**Tables**

**Table 1: Dependent variables re-coding procedures.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Code at STEP datasets** | **Categories in STEP** | **Recoding procedures** |
| **Raised blood pressure or hypertension (systolic)** | First reading: m11a/ m4a  Second reading: m12a/ m5a  Third reading: m13a/ m6a | Yes [average of three readings ≥ 140 mm Hg (for systolic) or ≥ 90 mm Hg (for diastolic)]  No (otherwise) | 1 = "Yes"  0 = "No" |
| **Raised blood pressure or hypertension (diastolic)** | First reading: m11b/ m4b  Second reading: m12b/ m5b  Third reading: m13b/ m6b |
| **Raised blood glucose or Diabetes** | b5 | Yes [fasting blood glucose≥126 mg/dL or 7 mmol/L]  No (otherwise) | 1 = "Yes"  0 = "No" |
| **Raised blood cholesterol or hypercholesterolemia** | b8 | Yes [lipid profile≥190 mg/dL or 5 mmol/L]  No (otherwise) | 1 = "Yes"  0 = "No" |

**Table 2: Independent variables re-coding procedures.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Code at STEP datasets** | **Categories in STEP** | **Recoding procedures** |
| **Socio-economic background** |  |  |  |
| Age (18 years or above) | age | 18-29 | 0 = "18-29" |
|  |  | 30-44 | 1 = "30-44" |
|  |  | 45-59 | 2 = "45-59" |
|  |  | 60 or above | 3 = "60 or above" |
| Sex | sex | Women | 0 = "Women" |
|  |  | Man | 1 = "Man" |
| Highest level of education | c5 | No formal schooling | 0 = "No formal schooling/ Basic Literacy" |
|  |  | Less than primary/ Primary school completed | 1 = "Less than primary/ Primary school completed" |
|  |  | Secondary school completed/ High school completed | 2 = "Secondary school completed/High school completed" |
|  |  | College/ University completed/ Post graduate degree | 3 = "College/ University completed/ Post graduate degree" |
| Marital status | c7 | Currently Married | 0 = "Currently Married" |
|  |  | Not Married | 1 = "Not Married" |
| Work status | c8 | Employee/ Business/ Agriculture/ Labour | 0 = "Employee/Business/ Agriculture/Labour" |
|  |  | Homemaker/ Other voluntary work | 1 = "Homemaker/Other voluntary work " |
|  |  | Unemployed | 2 = "Unemployed" |
| **Food intake** |  |  |  |
| Current smoking | t1 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Fruit eaten in a week | d1 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Vegetables eaten in a week | d3 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| adding salt when eating | d5a/ds1 | Always/ Often | 0 = "Always/ Often" |
|  |  | Sometimes/ Rarely | 1 = "Sometimes/ Rarely" |
|  |  | Never | 2 = "Never" |
| Oil used most often | dx6/d5/d8 | Coconut/groundnut/ Sunflower/Mustard | 0 = "Coconut/groundnut/ Sunflower/Mustard" |
|  |  | Soybean/ Vegetable/ Palm | 1 = "Soybean/ Vegetable/ Palm" |
|  |  | Others/ Olive/ Corn / Not specific | 2 = "Others/ Olive/ Corn / Not specific" |
| Meals eaten outside in a week | dx7/d6/d9 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| **Physical activity** |  |  |  |
