1.40	0.40-4.83	0.597
BRV 20mg/day vs. BRV 100mg/day	1.78	1.00-3.18	0.051

B, Psychiatric disorders

Treatment	OR	95% CI	P-value
BRV 50mg/day vs. BRV 100mg/day	5.95	1.58-22.38	0.014
Placebo vs. BRV 5mg/day	0.99	0.14-7.17	0.992
Placebo vs. BRV 20mg/day	0.70	0.17-2.85	0.649
Placebo vs. BRV 50mg/day	0.16	0.04-0.64	0.022
BRV 5mg/day vs. BRV 20mg/day	0.51	0.09-2.82	0.437
BRV 5mg/day vs. BRV 50mg/day	0.28	0.06-1.40	0.121
BRV 20mg/day vs. BRV 50mg/day	0.30	0.10-0.87	0.228
Placebo vs. BRV 100mg/day	0.14	0.02-1.12	0.093
Placebo vs. BRV 200mg/day	0.32	0.01-7.84	0.484
BRV 100mg/day vs. BRV 200mg/day	5.05	0.58-43.28	0.142
BRV 20mg/day vs. BRV 100mg/day	0.33	0.01-8.28	0.503

C, Infections

Treatment	OR	95% CI	P-value
BRV 50mg/day vs. BRV 100mg/day	0.61	0.17-2.11	0.432
Placebo vs. BRV 5mg/day	0.49	0.21-1.14	0.098
Placebo vs. BRV 20mg/day	0.93	0.23-3.77	0.918
Placebo vs. BRV 50mg/day	1.62	0.64-4.07	0.310
BRV 5mg/day vs. BRV 20mg/day	2.08	0.25-16.95	0.495
BRV 5mg/day vs. BRV 50mg/day	3.52	1.44-8.61	0.006
BRV 20mg/day vs. BRV 50mg/day	3.11	0.91-10.62	0.070
Placebo vs. BRV 100mg/day	0.77	0.35-1.67	0.511
Placebo vs. BRV 200mg/day	3.28	0.89-12.06	0.074
BRV 100mg/day vs. BRV 200mg/day	4.46	1.25-15.85	0.021
BRV 20mg/day vs. BRV 100mg/day	4.31	0.89-20.82	0.069

BRV, brivaracetam; OR, odds ratio; 95% CI, 95% confidence interval.