Supplementary Table S1. Basic characteristics of studies on the prevalence of HHcy (defined as Hcy ⩾ 15μmol/L) in China

Authors	Year of Publication	year of data collection	Population source	Age (Years)	Province	Setting	Area	Study Location	Methods of Hcy measurement	Sample	Number of Cases	Prevalence of HHCY (%)	Prevalence of male (%)	Prevalence of female (%)
Pang2014[1]	2014	2011.5-2012.11	Community-based	42.2±11.4	Xinjiang	R	N	I	ECA	1003	316	31.5	49.9	17.5
Wang2014[2]	2014	NR	Community-based	54.05±12.11	Guangdong	U	S	Co	ECA	1586	270	17.02	29.6	8.47
Liu2014[3]	2014	2012.08-2013.09	Physical examination -based	43. 04 ± 10. 24	Jilin	U and R	N	I	ECA	1106	200	18.1	NR	NR
Liu2015[4]	2015	2007	Community-based	43.57	Shanxi	U and R	N	I	ECA	2645	1791	67.7	81.4	58.8
Zhang2015[5]	2015	2009	Community-based	69.5±8.1	Beijing	U	N	I	ECA	1458	902	61.87	NR	NR
Deng2015[6]	2015	NR	Community-based	72.96± 7.66	Shanghai	R	C	Co	HPLC	1621	569	35.1	43.6	29.5
Wang2016[7]	2016	2013.1-2013.12	Physical examination -based	49.1±11.7	Guangdong	U and R	S	Co	IA	1136	575	50.61	65.61	27.78
Wu2016a[8]	2016	2013.1-2014.10	Physical examination -based	45. 86 ±13. 53	Sichuan	U and R	C	I	ECA	11740	3393	28.9	40.53	8.77
Wu2016b[9]	2016	2014.1	Physical examination -based	38.0±8.6	Shanghai	U and R	C	Co	ECA	438	125	28.54	NR	NR
Zhang2016[10]	2016	2012.8-2012.12	Community-based	64.6±7.4	Shanxi	R	N	I	ECA	2355	1710	72.6	84.3	63.2
Chen2017[11]	2017	2012.7-2013.8	Community-based	53.8±10.6	Liaoning	R	N	I	ECA	7365	2944	39.97	59.04	25.79
Zhan2017[12]	2017	2012.8-2012.12	Community-based	63.68	Shanxi	U	N	I	ECA	516	250	48.4	NR	NR
Wei2017[13]	2017	2015-2016	Community-based	≥35	Guangxi	R	S	Co	ECA	600	214	35.7	40.4	28.1

Yang2018[14]	2018	2013-2018	Physical examination - based	54.8±7.9	Hunan	U and R	C	Co	NR	207069	82701	39.94	55.6	16.7
Qin2018[15]	2018	2015-2016	Physical examination - based	≥20	Guangxi	U and R	S	Co	ECA	8043	4086	50.8	52.3	48.1
Chen2018[16]	2020	2016.08-2016.09	Community-based	61.2±9.5	Jiangsu	U	C	Co	ECA	16644	5018	30.15	43.65	22.31
Wang2019[17]	2019	2013	Community-based	55.7 ± 11.1	Shanghai	U and R	C	Co	ECA	8337	2059	24.7	NR	NR
Cao2019[18]	2019	2015.07-2017.12	Physical examination - based	NR	Chongqing	U and R	C	I	ECA	7308	1237	16.93	90.54	5.6
Jiang2019[19]	2019	2007	Community-based	35-64	Jiangxi	R	C	I	ECA	3886	1542	39.68	49.61	24.14
Tan2019[20]	2019	2015	Physical examination - based	72.57±6.51	Shanghai	U and R	C	Co	ECA	5976	2487	41.62	51.47	33.82
Zhang2019[21]	2019	NR	Physical examination - based	61.91±7.26	Heilongjiang	U	N	I	ELISA	668	200	29.94	25.99	33.72
Zhao2019[22]	2019	2017.01	Physical examination - based	59.8±9.8	Xinjiang	U and R	N	I	NR	7492	4745	63.33	74.23	54.46
Deng2020[23]	2020	2017.07-2018.10	Physical examination - based	50.37±6.09	Guangxi	U and R	S	Co	ECA	1768	270	15.2	23.1	6
Wang2020[24]	2020	2018.01-2018.06	Physical examination - based	58.15±11.74	Hebei	U	N	I	NR	2572	724	28.15	NR	NR
Yu2020[25]	2020	2001.01-2003.08	Community-based	54 ± 10	Liaoning	R	N	Co	ECA	6837	2824	41.3	NR	NR
Cui2020[26]	2020	2016.06-2017.11	Community-based	20-74	Shanghai	U	C	Co	ECA	8201	2673	32.59	52.69	18.6
Niu2021[27]	2021	2013-2014	Community-based	54.5	Hunan	U and R	C	Co	NR	4012	1420	35.39	45.38	28.46

