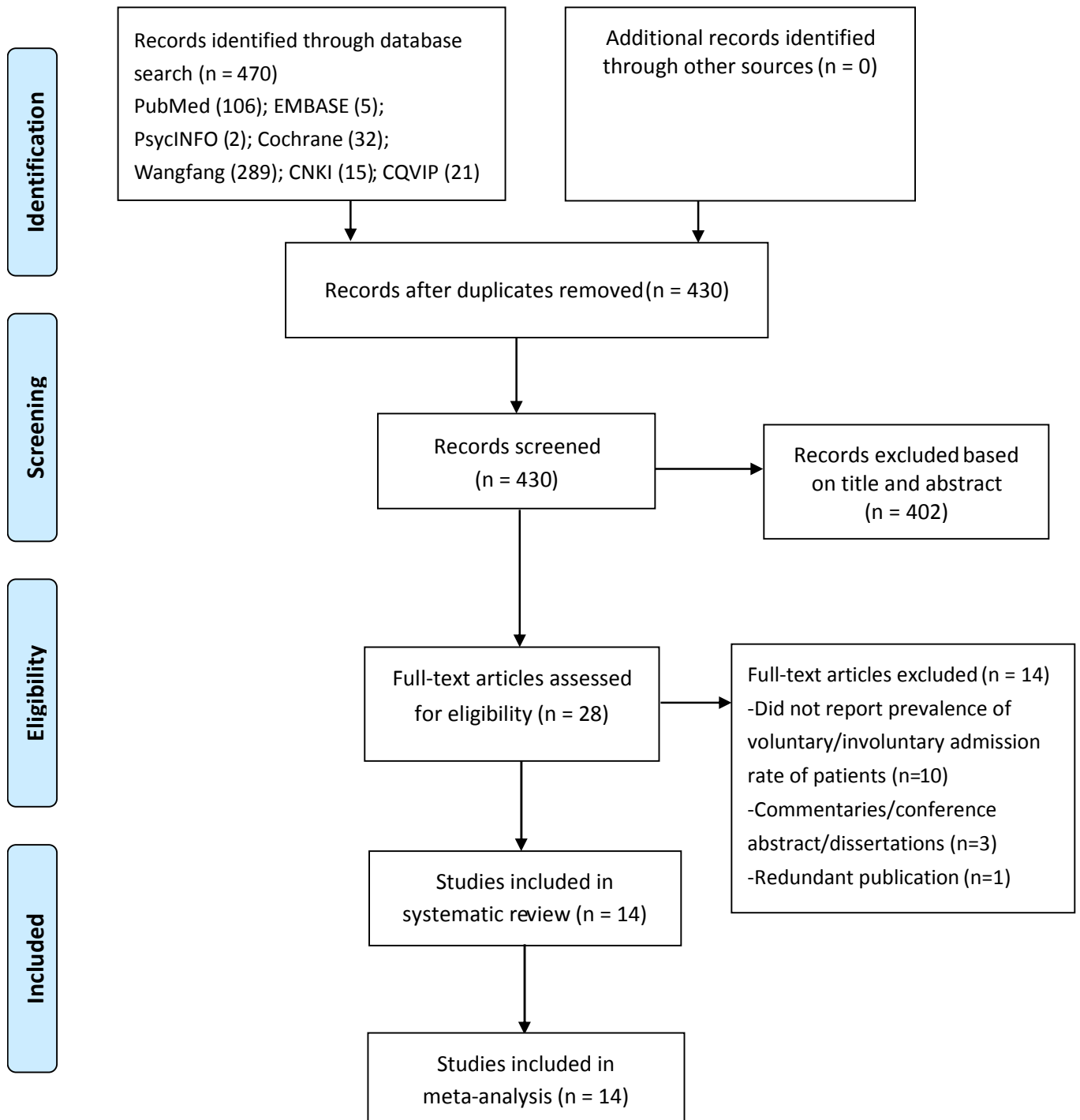


Online supplement

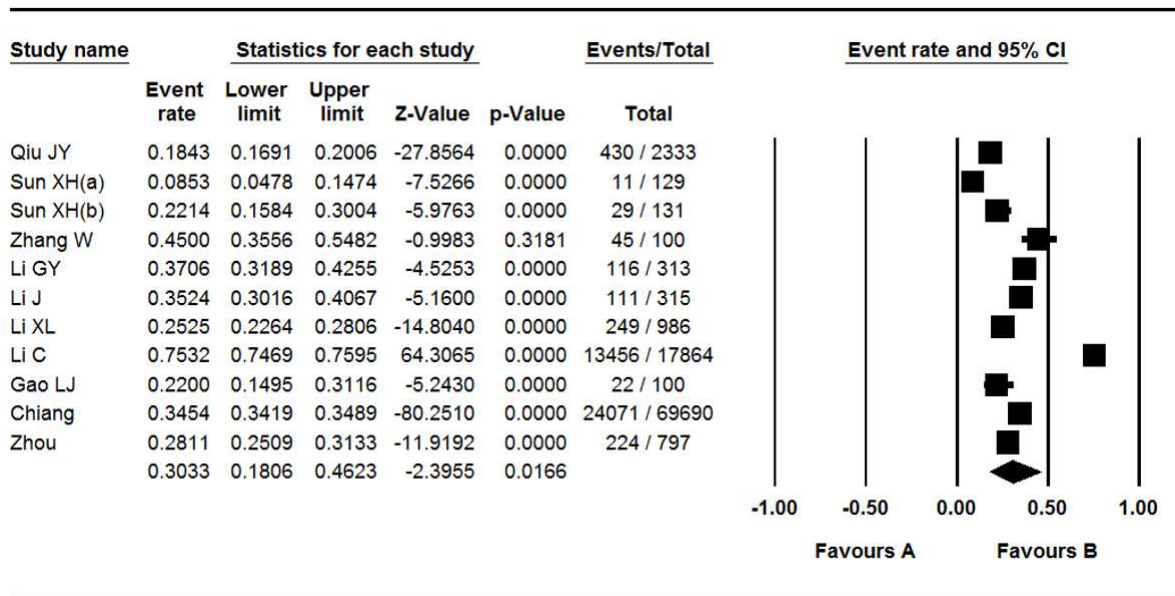
Search terms:

("schizophrenic disorder" OR "disorder, schizophrenic" OR "schizophrenic disorders" OR "schizophrenia" OR "dementia praecox" OR "bipolar disorder" OR "bipolar depression" OR "manic depressive" OR "bipolar affective psychosis" OR "manic depression" OR "bipolar affective" OR "manic state" OR "mania" OR "manic" OR "manic disorder" OR "bipolar psychosis" OR "psychosis" OR "depression" OR "depressive" OR "depressed" OR "melancholia") AND ("Voluntary Admission" OR "Admission, Voluntary" OR "Admissions, Voluntary" OR "Voluntary Admissions") AND ("Chinese" OR "China").

