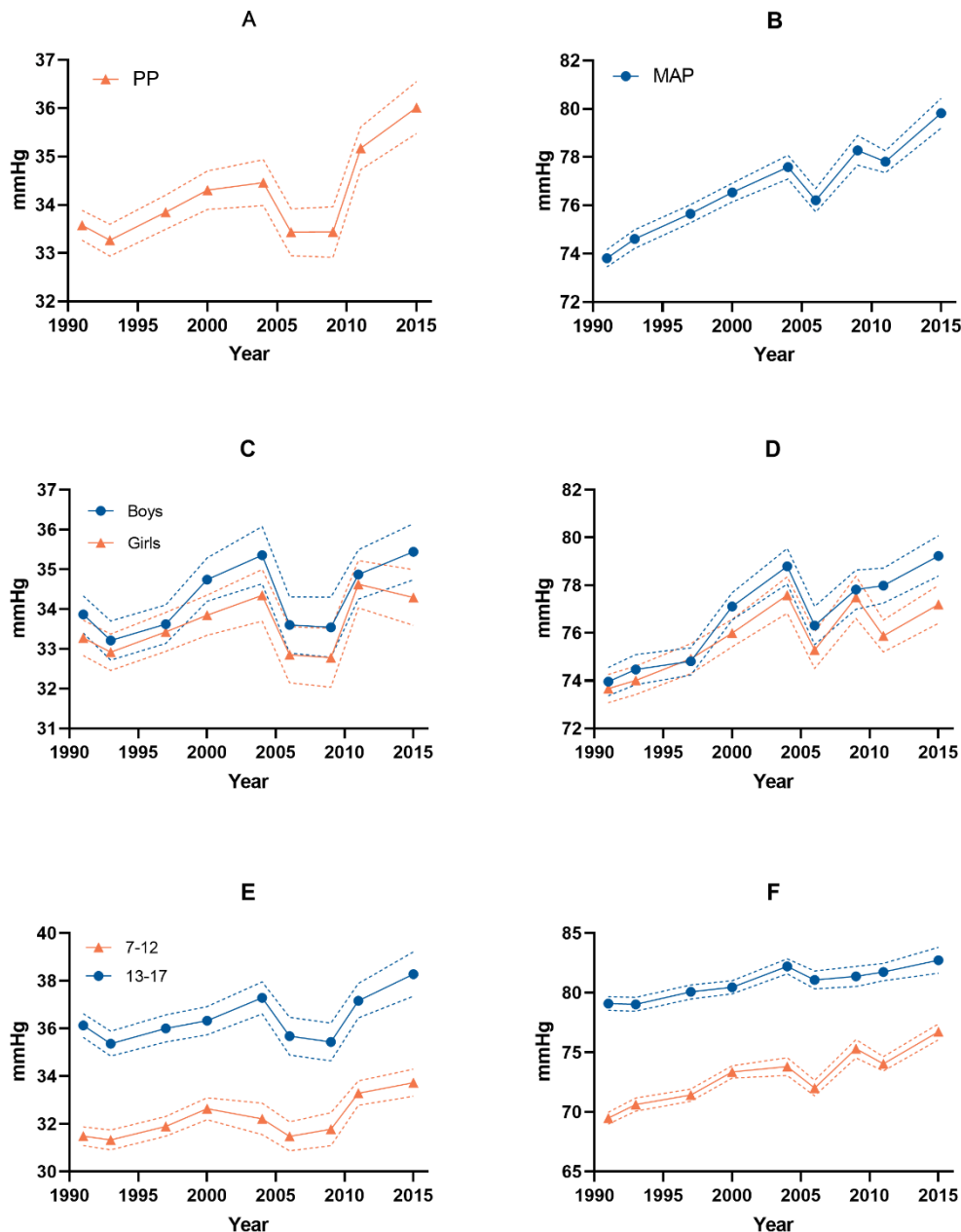


Title: Temporal Trends in Pulse Pressure and Mean Arterial Pressure in Chinese Children and Adolescents Over Two Decades (1991–2015)



Supplementary Figure 1. Locations of investigated provinces in CHNS 1991-2015



Supplementary Figure 2. Temporal trend in PP and MAP in Chinese children and adolescents over two decades

Note: *PP is pulse pressure and MAP is mean arterial pressure.

