

Supplemental Table S2. NHIS and Synthetic KNHANES (m1-m10) after Matching

Variable	KNHANES										
	NHIS-HEALS (n=4,572)	M1 (n=4,463)	M2 (n=4,761)	M3 (n=4,588)	M4 (n=4,633)	M5 (n=4,655)	M6 (n=4,600)	M7 (n=4,498)	M8 (n=4,527)	M9 (n=4,553)	M10 (n=4,572)
Female sex	2,852 (62.40)	2,782 (62.30)	3,008 (63.20)	2,878 (62.70)	2,904 (62.70)	2,893 (62.10)	2,850 (62.00)	2,745 (61.00)	2,798 (61.80)	2,807 (61.70)	2,852 (62.40)
Age, yr	59.61±9.30	59.55±9.41	59.42±9.29	59.41±9.41	59.60±9.40	59.48±9.27	59.65±9.46	59.51±9.37	59.41±9.15	59.53±9.31	59.61±9.30
Region											
Seoul	1,559 (34.1)	1,587 (35.6)	1,640 (34.4)	1,569 (34.2)	1,609 (34.7)	1,569 (33.7)	1,610 (35.0)	1,562 (34.7)	1,579 (34.9)	1,584 (34.8)	1,559 (34.1)
Busan	415 (9.1)	458 (10.3)	483 (10.1)	469 (10.2)	452 (9.8)	486 (10.4)	424 (9.2)	420 (9.3)	420 (9.3)	455 (10.0)	415 (9.1)
Daegu	224 (4.9)	220 (4.9)	220 (4.6)	205 (4.5)	203 (4.4)	233 (5.0)	226 (4.9)	228 (5.1)	200 (4.4)	215 (4.7)	224 (4.9)
Incheon	215 (4.7)	251 (5.6)	241 (5.1)	248 (5.4)	241 (5.2)	233 (5.0)	226 (4.9)	207 (4.6)	239 (5.3)	205 (4.5)	215 (4.7)
Gwangju	116 (2.5)	104 (2.3)	105 (2.2)	113 (2.5)	114 (2.5)	123 (2.6)	130 (2.8)	123 (2.7)	140 (3.1)	109 (2.4)	116 (2.5)
Daejeon	146 (3.2)	132 (3.0)	165 (3.5)	152 (3.3)	151 (3.3)	126 (2.7)	125 (2.7)	147 (3.3)	136 (3.0)	156 (3.4)	146 (3.2)
Ulsan	78 (1.7)	68 (1.5)	96 (2.0)	75 (1.6)	91 (2.0)	85 (1.8)	80 (1.7)	82 (1.8)	80 (1.8)	58 (1.3)	78 (1.7)
Gyeonggi	1,400 (30.6)	1,304 (29.2)	1,430 (30.0)	1,388 (30.3)	1,390 (30.0)	1,438 (30.9)	1,385 (30.1)	1,359 (30.2)	1,332 (29.4)	1,376 (30.2)	1,400 (30.6)
Gangwon	89 (1.9)	85 (1.9)	84 (1.8)	80 (1.7)	75 (1.6)	93 (2.0)	88 (1.9)	75 (1.7)	77 (1.7)	88 (1.9)	89 (1.9)
Chungcheong	307 (6.7)	245 (5.5)	278 (5.8)	272 (5.9)	292 (6.3)	247 (5.3)	288 (6.3)	270 (6.0)	305 (6.7)	288 (6.3)	307 (6.7)
Jeolla	23 (0.5)	9 (0.2)	19 (0.4)	17 (0.4)	15 (0.3)	22 (0.5)	18 (0.4)	25 (0.6)	19 (0.4)	19 (0.4)	23 (0.5)
Employed insurance	2,771 (60.60)	2,716 (60.90)	2,875 (60.40)	2,779 (60.60)	2,830 (61.10)	2,832 (60.80)	2,846 (61.90)	2,764 (61.40)	2,726 (60.20)	2,729 (59.90)	2,771 (60.60)
Smoking	1,485 (32.50)	1,478 (33.10)	1,584 (33.30)	1,492 (32.50)	1,509 (32.60)	1,550 (33.30)	1,507 (32.80)	1,545 (34.30)	1,503 (33.20)	1,488 (32.70)	1,485 (32.50)
Diabetes mellitus	-	4,463 (100.00)	4,761 (100.00)	4,588 (100.00)	4,633 (100.00)	4,655 (100.00)	4,600 (100.00)	4,498 (100.00)	4,527 (100.00)	4,553 (100.00)	4,572 (100.00)
Hypertension	1,293 (28.30)	1,223 (27.40)	1,343 (28.20)	1,231 (26.80)	1,338 (28.90)	1,313 (28.20)	1,297 (28.20)	1,256 (27.90)	1,233 (27.20)	1,314 (28.90)	1,293 (28.30)
BMI, kg/m ²	23.85±2.57	23.90±2.94	23.89±3.00	23.93±2.99	23.84±2.95	23.91±2.93	23.93±3.00	23.88±2.89	23.87±3.02	23.88±2.95	23.89±2.97
Waist circumference, cm	80.91±7.71	82.32±8.78	82.20±8.95	82.49±8.99	82.27±8.73	82.43±8.80	82.46±8.86	82.31±8.73	82.33±8.96	82.27±8.67	82.32±8.80
Fasting plasma glucose, mg/dL	94.53±9.09	95.17±9.60	95.04±9.64	95.14±9.63	95.20±9.35	95.11±9.38	95.00±9.58	95.01±9.54	95.08±9.65	95.25±9.53	94.98±9.62
Hemoglobin, g/dL	13.69±1.29	13.77±1.43	13.77±1.42	13.79±1.43	13.76±1.41	13.80±1.42	13.78±1.44	13.84±1.43	13.79±1.44	13.79±1.46	13.77±1.42
Systolic BP, mm Hg	125.13±15.63	119.23±18.00	118.97±17.65	118.53±17.12	118.78±17.62	119.47±17.62	119.39±17.92	119.18±17.64	119.01±17.70	119.19±17.71	119.11±18.16
Diastolic BP, mm Hg	77.09±10.03	77.25±10.85	77.03±10.53	77.03±10.18	76.88±10.44	77.30±10.40	77.53±10.64	77.32±10.64	77.32±10.62	77.32±10.28	77.06±10.69
Total cholesterol, mmol/L	195.88±30.84	194.99±35.09	194.91±35.87	195.89±35.45	195.57±35.56	195.36±35.47	195.48±35.10	195.89±35.14	195.78±35.74	195.72±35.35	194.83±35.39
Fasting insulin, µU/mL	-	9.55±5.12	9.55±5.18	9.57±5.38	9.70±5.52	9.50±5.19	9.56±5.23	9.61±5.52	9.57±5.09	9.63±5.57	9.52±5.48
HbA1c, %	-	5.67±0.37	5.65±0.37	5.68±0.37	5.69±0.39	5.66±0.34	5.63±0.36	5.66±0.38	5.66±0.36	5.69±0.36	5.66±0.34
HDL-C, mmol/L	55.52±21.65	48.97±11.14	49.34±11.37	48.86±11.11	49.20±11.33	48.74±11.09	49.15±11.43	48.88±11.22	49.02±11.09	48.84±11.17	48.77±11.37
Triglycerides, mmol/L	130.57±77.99	132.31±96.62	130.05±96.13	132.18±104.14	133.81±113.57	133.76±103.49	133.89±103.15	133.78±109.66	132.38±106.24	132.76±99.94	135.25±103.98
HOMA-IR	2.28±1.38	2.27±1.41	2.27±1.41	2.28±1.47	2.31±1.50	2.26±1.39	2.28±1.41	2.29±1.50	2.28±1.37	2.30±1.51	2.26±1.47
HOMA-β	113.20±59.17	455.78±23,633.22	847.53±49,798.50	604.11±33,371.80	652.33±36,828.09	113.59±60.33	112.86±68.68	113.52±62.17	113.89±65.03	113.39±64.29	