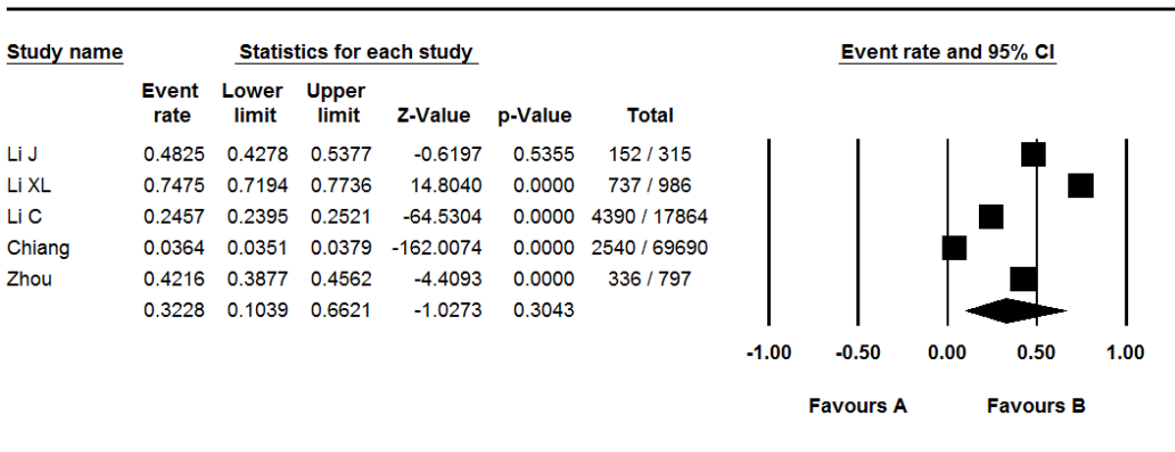
Supplementary Figure. PRISMA flowchart



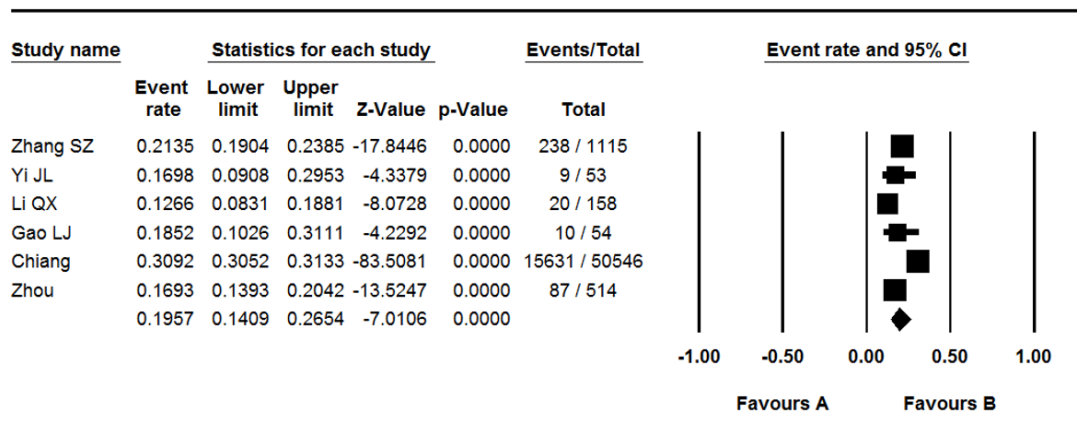
Supplementary Figure. Voluntary admission rate for severe mental illness



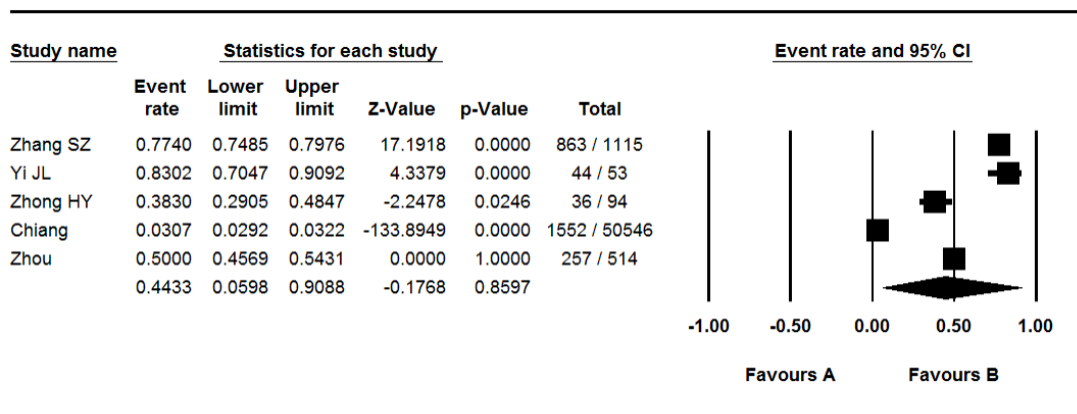
Supplementary Figure. Involuntary admission rate for severe mental illness



