Supplement Table 1. Prevalence of HHcy among agriculture, urban and stock raising regions. (Hcy≥10μmol/L)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Urban | Agriculture | Stock raising | P |
| n | Hhcy (%) | X²/ p | n | Hhcy (%) | X²/ p | n | Hhcy (%) | X²/ p |
| Total | 885 | 605 (68.4) |  | 861 | 600 (69.7) |  | 180 | 148 (82.2) |  | 13.986/0.001 b c |
| Age (year) |  |  | 52.741 |  |  | 23.802 |  |  | 3.611 |  |
| ≤44 | 285 | 162 (56.8) | <0.001 | 276 | 178 (64.5) | <0.001 | 61 | 46 (75.4) | 0.164 | 8.606/0.014c |
| 45-59 | 323 | 209 (64.7) |  | 331 | 215 (65.0) |  | 65 | 54 (83.1) |  | 8.837/0.012 b c |
| ≥60 | 277 | 234 (84.5) |  | 254 | 207 (81.5) |  | 54 | 48 (88.9) |  | 2.076/0.354 |
| Sex |  |  | 37.313 |  |  | 23.627 |  |  | 1.242 |  |
| Men | 382 | 303 (79.3) | <0.001 | 388 | 303 (78.1) | <0.001 | 72 | 62 (86.1) | 0.265 | 2.382/0.304 |
| Women | 503 | 302 (60.0) |  | 473 | 297 (62.8) |  | 108 | 86 (79.6) |  | 14.727/<0.001 b c |
| Ethnicity |  |  | 1.835 |  |  | 3.019 |  |  | 0.684 |  |
| Han | 469 | 327 (69.7) | 0. 607 | 455 | 320 (70.3) | 0.389 | 26 | 21 (80.8) | 0.877 | 1.440/0.487 |
| Kazakh | 171 | 119 (69.6) |  | 262 | 181 (69.1) |  | 136 | 111 (81.6) |  | 7.862/0.020 b c |
| Mongolian | 30 | 24 (80.0) |  | 32 | 18 (56.3) |  | 8 | 6 (75.0) |  | 4.226/0.121 |
| Others | 75 | 50 (66.7) |  | 61 | 44 (72.1) |  | 2 | 2 (100.0) |  | 1.362/0.506 |
| Education |  |  | 0.048 |  |  | 4.581 |  |  | 4.784 |  |
| Primary and lower | 560 | 391 (69.8) | 0.976 | 399 | 291 (72.9) | 0.101 | 50 | 45 (90.0) | 0.091 | 9.536/0.008 b c |
| Junior | 76 | 54 (71.1) |  | 310 | 203 (65.5) |  | 118 | 91 (77.1) |  | 5.582/0.061 |
| Senior and higher | 10 | 7 (70.0) |  | 56 | 39 (69.6) |  | 4 | 4 (100.0) |  | 1.698/0.428 |
| Cigarette consumption |  |  | 6.461 |  |  | 10.050 |  |  | 4.622 |  |
| No | 457 | 306 (67.0) | 0.011 | 560 | 376 (67.1) | 0.002 | 127 | 99 (78.0) | 0.032 | 6.188/0.045 |
| Yes | 180 | 139 (77.2) |  | 169 | 135 (79.9) |  | 34 | 32 (94.1) |  | 5.082/0.079 |
| Alcohol intake |  |  | 5.164 |  |  | 9.851 |  |  | 3.245 |  |
| No | 462 | 311 (67.3) | 0.023 | 572 | 385 (67.3) | 0.002 | 125 | 98 (78.4) | 0.072 | 6.356/0.042 b |
| Yes | 175 | 134 (76.6) |  | 157 | 126 (80.3) |  | 36 | 33 (91.7) |  | 4.261/0.119 |
| BMI |  |  | 10.139 |  |  | 0.081 |  |  | 1.795 |  |
| <25 | 378 | 236 (62.4) | 0.001 | 430 | 303(70.5) | 0.775 | 86 | 68 (79.1) | 0.180 | 11.402/0.003 ac |
| ≥25 | 462 | 336 (72.7) |  | 414 | 288(69.6) |  | 90 | 78 (86.7) |  | 10.888/0.004 b c |
| Abdominal obesity |  |  | 0.004 |  |  | 10.659 |  |  | 0.945 |  |
| No | 336 | 229 (68.2) | 0.947 | 391 | 294 (75.2) | 0.001 | 81 | 69 (85.2) | 0.331 | 11.097/0.004 c |
| Yes | 499 | 339 (67.9) |  | 452 | 293 (64.8) |  | 98 | 78 (79.6) |  | 8.059/0.018 c |
| Women WC |  |  | 0.001 |  |  | 13.328 |  |  | 0.643 |  |
| <85 | 206 | 123 (59.7) | 0.999 | 213 | 152 (71.4) | <0.001 | 47 | 39 (83.0) | 0.423 | 12.255/0.002 a c |
| ≥85 | 268 | 160 (59.7) |  | 246 | 135 (54.9) |  | 60 | 46 (76.7) |  | 9.514/0.009 b c |
| Men WC |  |  | 0.821 |  |  | 0.529 |  |  | 0.243 |  |
| <90 | 130 | 106 (81.5) | 0.365 | 178 | 142 (79.8) | 0.467 | 34 | 30 (88.2) | 0.622 | 1.352/0.509 |
| ≥90 | 231 | 179 (77.5) |  | 206 | 158 (76.7) |  | 38 | 32 (84.2) |  | 1.054/0.590 |

a: Urban VS Agriculture; b: Agriculture VS Stock raising; c: Stock raising VS Urban.