| Vigorous activity at work | p1 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Moderate activity at work | p4 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Active transport | p7 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Vigorous leisure activity | p10 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Moderate leisure activity | p13 | No | 0 = "No" |
|  |  | Yes | 1 = "Yes" |
| Height | m3/m11 | Height in Centimeter |  |
| Weight | m4/m12 | Weight in Kilograms |  |
| Obesity |  | No (BMI < 30 kg/m2) | 0 = "No" |
|  |  | Yes (BMI ≥ 30 kg/m2) | 1 = "Yes" |

**Table 3: Mean (CI) of selected parameters of NCDs in Southeast Asian adults**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Systolic blood pressure** | | **Diastolic Blood pressure** | | **Blood glucose** | | **Blood cholesterol** | |
|  | **Mean (SE)** | **95% CI** | **Mean (SE)** | **95% CI** | **Mean (SE)** | **95% CI** | **Mean (SE)** | **95% CI** |
| **Maldives** | 148.83 (12.68) | 123.95 – 173.71 | 104.42 (12.74) | 79.42 – 129.41 | Self-explained | | Not measured or self-explained | |
| **Sri Lanka** | 128.94 (0.75) | 127.46 – 130.41 | 84.46 (1.50) | 81.51 – 87.42 | 85.46 (1.50) | 81.51 – 87.42 | 154.10 (1.60) | 150.96 – 157.23 |
| **Myanmar** | 126.99 (1.23) | 124.51 – 129.47 | 82.31 (0.70) | 80.91 – 83.72 | 92.69 (1.30) | 90.07 – 95.31 | 188.10 (2.33) | 183.41 – 192.76 |
| **Timor-Leste** | 129.84 (2.62) | 124.68 – 135.02 | 83.32 (1.22) | 80.92 – 85.73 | 80.38 (2.40) | 75.64 – 85.12 | 139.69 (2.47) | 134.80 – 144.57 |
| **Bangladesh** | 121.44 (0.40) | 120.66 – 122.23 | 79.21 (0.28) | 78.66 – 79.75 | 97.32 (0.60) | 96.15 – 98.50 | 167.64 (0.92) | 165.84 – 169.45 |
| **Nepal** | 125.65 (0.46) | 124.74 – 126.60 | 82.51 (0.33) | 81.51 – 87.42 | 94.16 (0.93) | 92.32 –96.00 | 142.88 (1.16) | 140.59 – 145.17 |
| **Total** | 127.45 (0.97) | 125.56 – 129.37 | 82.72 (0.57) | 81.61 – 83.83 | 90.98 (1.19) | 88.64 – 93.31 | 180.69 (1.75) | 177.26 – 184.11 |

**Table 4: Weighted descriptive statistics of socio-economic variables associated with Hypertension status in Southeast Asian adults**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Told had a high blood pressure (Hypertension), weighted n (%)** | | | | | | | | | | | |
|  | **Maldives**  **(N = 1646)** | | **Sri Lanka**  **(N =5188)** | | **Myanmar**  **(N= 8483)** | | **Timor-Leste**  **(N = 2572)** | | **Bangladesh**  **(N = 8185)** | | **Nepal**  **(N = 5364)** | |
|  | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** |
| **Socio-economic background** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Age (18 years or above)*** |  |  |  |  |  |  |  |  |  |  |  |  |
| 18-29 | 52 (9.42) | <0.001 | 142 (17.91) | <0.001 | 89 (10.13) | <0.001 | 83 (46.26) | 0.393 | 174 (9.05) | <0.001 | 167 (15.74) | <0.001 |
| 30-44 | 101 (19.19) |  | 484 (27.42) |  | 720 (23.69) |  | 259 (31.47) |  | 714 (19.26) |  | 496 (26.64) |  |
| 45-59 | 216 (47.15) |  | 716 (42.78) |  | 1296 (38.64) |  | 196 (38.73) |  | 716 (29.73) |  | 554 (40.83) |  |
| 60 or above | 70 (61.39) |  | 483 (54.84) |  | 386 (45.66) |  | 160 (38.37) |  | 233 (37.66) |  | 325 (44.56) |  |
| ***Sex*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Men | 429 (21.63) | 0.013 | 740 (31.23) | 0.625 | 794 (27.16) | 0.473 | 290 (45.80) | <0.001 | 736 (16.94) | <0.001 | 731 (33.42) | <0.001 |