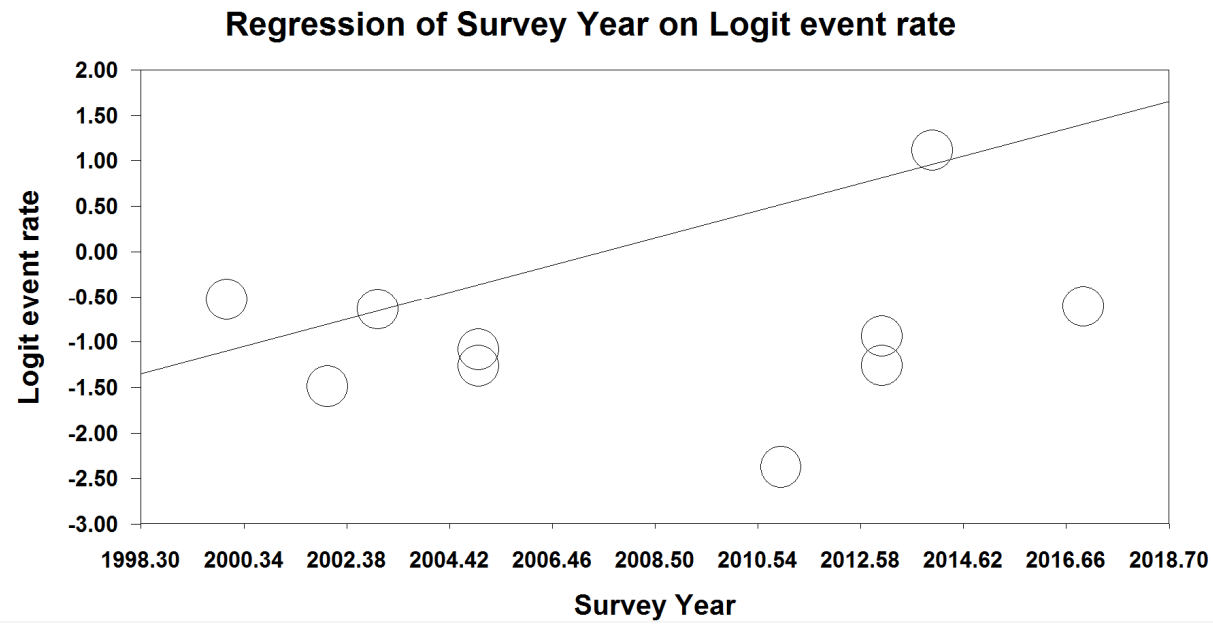
Supplementary Figure. Voluntary admission rate for schizophrenia



