

Supplementary Table S1. The characteristics of external datasets.

| Variable | Categories | Ex-validation set-1 (N=501) | Ex-validation set-2 (N=746) |
|---|--|--------------------------------|--------------------------------|
| Gender, n (%) | Male | 209 (42%) | 303 (41%) |
| | Female | 292 (58%) | 443 (59%) |
| Age, mean (SD) | | 90.7 (10%) | 89.9 (10%) |
| Place of residence, n (%) | Urban | 271 (54%) | 447 (60%) |
| | Rural | 230 (46%) | 299 (40%) |
| Marital status, n (%) | Married | 138 (28%) | 225 (30%) |
| | Others | 363 (72%) | 521 (70%) |
| Education level, n (%) | Absence of formal education (<1 year) | 327 (65%) | 469 (63%) |
| | Primary education (1~6 years) | 136 (27%) | 187 (25%) |
| | Higher education (over 6 years) | 38 (8%) | 90 (12%) |
| ADL score, mean (SD) | | 9.4 (2.6) | 9.3 (2.6) |
| IADL score, mean (SD) | | 19.7 (5.1) | 19.0 (5.0) |
| Smoking, n (%) | No | 452 (90%) | 641 (86%) |
| | Yes | 49 (10%) | 105 (14%) |
| Drinking, n (%) | No | 457 (91%) | 642 (86%) |
| | Yes | 44 (9%) | 104 (14%) |
| Daily exercise, n (%) | No | 405 (81%) | 561 (75%) |
| | Yes | 96 (19%) | 185 (25%) |
| Routine medical checkup, n (%) | No | 241 (48%) | 171 (23%) |
| | Yes | 260 (52%) | 575 (77%) |
| Kyphosis, n (%) | No | 211 (42%) | 382 (51%) |
| | Yes | 290 (58%) | 364 (49%) |
| VI, n (%) | No | 312 (62%) | 446 (60%) |
| | Yes | 189 (38%) | 300 (40%) |
| HI, n (%) | No | 312 (62%) | 473 (63%) |
| | Yes | 189 (38%) | 273 (37%) |
| Wearing hearing aids, n (%) | No | 344 (69%) | 521 (70%) |
| | Yes | 157 (31%) | 225 (30%) |
| Chronic diseases, n (%) | 0 | 247 (49%) | 352 (47%) |
| | 1 | 153 (31%) | 231 (31%) |
| | 2 | 58 (12%) | 101 (14%) |
| | ≥3 | 43 (8%) | 62 (8%) |
| Wearing dentures, n (%) | No | 356 (71%) | 526 (71%) |
| | Yes | 145 (29%) | 220 (29%) |
| Number of natural teeth, median (Q1, Q3) | | 5 (0, 12) | 6 (1, 14) |
| Tooth cleaning behavior, n (%) | Rarely brush teeth | 360 (72%) | 471 (63%) |
| | Regular toothbrushing | 141 (28%) | 275 (37%) |
| Childhood famine | No | 140 (28%) | 171 (23%) |

| | | | |
|--|-----------|-------------|-------------|
| experiences, n (%) | Yes | 361 (72%) | 575 (77%) |
| CC (cm), mean (SD) | | 28.8 (6.4) | NA |
| WC (cm), mean (SD) | | 79.9 (13.5) | 80.9 (15.3) |
| HC (cm), mean (SD) | | NA | NA |
| BMI (kg/m ²), mean (SD) | | 21.4 (4.1) | 21.2 (4.6) |
| WHR (%), mean (SD) | | NA | NA |
| WHtR (%), mean (SD) | | 0.5 (0.1) | 0.5 (0.1) |
| WCR (%), mean (SD) | | 2.9 (0.7) | NA |
| Daily housework, n (%) | Always | 81 (16%) | 107 (14%) |
| | Sometimes | 34 (7%) | 59 (8%) |
| | Never | 386 (77%) | 580 (78%) |
| Garden work, n (%) | Always | 43 (9%) | 64 (9%) |
| | Sometimes | 15 (3%) | 47 (6%) |
| | Never | 443 (88%) | 635 (85%) |
| Reading newspapers or books, n (%) | Always | 28 (6%) | 58 (8%) |
| | Sometimes | 33 (7%) | 45 (6%) |
| | Never | 440 (87%) | 643 (86%) |
| Raising domestic animals or pets, n (%) | Always | 36 (7%) | 48 (6%) |
| | Sometimes | 12 (2%) | 28 (4%) |
| | Never | 453 (91%) | 670 (90%) |
| Playing cards or mah-jongg, n (%) | Always | 11 (2%) | 18 (2%) |
| | Sometimes | 35 (7%) | 40 (5%) |
| | Never | 455 (91%) | 688 (93%) |
| Watching tv or listening to the radio, n (%) | Always | 216 (43%) | 295 (40%) |
| | Sometimes | 92 (18%) | 133 (18%) |
| | Never | 193 (39%) | 318 (43%) |

* ADL: activities of daily living; IADL: instrumental activities of daily living; CC: Calf circumference; WC: waist circumference; HC: hip circumference; BMI: body mass index; WHR: waist-to-hip ratio; WHtR: waist-to-height ratio; WCR: waist-to-calf ratio; NA: not applicable.