Guo2021[28]	2021	2012.03-2015.07	Community-based	57.5±10.9	Guangdong	U	S	Co	NR	15808	2739	17.33	NR	NR
Liu2021[29]	2021	2014.04-2015.04	Physical examination - based	40±8.4	Sichuan	U and R	C	I	ELISA	470	163	34.68	NR	NR

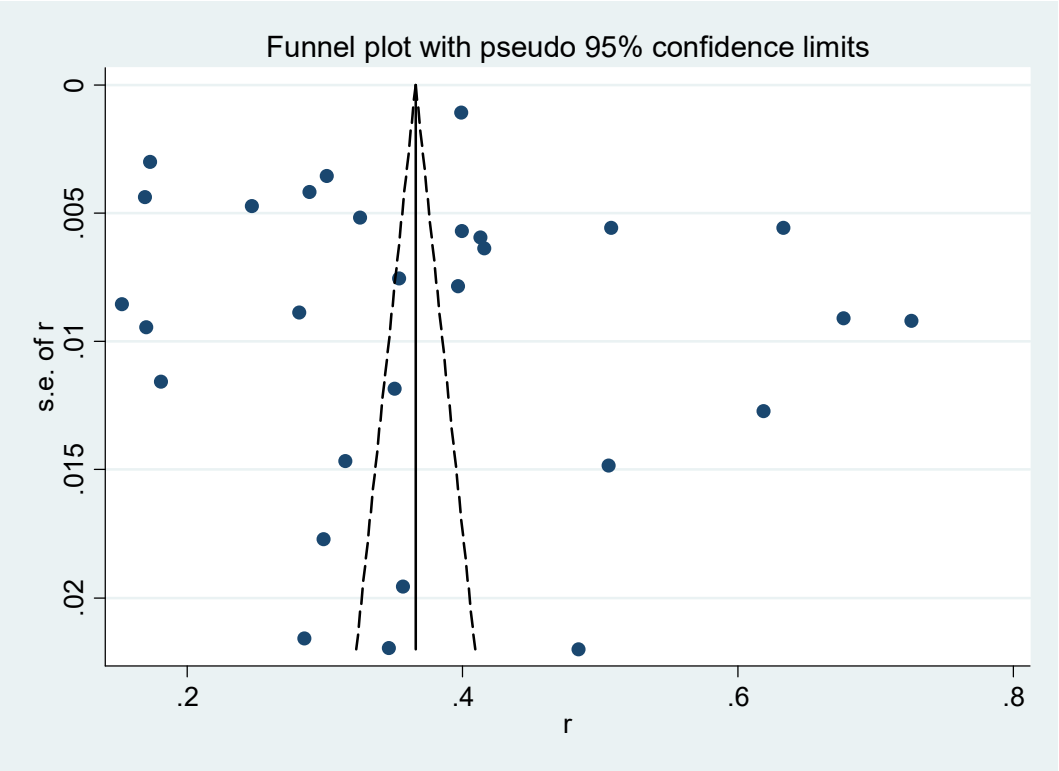
HHcy, hyperhomocysteinemia; Hcy, homocysteine; NR, not reported; N, north; S, south; Ce, central; I, inland; Co, coastal; U, urban; R, rural; HPLC, high-performance liquid chromatography; ECA, enzymatic cycling assay; IA, immunoturbidimetric assays.

Table S2. Quality scores for assessing the risk of bias of in the included articles for observation study.