Supplementary Figure. Involuntary admission rate for schizophrenia

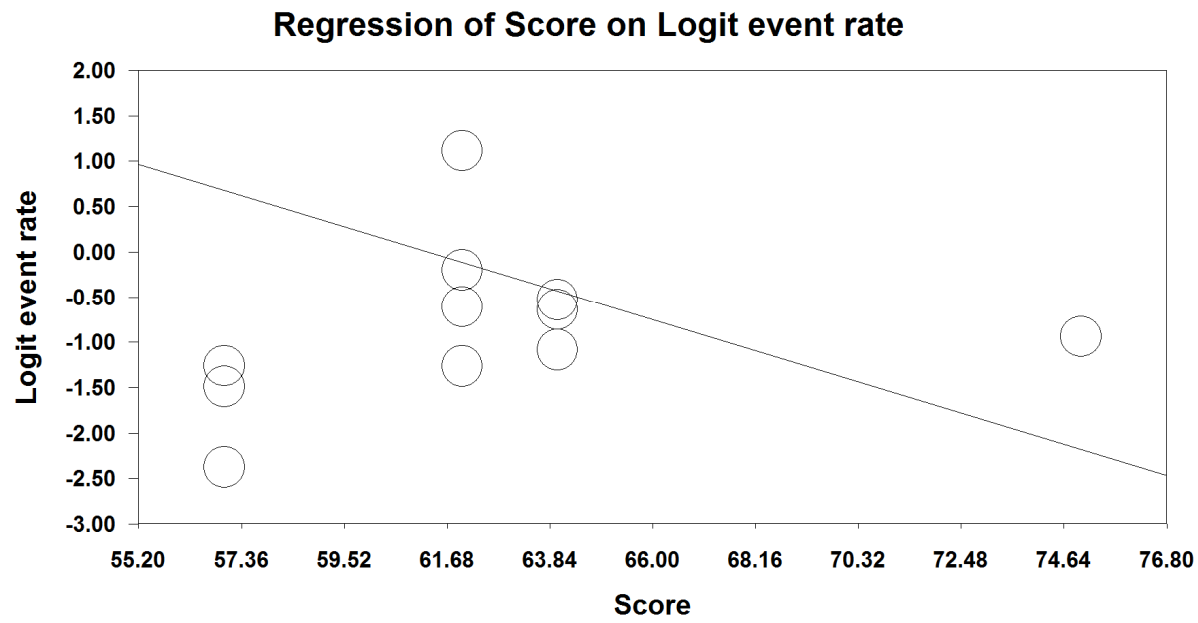


Supplementary Figure: Meta regression of survey year on voluntary rate in patients with severe mental illness



Note: Slope=0.15, Intercept=-295.52, $P < 0.001$

Supplementary Figure: Meta regression of quality assessment score on voluntary rate in patients with severe mental illness



Note: Slope=-0.16, Intercept=9.76, P<0.001

Supplementary Table. Characteristic of studies included in the meta-analysis

No.	First author	Year	Design	Participants					Several mental illness			Schizophrenia			ref	Quality
				N	Hospital	M%	Age (M±SD)	Effective rate	N	Vol (%)	Invol (%)	N	Vol (%)	Invol (%)		
1	Qiu JY	2004	CS	2,333	Psychiatric	50.90	36.50±14	NR	2,333	18.43	/	/	/	/	(1)	57
2	Sun XH ^a	2016	CS	129	Psychiatric	45.00	38.54±12.71	92.14	129	8.53	/	/	/	/	(2)	57
2	Sun XH ^b	2016	CS	131	Psychiatric	48.09	40.85±11.87	91.61	131	22.14	/	/	/	/	(2)	57
3	Zhang W	2003	CS	100	General	47.00	34.58±13.4	78.1	100	45	/	/	/	/	(3)	62
4	Zhang SZ	2016	CS	1,115	Psychiatric	51.80	36.00±12	93.1	/	/	/	1,115	21.3	77.4	(4)	64
5	Yi JL	2015	CS	53	Psychiatric	43.30	31.00±12	91.38	/	/	/	53	16.9	83	(5)	61
6	Li GY	2002	CS	313	General	50.50	34.47±13.21	NR	313	37	/	/	/	/	(6)	64
7	Li QX	2006	CS	303	Psychiatric	52.15	34.47±13.21	NR	/	/	/	158	12.7	/	(7)	62
8	Li J	2017	CS	315	Mixed	47.62	39.80±11.55	NR	315	35.2	48.3	/	/	/	(8)	62
9	Li XL	2006	CS	986	Psychiatric	53.55	29.84±10.41	NR	986	25.3	74.7	/	/	/	(9)	64
10	Li C	2018	CS	17,846	Psychiatric	59.20	41.80±5.10	NR	17,864	75.4	24.6	/	/	/	(10)	62
11	Zhong HY	2014	CS	94	Psychiatric	46.81	43.39±4.42	NR	/	/	/	94	/	38.3	(11)	59
12	Gao LJ	2006	CS	100	Psychiatric	48.00	34.40±9.80	NR	100	22	/	54	18.5	/	(12)	62
13	Chiang	2017	CS	69,690	Mixed	55.90	NR	NR	69,690	34.5	3.6	50,546	30.9	3.1	(13)	64
14	Zhou	2015	LT	797	Mixed	52.00	36.40±13.10	98	797	28.11	42.16	514	16.93	50	(14)	75