| Women | 778 (16.62) |  | 1085 (30.46) |  | 1697 (28.74) |  | 408 (28.03) |  | 1101 (23.40) |  | 811 (20.66) |  |
| ***Highest level of education*** |  |  |  |  |  |  |  |  |  |  |  |  |
| No formal schooling/Basic literacy | 214 (44.09) | <0.001 | 100 (37.70) | 0.002 | 422 (34.67) | 0.134 | 259 (49.66) | <0.001 | 587 (23.38) | 0.005 | 24 (25.89) | 0.004 |
| Less than primary/Primary school completed | 118 (24.77) |  | 279 (35.66) |  | 1487 (27.31) |  | 251 (43.71) |  | 756 (18.37) |  | 450 (29.49) |  |
| Secondary school completed/High school completed | 79 (10.75) |  | 537 (32.59) |  | 443 (28.69) |  | 161 (22.35) |  | 347 (20.53) |  | 323 (18.62) |  |
| College/University completed/Post graduate degree | 26 (15.34) |  | 899 (28.61) |  | 131 (19.76) |  | 13 (13.36) |  | 145 (20.22) |  | 48 (23.57) |  |
| ***Marital status*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Currently Married | 319 (21.36) | 0.007 | - |  | 1891 (29.14) | <0.001 | 568 (31.87) | 0.045 | 1635 (20.49) | 0.906 | 1375 (27.81) | 0.020 |
| Not Married | 118 (15.40) |  | - |  | 599 (23.90) |  | 128 (53.34) |  | 202 (20.24) |  | 167 (20.45) |  |
| ***Work status*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Employee/Business/Agriculture/Labour | 132 (16.96) | 0.009 | 416 (28.55) | 0.003 | 215 (22.64) | 0.018 | 128 (38.22) | <0.001 | 714 (17.28) | <0.001 | 160 (29.88) | <0.001 |
| Home maker/Other voluntary work | 221 (23.63) |  | 1027 (33.85) |  | 2049 (28.28) |  | 431 (46.96) |  | 1001 (22.61) |  | 1267 (28.34) |  |
| Unemployed | 84 (16.64) |  | 378 (27.36) |  | 226 (33.01) |  | 110 (11.89) |  | 121 (25.4) |  | 114 (16.30) |  |
| **Food intake** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Current smoking*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Daily/Yes | 55 (16.64) | 0.268 | 217 (32.02) | 0.509 | 489 (27.05) | 0.560 | 198 (36.46) | 0.182 | 283 (12.19) | <0.001 | 369 (34.55) | <0.001 |
| Less than daily/No | 384 (19.76) |  | 1603 (30.58) |  | 2001 (28.26) |  | 500 (42.80) |  | 1554 (22.93) |  | 1173 (24.84) |  |
| ***Fruit eaten in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 332 (19.51) | 0.145 | 1744 (30.89) | 0.159 | 1845 (29.19) | 0.519 | 558 (41.48) | 0.009 | 1196 (21.09) | 0.420 | 1102 (25.73) | 0.199 |
| No | 74 (15.69) |  | 52 (24.92) |  | 555 (27.47) |  | 95 (22.21) |  | 606 (19.89) |  | 361 (28.74) |  |
| ***Vegetables eaten in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 377 (19.63) | 0.032 | 1810 (30.74) | 0.313 | 2463 (28.01) | 0.808 | 673 (35.31) | 0.024 | 1833 (20.48) | 0.979 | 1527 (26.53) | 0.396 |
| No | 44 (13.24) |  | 3 (17.30) |  | 25 (26.26) |  | 7 (12.62) |  | 3 (20.11) |  | 6 (17.44) |  |
| ***Adding salt when eating*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Always/Often | - |  |  |  | - | - | 575 (38.92) | 0.445 | 786 (18.79) | 0.055 | 99 (22.92) | <0.001 |
| Sometimes/Rarely | - |  |  |  | - |  | 98 (43.31) |  | 330 (20.97) |  | 779 (23.45) |  |
| Never | - |  |  |  | - |  | 25 (33.05) |  | 719 (22.69) |  | 660 (31.47) |  |