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Supplemental Table S2. Continued

Variable	KNHANES										
	NHIS-HEALS (n=4,572)	M1 (n=4,463)	M2 (n=4,761)	M3 (n=4,588)	M4 (n=4,633)	M5 (n=4,655)	M6 (n=4,600)	M7 (n=4,498)	M8 (n=4,527)	M9 (n=4,553)	M10 (n=4,572)
HOMA-IR/HOMA- β status											
HOMA-IR (low), HOMA- β (high)	662 (14.80)	693 (14.60)	700 (15.30)	597 (12.90)	597 (12.90)	602 (12.90)	647 (14.10)	607 (13.50)	677 (15.00)	615 (13.50)	659 (14.40)
HOMA-IR (low), HOMA- β (low)	1,465 (32.80)	1,571 (33.00)	1,514 (33.00)	1,589 (34.30)	1,589 (34.30)	1,594 (34.20)	1,495 (32.50)	1,541 (34.30)	1,426 (31.50)	1,524 (33.50)	1,544 (33.80)
HOMA-IR (high), HOMA- β (high)	1,630 (36.50)	1,732 (36.80)	1,650 (36.00)	1,772 (38.20)	1,772 (38.20)	1,706 (36.60)	1,735 (37.70)	1,662 (36.90)	1,684 (37.20)	1,703 (37.40)	1,670 (36.50)
HOMA-IR (high), HOMA- β (low)	706 (15.80)	745 (15.60)	724 (15.80)	675 (14.60)	675 (14.60)	753 (16.20)	723 (15.70)	688 (15.30)	740 (16.30)	711 (15.60)	699 (15.30)

Values are expressed as number (%) or mean \pm standard deviation.

NHIS, National Health Insurance Service; KNHANES, Korea National Health and Nutrition Examination Survey; NHIS-HEALS, National Health Insurance Service-National Health Screening Cohort; BMI, body mass index; BP, blood pressure; HbA1c, glycated hemoglobin; HDL-C, high-density lipoprotein cholesterol; HOMA-IR, homeostasis model assessment of insulin resistance; HOMA- β , homeostasis model assessment of β -cell function.