^aParticipants were recruited in 2011 (N=129), ^bParticipants were recruited in 2013 (N=131). CS: cross-sectional, LT: longitudinal; M%: Percentage of male; Quality: Studies scoring above 67 were of high quality and those scoring between 50 and 66 were considered to be of moderated quality.

Supplementary Table. Quality assessment of included studies

Study	1. Study question	2. Study population	3. Comparability of subjects	4. Exposure /intervention	5. Outcome measures	6. Statistical Analysis	7. Results	8. Discussion	9. Funding /sponsorship	Total	Quality
Li GY 2002	2	8	14	3	10	12	5	5	5	64	moderate
Zhang W 2003	2	8	14	3	10	10	5	5	5	62	moderate
Qiu JY 2004	2	8	9	3	10	10	5	5	5	57	moderate
Gao LJ 2006	2	8	14	3	10	10	5	5	5	62	moderate
Li QX 2006	2	8	14	3	10	10	5	5	5	62	moderate
Li XL 2006	2	8	14	3	10	12	5	5	5	64	moderate
Zhong HY 2014	2	5	14	3	10	10	5	5	5	59	moderate
Yi JL 2015	2	5	14	3	10	12	5	5	5	61	moderate
Zhou 2015	2	8	17	3	15	12	8	5	5	75	High
Sun XH 2016	2	8	9	3	10	10	5	5	5	57	moderate
Zhang SZ 2016	2	8	14	3	10	12	5	5	5	64	moderate
Chiang 2017	2	8	14	3	10	12	5	5	5	64	moderate
Li J 2017	2	8	14	3	10	10	5	5	5	62	moderate
Li C 2018	2	8	14	3	10	10	5	5	5	62	moderate

Note: Studies scoring above 67 were defined to be of high quality and those scoring between 50 and 66 were considered to be of moderated quality

Supplementary Table. Subgroup analyses of voluntary and involuntary admission rates for severe mental illness

Subgroups	Categories (Num of studies)	Proportion (%)	95% CI		Events	Sample size	I^2	P (within subgroup)	Q (P across subgroup)
Voluntary admission									
Study site	Multicenter (6)	37.4	19.0	60.4	38,408	91,312	99.9	<0.001	1.59 (0.21)
	Single site (5)	23.2	15.6	33.2	356	1,446	89.3	<0.001	
Hospital type	Psychiatric (6)	25.9	8.1	58.2	14,197	21,543	99.8	<0.001	0.34 (0.56)
	General or mixed (5)	34.7	31.0	38.5	24,567	71,215	80.1	<0.001	
Study time	Before law introduction (8)	26.4	20.5	33.4	25,168	74,448	97.9	<0.001	0.10 (0.76)
	After law introduction (2)	28.7	17.6	43.2	140	446	86.2	0.007	
Study Area	East (6)	24.9	19.4	31.2	24,493	71,351	93.9	<0.001	5.42 (0.02)
	West (2)	61.6	30.6	85.4	13,501	17,964	97.7	<0.001	
Gender	Female (5)	28.2	20.9	36.9	11,594	32,778	97.1	<0.001	0.74 (0.39)
	Male (5)	23.1	15.9	32.4	13,402	41,128	97.7	<0.001	
Publication	Chinese (9)	30.0	13.1	54.8	14,469	22,271	99.8	<0.001	0.02 (0.90)
Language	English (2)	31.5	25.5	38.1	24,295	70,487	93.0	<0.001	
Involuntary admission									
Study site	Multicenter (4)	23.2	6.4	57.1	7,418	88,666	99.9	<0.001	9.00 (0.00)
	Single site (1)	74.7	71.9	77.4	737	986	-	-	
Hospital type	Psychiatric (2)	49.5	10.1	89.5	5,127	18,850	99.9	<0.001	0.43 (0.47)
	General or mixed (3)	22.8	2.6	76.4	3,028	70,802	99.9	<0.001	
Study time	Before law introduction (3)	48.3	42.8	53.8	3,613	71,702	99.9	<0.001	26.3 (0.61)
	After law introduction (1)	30.2	42.7	53.6	152	315	-	-	
Study Area	East (3)	32.0	1.9	92.1	3,429	71,220	99.9	<0.001	0.05 (0.82)
	West (1)	24.6	23.9	25.2	4,390	17,864	-	-	
Gender	Female (3)	26.6	0.02	0.86	1,515	31,632	99.9	<0.001	0.03 (0.88)
	Male (3)	33.6	0.02	0.91	2,098	39,941	99.9	<0.001	
Publication	Chinese (3)	49.1	17.1	0.82	5,279	19,165	99.8	<0.001	1.10 (0.29)

