| **Table S4. Comparison of included and excluded population** | 　 |
| --- | --- |
| **Variables** | **Included participants** |  | **Excluded participant** | **P value** |
| **N** | **%** |  | **N** | **%** |  |
| **Total** | 　 | **4,274** | **100** |  | **2,253** | **100** |  |
|  |  |  |  |  |  |  |  |
| **Sex** | 　 |  |  |  |  |  | 0.0001 |
| Male | 　 | 1,923 | 45.0 |  | 902 | 40.0 |  |
| Female | 　 | 2,351 | 55.0 |  | 1,351 | 60.0 |  |
| Missing | 　 |  |  |  | - | 0.0 |  |
| **PHQ-9** | 　 |  |  |  |  |  | <.0001 |
| Depression | 774 | 18.1 |  | 386 | 26.8 |  |
| Normal | 　 | 3,500 | 81.9 |  | 1,053 | 73.2 |  |
| Missing | 　 |  |  |  | 814 | 36.1 |  |
| **Handgrip strength** |  |  |  |  |  | <.0001 |
| High | 　 | 1,719 | 40.2 |  | 436 | 31.1 |  |
| Medium | 　 | 1,709 | 40.0 |  | 570 | 40.7 |  |
| Low | 　 | 846 | 19.8 |  | 396 | 28.2 |  |
| Missing | 　 |  |  |  | 851 | 37.8 |  |
| **Handgrip strength symmetry** |  |  |  |  |  | 0.0005 |
| Symmetric | 　 | 2,506 | 58.6 |  | 674 | 55.8 |  |
| Moderate asymmetry | 1,225 | 28.7 |  | 328 | 27.2 |  |
| Prominent asymmetry | 543 | 12.7 |  | 206 | 17.1 |  |
| Missing | 　 |  |  |  | 1,045 | 46.4 |  |
| **Handedness** | 　 |  |  |  |  |  | <.0001 |
| Right | 　 | 3,826 | 89.5 |  | 1,637 | 87.2 |  |
| Left | 　 | 183 | 4.3 |  | 116 | 6.2 |  |
| Both | 　 | 265 | 6.2 |  | 125 | 6.7 |  |
| Missing | 　 |  |  |  | 375 | 16.6 |  |
| **Age** | 　 |  |  |  |  |  | <.0001 |
| 60 ~ 64 | 　 | 1,175 | 27.5 |  | 481 | 21.3 |  |
| 65 ~ 69 | 　 | 1,061 | 24.8 |  | 488 | 21.7 |  |
| 70 ~ 74 | 　 | 900 | 21.1 |  | 455 | 20.2 |  |
| 75 ~ | 　 | 1,138 | 26.6 |  | 829 | 36.8 |  |
| Missing | 　 |  |  |  | - | 0.0 |  |
| **Region** | 　 |  |  |  |  |  | 0.1402 |
| Metropolitans | 2,265 | 53.0 |  | 1,150 | 51.0 |  |
| Rurals | 　 | 2,009 | 47.0 |  | 1,103 | 49.0 |  |
| Missing | 　 |  |  |  | - | 0.0 |  |
| **Educational level** |  |  |  |  |  | <.0001 |
| Under highschool | 3,738 | 87.5 |  | 1,408 | 91.5 |  |
| College | 　 | 536 | 12.5 |  | 131 | 8.5 |  |
| Missing | 　 |  |  |  | 714 | 31.7 |  |
| **Job** | 　 |  |  |  |  |  | <.0001 |
| White | 　 | 247 | 5.8 |  | 58 | 3.8 |  |
| Pink | 　 | 289 | 6.8 |  | 108 | 7.0 |  |
| Blue | 　 | 1,242 | 29.1 |  | 380 | 24.6 |  |
| None | 　 | 2,496 | 58.4 |  | 996 | 64.6 |  |
| Missing | 　 |  |  |  | 711 | 31.6 |  |
| **Household income (quartiles)** |  |  |  |  |  | <.0001 |
| High | 　 | 671 | 15.7 |  | 219 | 9.9 |  |
| Middle high | 786 | 18.4 |  | 356 | 16.1 |  |
| Middle low | 1,192 | 27.9 |  | 594 | 26.9 |  |
| Low | 　 | 1,625 | 38.0 |  | 1,041 | 47.1 |  |
| Missing | 　 |  |  |  | 43 | 1.9 |  |
| **Marital status** |  |  |  |  |  | <.0001 |
| With spouse | 3,112 | 72.8 |  | 1,485 | 66.0 |  |
| Without spouse | 1,162 | 27.2 |  | 765 | 34.0 |  |
| Missing | 　 |  |  |  | 3 | 0.1 |  |
| **Eating habit** | 　 |  |  |  |  |  | 0.5277 |
| Regular | 　 | 3,516 | 82.3 |  | 1,332 | 81.5 |  |
| Irregular | 　 | 758 | 17.7 |  | 302 | 18.5 |  |
| Missing | 　 |  |  |  | 619 | 27.5 |  |
| **Lifetime smoking experience** |  |  |  |  |  | 0.2690 |
| Yes | 　 | 1,671 | 39.1 |  | 665 | 37.8 |  |
| No | 　 | 2,603 | 60.9 |  | 1,092 | 62.2 |  |
| Missing | 　 |  |  |  | 505 | 22.4 |  |
| **Drink** | 　 |  |  |  |  |  | 0.0002 |
| 2 ~ 4 times / week | 812 | 19.0 |  | 275 | 15.6 |  |
| 2 ~ 4 times / month | 570 | 13.3 |  | 198 | 11.3 |  |
| Never or occasionally | 2,892 | 67.7 |  | 1,287 | 73.1 |  |
| Missing | 　 |  |  |  | 493 | 21.9 |  |
| **BMI†** | 　 |  |  |  |  |  | 0.0050 |
| Obese(≥25) | 1,568 | 36.7 |  | 747 | 33.2 |  |
| Normal or under-weight(<25) | 2,706 | 63.3 |  | 1,506 | 66.8 |  |
| Missing | 　 |  |  |  | - | 0.0 |  |
| **Physical activity** |  |  |  |  |  | 0.0123 |
| Sufficient | 　 | 1,597 | 37.4 |  | 514 | 33.7 |  |
| Insufficient | 2,677 | 62.6 |  | 1,010 | 66.3 |  |
| Missing | 　 |  |  |  | 729 | 32.4 |  |
| **Stress** | 　 |  |  |  |  |  | <.0001 |
| Lot | 　 | 704 | 16.5 |  | 394 | 22.6 |  |
| Little | 　 | 3,570 | 83.5 |  | 1,350 | 77.4 |  |
| Missing | 　 |  |  |  | 509 | 22.6 |  |
| **Chronic disease\*** |  |  |  |  |  | 0.0006 |
| Yes | 　 | 2,590 | 60.6 |  | 1,180 | 65.3 |  |
| No | 　 | 1,684 | 39.4 |  | 627 | 34.7 |  |
| Missing | 　 |  |  |  | 446 | 19.8 |  |
|  PHQ-9, Patient Health Questionnaire 9; BMI, Body Mass Index  | 　 | 　 | 　 |
|  †Obesity status defined by BMI based on 2014 Clinical Practice Guidelines for Overweight and Obesity in Korea \*Chronic diseases include hypertension, diabetes mellitus and dyslipidemia. |