Supplement Table 2. Prevalence of Folate deficiency among agriculture urban and stock raising region.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Urban | Agriculture | Stock raising | P |
| n | FD (%) | X²/ p | n | FD (%) | X²/ p | n | FD (%) | X²/ p |
| Total | 855 | 22 (2.6) |  | 797 | 66 (8.3) |  | 157 | 86 (54.8) |  | 417.832/<0.001 a b c |
| Age (year) |  |  | 7.863 |  |  | 1.652 |  |  | 2.896 |  |
| ≤44 | 274 | 11 (4.0) | 0.020 | 242 | 20 (8.3) | 0.438 | 55 | 30 (54.5) | 0.235 | 12.150/<0.001 b c |
| 45-59 | 312 | 10 (3.2) |  | 312 | 30 (9.6) |  | 56 | 35 (62.5) |  | 171.285/<0.001 a b c |
| ≥60 | 266 | 1 (0.4) |  | 243 | 16 (6.6) |  | 46 | 21 (45.7) |  | 126.095/<0.001 a b c |
| Sex |  |  | 1.136 |  |  | 0.018 |  |  | 0.037 |  |
| Women | 482 | 10 (2.1) | 0.286 | 441 | 36 (8.2) | 0.893 | 96 | 52 (54.2) | 0.847 | 251.807/<0.001 a b c |
| Men | 370 | 12 (3.2) |  | 356 | 30 (8.4) |  | 61 | 34 (55.7) |  | 166.532/<0.001 a b c |
| Ethnicity |  |  | 13.211 |  |  | 70.579 |  |  | 6.810 |  |
| Han | 449 | 6 (1.3) | 0.004 | 430 | 9 (2.1) | <0.001 | 22 | 8 (36.4) | 0.078 | 104.139/<0.001 b c |
| Kazakh | 167 | 11 (6.6) |  | 239 | 50 (20.9) |  | 118 | 71 (60.2) |  | 109.595/<0.001 a b c |
| Mongolian | 29 | 2 (6.9) |  | 28 | 1 (3.6) |  | 7 | 4 (57.1) |  | 17.387/<0.001 b c |
| Other | 71 | 3 (4.2) |  | 51 | 4 (7.8) |  | 2 | 0 (0.0) |  | 0.851/0.653 |
| Education |  |  | 0.542 |  |  | 15.943 |  |  | 4.009 |  |
| ≤Primary  | 537 | 16 (3.0) | 0.763 | 377 | 21 (5.6) | <0.001 | 44 | 19 (43.2) | 0.135 | 119.509/<0.001 b c |
| Junior | 74 | 3 (4.1) |  | 280 | 38 (13.6) |  | 102 | 62 (60.8) |  | 112.662/<0.001 b c |
| ≥Senior | 9 | 0 (0.0) |  | 48 | 1 (2.1) |  | 3 | 2 (66.7) |  | 25.351/<0.001 b c |
| Cigarette consumption |  |  | 0.810 |  |  | 0.675 |  |  | 1.406 |  |
| No | 435 | 13 (3.0) | 0.368 | 512 | 38 (7.4) | 0.411 | 109 | 58 (53.2) | 0.236 | 246.531/<0.001 a b c |
| Yes | 176 | 3 (1.7) |  | 159 | 15 (9.4) |  | 29 | 19 (65.5) |  | 111.191/<0.001 a b c |
| Alcohol intake |  |  | 0.073 |  |  | 0.505 |  |  | 0.883 |  |
| No | 440 | 12 (2.7) | 0.787 | 520 | 39 (7.5) | 0.477 | 108 | 58 (53.7) | 0.347 | 253.982/<0.001 a b c |
| Yes | 171 | 4 (2.3) |  | 151 | 14 (9.3) |  | 30 | 19 (63.3) |  | 101.374/<0.001 a b c |
| BMI |  |  | 0.786 |  |  | 3.369 |  |  | 8.039 |  |
| <25 | 361 | 7 (1.9) | 0.375 | 397 | 26 (6.5) | 0.066 | 76 | 33 (43.4) | 0.005 | 150.183/<0.001 a b c |
| ≥25 | 446 | 13 (2.9) |  | 383 | 39 (10.2) |  | 77 | 51 (66.2) |  | 262.199/<0.001 a b c |
| Abdominal obesity |  |  | 0.172 |  |  | 0.017 |  |  | 0.062 |  |
| No | 317 | 7 (2.2) | 0.678 | 366 | 30 (8.2) | 0.897 | 72 | 40 (55.6) | 0.804 | 185.432/<0.001 a b c |
| Yes | 486 | 13 (2.7) |  | 414 | 35 (8.5) |  | 84 | 45 (53.6) |  | 217.624/<0.001 a b c |

a: Urban VS Agriculture; b: Agriculture VS Stock raising; c: Stock raising VS Urban.