Language	English (2)	14.2	0.01	0.75	2,876	70,487	99.9	<0.001
-----------------	-------------	------	------	------	-------	--------	------	--------

Included studies:

1. Qiu JY, et al.: An investigation on female in patients with mental disorders in China [In Chinese]. Shanghai Arch Psychiatry 16:343-6, 2004
2. Sun XH, et al.: Investigation on admission methods of patients in closed ward of psychiatric hospital [In Chinese]. Prev Med 28:1029-33, 2016
3. Zhang W, et al.: The Survey of Psychopath's Rights [In Chinese]. West China Medical Journal 18:42-3, 2003
4. Zhang SZ, et al.: Correlates of agitation in newly hospitalized patients with schizophrenia [In Chinese]. Chinese Mental Health Journal 30:881-5, 2016
5. Yi JL, et al.: Related factors to the competence of informed consent in new admitted patients with schizophrenia. [In Chinese]. Chinese Mental Health Journal 29:651-5, 2015
6. Li GY, et al.: A study of insight in relation to voluntary admission and voluntary treatment of persons with mental disorders. [In Chinese]. Chinese Journal of Behavioral Medical Science 11:1-4, 2002
7. Li QX, et al.: Admission Attitude and Insight in Patients with Mental Disorders. [In Chinese] Journal of Nursing Science 21:21-3, 2006
8. Li J, et al.: Preliminary study of application of Barriers to Access to Care Evaluation (BACE) (Chinese version) in patients with severe mental disorders [In Chinese]. Journal of Psychiatry 30:241-5, 2017
9. Li XL, et al.: The effect of schizophrenia patients and their families on their right of knowing and agreeing on the facts of hospitalization. [In Chinese]. Journal of Nursing 13:4-6, 2006
10. Li C, et al.: Epidemiological survey on emergency patients with severe mental illness in mental health specialized hospitals in Guangxi. [In Chinese]. Guangxi Medical Journal 40:1591-4, 2018
11. Zhong HY, et al.: Analysis of related factors of violent aggression in patients with schizophrenia. [In Chinese]. Medical Journal of Chinese People's Health 26:52-3, 2014
12. Gao LJ, et al.: Analysis of admission methods and related factors in patients with mental illness. [In Chinese]. Journal of Clinical Medicine in Practice 2:61-2, 2006
13. Chiang CL, Chen PC, Huang LY, et al.: Time trends in first admission rates for schizophrenia and other psychotic disorders in Taiwan, 1998-2007: a 10-year population-based cohort study. Soc Psychiatry Psychiatr Epidemiol 52:163-73, 2017
14. Zhou JS, Xiang YT, Zhu XM, et al.: Voluntary and involuntary psychiatric admissions in China. Psychiatric services (Washington, DC) 66:1341-6, 2015