(A) Temporal trends in overall-standardized PP; (B) Temporal trends in overall-standardized MAP. (C) Temporal trends in PP stratified by gender; (D) Temporal trends in MAP stratified by gender; blue represents boys and orange represents girls.

(E) Temporal trends in PP stratified by age; (D) Temporal trends in MAP stratified by age; blue represents participants aged 13-17 years; orange represents participants 7-12 years.

Dashed lines indicate 95% confidence intervals.

Supplementary Table 1. Investigated provinces and in each wave of CHNS 1991-2015

Wave year	Investigated provinces
1991	Liaoning, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
1993	Liaoning, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
1997	Heilongjiang, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
2000	Liaoning, Heilongjiang, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
2004	Liaoning, Heilongjiang, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
2006	Liaoning, Heilongjiang, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
2009	Liaoning, Heilongjiang, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou
2011	Beijing, Liaoning, Heilongjiang, Shanghai, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou, Chongqing
2015	Beijing, Liaoning, Heilongjiang, Shanghai, Jiangsu, Shandong, Henan, Hubei, Hunan, Guangxi, Guizhou, Chongqing

Supplementary Table 2. Comparison of demographic characteristics between the excluded and included subjects in CHNS 1991-2015

Characteristics	1991-2015 combined			1991			1993			1997			2000		
	Excluded (3,581)	Included (15022)	p value	Excluded (527)	Included (2,410)	p value	Excluded (556)	Included (2,225)	p value	Excluded (635)	Included (2,241)	p value	Excluded (675)	Included (2,202)	p value
Age, year	12.58±3.42	11.81±2.99	<0.001	12.41±3.59	12.08±3.09	0.0342	12.35±3.56	11.82±3.1	0.0005	12.69±3.54	11.69±2.93	<0.001	13.65±2.99	12.12±2.74	<0.001
Age group															
7-12 years	1,604(44.79)	8,705(57.95)	<0.001	242(45.92)	1,322(54.85)	<0.001	266(47.84)	1,265(56.85)	<0.001	280(44.09)	1,349(60.20)	<0.001	215(31.85)	1,199(54.45)	<0.001
13-17 years	1,977(55.21)	6,317(42.05)		285(54.08)	1,088(45.15)		290(52.16)	960(43.15)		355(55.91)	892(39.80)		460(68.15)	1,003(45.55)	
Sex															
Male	1,910(53.34)	7,879(52.45)	0.339	287(54.46)	1,241(51.49)	0.217	273(49.1)	1,158(52.04)	0.214	338(53.23)	1,187(52.97)	0.907	351(52.00)	1,167(53.00)	0.650
Female	1,671(46.66)	7,143(47.55)		240(45.54)	1,169(48.51)		283(50.90)	1,067(47.96)		297(46.77)	1,054(47.03)		324(48.00)	1,035(47.00)	
Setting															
Urban	909(25.38)	4,304(28.65)	<0.001	120(22.77)	612(25.39)	0.207	117(21.04)	559(25.12)	0.045	147(23.00)	654(29.18)	0.003	167(24.74)	603(27.38)	0.175
Rural	2,672(74.62)	10,718(71.35)		407(77.23)	1,798(74.61)		439(78.96)	1,666(74.88)		488(77.00)	1,587(70.82)		508(75.26)	1,599(72.62)	