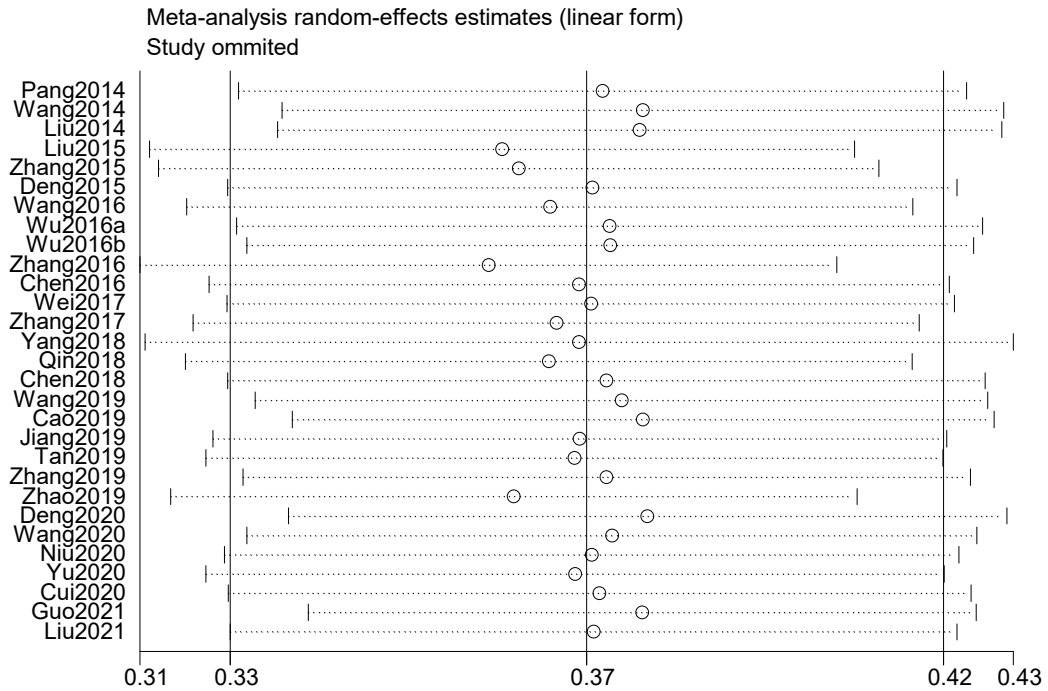
Study(year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Total Score
Pang2014[1]	1	0	1	1	1	0	1	1	0	1	1	8
Wang2014[2]	1	1	1	1	1	0	1	0	0	1	1	8
Liu2014[3]	1	0	1	1	1	0	0	0	0	0	1	5
Liu2015[4]	1	1	1	1	1	0	1	1	0	1	1	9
Zhang2015[5]	1	1	1	1	1	0	1	1	0	1	1	9
Deng2015[6]	1	0	0	1	1	0	0	0	0	1	1	5
Wang2016[7]	1	1	1	1	1	0	0	0	0	0	1	6
Wu2016a[8]	1	0	1	1	1	0	0	0	0	0	1	5
Wu2016b[9]	1	1	1	1	1	0	1	0	0	1	1	8
Zhang2016[10]	1	1	1	1	1	0	1	0	0	1	1	8
Chen2017[11]	1	1	1	1	1	0	0	1	0	1	1	8
Zhan2017[12]	1	1	1	1	1	0	1	1	0	1	1	9
Wei2017[13]	1	1	1	1	1	0	0	0	0	0	1	6
Yang2018[14]	1	1	1	1	1	0	0	0	0	0	1	6
Qin2018[15]	1	1	1	1	1	0	0	1	0	0	1	7

Chen2018[16]	1	1	1	1	1	0	0	0	0	0	1	6
Wang2019[17]	1	1	1	1	1	0	0	1	0	0	1	7
Cao2019[18]	1	1	1	1	1	0	0	1	0	0	1	7
Jiang2019[19]	1	0	1	1	1	0	0	0	0	0	1	5
Tan2019[20]	1	0	1	1	1	0	1	0	0	1	1	7
Zhang2019[21]	1	1	0	1	1	0	1	0	0	1	1	7
Zhao2019[22]	1	1	1	1	1	0	0	0	0	0	1	6
Deng2020[23]	1	1	1	1	1	0	0	1	0	0	1	7
Wang2020[24]	1	1	1	1	1	0	1	0	0	1	1	8
Yu2020[25]	1	1	1	1	1	0	1	1	0	1	1	9
Cui2020[26]	1	1	1	1	1	0	1	1	0	1	1	9
Niu2020[27]	1	1	1	1	1	0	1	1	0	1	1	9
Guo2021[28]	1	1	1	1	1	0	0	1	0	1	1	8
Liu2021[29]	1	1	1	1	1	0	0	0	0	0	1	6

"No" or "Unclear" was scored "0", and "Yes" was scored "1". Low quality: ≤3 scores; Moderate quality: 4-7 scores; High quality: ≥8 scores. Q1: Define the source of information (survey, record review); Q2: List inclusion and exclusion criteria for exposed and unexposed subjects (cases and controls) or refer to previous publications; Q3: Indicate time period used for identifying patients; Q4: Indicate whether or not subjects were consecutive if not population-based; Q5: Indicate if evaluators of subjective components of study were masked to other aspects of status of the participants; Q6: Describe any assessments undertaken for quality assurance purpose; Q7: Explain any patient exclusions from analysis; Q8: Describe how confounding was assessed and/or controlled; Q9: If applicable, explain how missing data were handled in the analysis; Q10: Summarize patient response rates and completeness of data collection; Q11: Clarify what follow-up, if any, was expected and the percentage of patients for which incomplete data or follow-up was obtained.



Supplementary Figure S1. Funnel chart



Supplementary Figure S2. Sensitivity analyses

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