Characteristics	1991-2015 combined			1991			1993			1997			2000		
	Excluded (3,581)	Included (15022)	p value	Excluded (527)	Included (2,410)	p value	Excluded (556)	Included (2,225)	p value	Excluded (635)	Included (2,241)	p value	Excluded (675)	Included (2,202)	p value
Region															
North	1,493(41.69)	5,227(34.80)	<0.001	234(44.40)	720(29.88)	<0.001	243(43.71)	683(30.70)	<0.001	226(35.59)	771(34.40)	0.579	275(40.74)	955(43.37)	0.227
South	2,088(58.31)	9,795(65.20)		293(55.60)	1,690(70.12)		313(56.29)	1,542(69.00)		409(64.41)	1,470(65.60)		400(59.26)	1,247(56.63)	
BMI, kg/m²	17.42±4.63	17.69±3.25	0.0395	15.4±1.86	17.38±2.78	<0.001	15.66±1.94	17.28±2.68	<0.001	15.66±2.05	17.43±2.78	<0.001	16.46±2.41	17.68±2.85	0.004
Obesity															
Normal	568(86.00)	13,228(88.00)	0.081	83(94.32)	2,222(92.20)	0.465	86(93.48)	2,046(91.96)	0.597	101(93.52)	2,042(91.12)	0.389	44(95.65)	1,983(90.05)	0.207
Overweight/ Obesity	94(14.00)	1,794(12.00)		5(5.68)	188(7.80)		6(6.52)	179(8.04)		7(6.48)	199(8.88)		2(4.35)	219(9.95)	
Waist circumference, cm	59.72±13.05	62.85±9.87	<0.001	NA	NA		58.28±8.45	62.33±8.46	<0.001	56.21±6.50	61.41±8.17	<0.001	60.01±8.78	62.76±8.34	0.002
Central obesity															
Normal	633(90.56)	10,505(91.75)	0.269	NA	NA		77(93.90)	1,206(96.48)	0.23	140(95.89)	2,066(96.27)	0.814	83(92.22)	2,057(94.75)	0.297

Characteristics	1991-2015 combined			1991			1993			1997			2000		
	Excluded (3,581)	Included (15022)	p value	Excluded (527)	Included (2,410)	p value	Excluded (556)	Included (2,225)	p value	Excluded (635)	Included (2,241)	p value	Excluded (675)	Included (2,202)	p value
Central obesity	66(9.44)	945(8.25)		NA	NA		5(6.10)	44(3.52)		6(4.11)	80(3.73)		7(7.78)	114(5.25)	

Continued

Characteristics	2004			2006			2009			2011			2015		
	Exclude d (295)	Include d (1,352)	p valu e	Exclude d (179)	Include d (1,119)	p valu e	Exclude d (131)	Include d (1,008)	p valu e	Exclud ed (80)	Include d (1,404)	p valu e	Exclude d (503)	Include d (1,061)	p valu e
Age, year	11.73±3. 21	12.46±3. 00	0.00 02	12±3.45	11.83±3. 08	0.50 13	12.28±3. 17	11.58± 2.87	0.00 9	12±3.4 1	11.39±3. 04	0.08 57	12.32±3. 34	10.71±2. 76	<0.0 01
Age group															
7-12 years	163(55.2 5)	641(47.4 1)	<0.0 01	93(51.96)	648(57.9 1)	<0.0 01	66(50.38)	615(61. 01)	<0.0 01	42(52.5 0)	874(62.2 5)	<0.0 01	237(47.1 2)	792(74.6 5)	<0.0 01
13-17 years	132(44.7 5)	711(52.5 9)		86(48.04)	471(42.0 9)		65(49.62)	393(38. 99)		38(47.5 0)	530(37.7 5)		266(52.8 8)	269(25.3 5)	
Sex															
Male	159(53.9 0)	715(52.8 8)	0.75 2	102(56.9 8)	592(52.9 0)	0.31	75(57.25)	559(55. 46)	0.69 7	41(51.2 5)	713(50.7 8)	0.93 5	284(56.4 6)	547(51.5 6)	0.06 9
Female	136(46.1 0)	637(47.1 2)		77(43.02)	527(47.1 0)		56(42.75)	449(44. 54)		39(48.7 5)	691(49.2 2)		219(43.5 4)	514(48.4 4)	
Setting															
Urban	65(22.03)	402(29.7 3)	0.00 8	50(27.93)	334(29.8 5)	0.60 2	36(27.48)	273(27. 08)	0.92 3	34(42.5 0)	530(37.7 5)	0.39 5	173(34.3 9)	337(31.7 6)	0.3
Rural	230(77.9 7)	950(70.2 7)		129(72.0 7)	785(70.1 5)		95(72.52)	735(72. 92)		46(57.5 0)	874(62.2 5)		330(65.6 1)	724(68.2 4)	

Characteristics	2004			2006			2009			2011			2015		
	Exclude d (295)	Include d (1,352)	p valu e	Exclude d (179)	Include d (1,119)	p valu e	Exclude d (131)	Include d (1,008)	p valu e	Exclud ed (80)	Include d (1,404)	p valu e	Exclude d (503)	Include d (1,061)	p valu e
Region															
North	146(49.49)	548(40.53)	0.005	89(49.72)	433(38.70)	0.005	41(31.30)	374(37.10)	0.194	35(43.75)	442(31.48)	0.022	204(40.56)	301(28.37)	<0.001
South	149(50.51)	804(59.47)		90(50.28)	686(61.30)		90(68.70)	634(62.90)		45(56.25)	962(68.52)		299(59.44)	760(71.63)	
BMI, kg/m ²	16.54±2.71	18.1±2.92	<0.001	16.65±2.93	17.77±3.09	0.1085	16.96±4.28	17.79±3.35	0.4368	15.57±2.14	18.35±3.8	0.0208	21.12±6.52	18.28±5.6	<0.001
Obesity															
Normal	87(87.88)	1,181(87.35)	0.879	14(70.00)	979(87.49)	0.02	9(90.00)	845(83.83)	0.597	10(100.00)	1,111(79.13)	0.105	134(70.90)	819(77.19)	0.061
Overweight/ Obesity	12(12.12)	171(12.65)		6(30.00)	140(12.51)		1(10.00)	163(16.17)		0(0.00)	293(20.87)		55(29.10)	242(22.81)	
Waist circumference, cm	58.85±1.025	64.05±9.37	<0.001	59.91±11.15	62.51±9.91	0.058	66.35±12.07	63.07±9.95	0.192	55.57±7.21	64.49±11.96	0.068	63.14±2.015	63.03±13.72	0.927
Central obesity															

Characteristics	2004			2006			2009			2011			2015		
	Exclude d (295)	Include d (1,352)	p valu e	Exclude d (179)	Include d (1,119)	p valu e	Exclude d (131)	Include d (1,008)	p valu e	Exclud ed (80)	Include d (1,404)	p valu e	Exclude d (503)	Include d (1,061)	p valu e
Normal	113(92.6 2)	1,235(92 .37)	0.92 0	52(92.86)	1,028(93 .54)	0.84 0	13(81.25)	895(89. 68)	0.27 4	6(100.0 0)	1,168(83 .31)	0.27 3	149(82.3 2)	850(81.1 8)	0.71 7
Central obesity	9(7.38)	102(7.63)		4(7.14)	71(6.46)		3(18.75)	103(10. 32)		0(0.00)	234(16.6 9)		32(17.68)	197(18.8 2)	

Supplementary Table 3. Characteristics of included subjects in CHNS 2009.

	Total (725)	Boys (398)	Girls (327)
Age (year)	11.69±2.83	11.68±2.90	11.71±2.73
Setting			
Urban	197 (27.17)	88 (22.11)	109 (33.33)
Rural	528 (72.83)	310 (77.89)	218 (66.67)
Region			
North	260 (35.86)	144 (36.18)	116 (35.47)
South	465 (64.14)	254 (63.82)	211 (64.53)
Economic status			
Low	95 (13.10)	43 (10.80)	52 (15.90)
Middle	190 (26.21)	108 (27.14)	82 (25.08)
High	440 (60.69)	247 (62.06)	193 (59.02)
BMI, kg/m²	17.69±3.23	17.72±3.31	17.65±3.12
WC, cm	63.13±9.55	64.01±10.12	62.05±8.71
UA (μmol/L)	303 (244-368)	321 (259-391)	286 (234-335)
Hb (g/L)	136 (128-146)	139 (130-149.5)	132 (126-141)
HDL-C (mmol/L)	1.43±0.56	1.42±0.35	1.45±0.73
LDL-C (mmol/L)	2.19±0.91	2.17±1.09	2.21±0.61
TC (mmol/L)	4.09±3.51	3.99±3.09	4.2±3.96
TG (mmol/L)	1.03±0.76	1.01±0.88	1.06±0.57
Glucose(mmol/L)	4.88±0.80	4.96±0.98	4.78±0.49
eGFR (mL/min per 1.73 m²)	107.59±15.28	109.28±16.76	105.56±13.03
ALT (U/L)	13 (10-17)	14 (11-18)	12 (9-15)

Note: Data are given as mean±SD or median (IQR) or as number (proportion). Anthropometric factors were only measured in 2009. WC, waist circumference; BMI, body mass index; UA, uric acid; Hb, haemoglobin; HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; TC, total cholesterol; TG, triglyceride; eGFR, estimated glomerular filtration rate; ALT, alanine aminotransferase