| ***Oil used most often*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Coconut/groundnut/ Sunflower/Mustard | 107 (19.60) | 0.776 | 1572 (30.64) | 0.022 | 1245 (30.43) | 0.027 | - | 0.003 | 136 (19.03) | 0.324 | 572 (25.74) | 0.355 |
| Soybean/Vegetable/ Palm | 255 (18.47) |  | 189 (30.00) |  | 997 (24.82) |  | 1752 (40.29) |  | 1665 (20.70) |  | 868 (27.68) |  |
| Others/ Olive/Corn /Not specific | 68 (20.44) |  | 51 (51.18) |  | 209 (26.91) |  | 115 (17.55) |  | 36 (15.11) |  | 102 (22.79) |  |
| ***Meals eaten outside in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 102 (15.58) | <0.001 | 468 (27.70) | 0.012 | 340 (21.46) | 0.029 | 69 (26.40) | 0.448 | 396 (16.59) | 0.002 | 421 (25.96) | 0.434 |
| No | 295 (23.38) |  | 1330 (32.24) |  | 2113 (29.07) |  | 497 (28.25) |  | 1384 (21.74) |  | 1068 (27.79) |  |
| **Physical activity** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Vigorous activity at work*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 20 (12.9) | 0.108 | 328 (27.57) | 0.038 | 318 (19.03) | 0.008 | 277 (45.28) | 0.006 | 322 (13.66) | <0.001 | 706 (26.53) | 0.951 |
| No | 417 (19.43) |  | 1485 (31.67) |  | 2171 (30.56) |  | 421 (34.07) |  | 1515 (23.39) |  | 836 (26.66) |  |
| ***Moderate activity at work*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 67 (18.28) | 0.754 | 967 (29.76) | 0.247 | 1473 (27.34) | 0.532 | 492 (42.43) | 0.004 | 1363 (19.58) | 0.006 | 1233 (25.72) | 0.099 |
| No | 370 (19.14) |  | 846 (31.92) |  | 1016 (28.91) |  | 206 (22.07) |  | 474 (24.36) |  | 309 (30.36) |  |
| ***Active transport*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 240 (17.98) | 0.269 | 943 (28.60) | 0.005 | 1812 (26.23) | <0.001 | 292 (29.89) | 0.001 | 1105 (19.04) | 0.008 | 1274 (26.34) | 0.567 |
| No | 199 (20.25) |  | 870 (33.42) |  | 677 (32.55) |  | 406 (46.45) |  | 732 (22.79) |  | 268 (27.94) |  |
| ***Vigorous leisure activity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 51 (14.46) | 0.032 | 41 (24.92) | 0.194 | 28 (20.61) | 0.199 | 41 (67.59) | 0.031 | 88 (19.14) | 0.619 | 48 (16.59) | 0.010 |
| No | 385 (20.30) |  | 1772 (31.10) |  | 2461 (28.16) |  | 657 (35.53) |  | 1749 (20.54) |  | 1494 (27.42) |  |
| ***Moderate leisure activity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 103 (18.33) | 0.656 | 109 (26.53) | 0.149 | 237 (30.81) | 0.489 | 52 (68.56) | 0.027 | 109 (18.22) | 0.337 | 199 (25.01) | 0.454 |
| No | 335 (19.41) |  | 1704 (31.230 |  | 2252 (27.56) |  | 646 (35.52) |  | 1728 (20.63) |  | 1343 (26.92) |  |
| ***Obesity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 120 (40.47) | <0.001 | 185 (54.03) | <0.001 | 309 (57.60) | <0.001 | 28 (42.14) | 0.980 | 243 (44.56) | <0.001 | 151 (54.39) | <0.001 |
| No | 309 (15.85) |  | 1353 (25.61) |  | 2176 (26.35) |  | 661 (42.45) |  | 1562 (19.23) |  | 1389 (25.56) |  |

**Table 5: Weighted descriptive statistics of socio-economic variables associated with Hyperglycemia status in Southeast Asian adults**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Told had a high blood glucose (Hyperglycemia), weighted n (%)** | | | | | | | | | | | |
|  | **Maldives**  **(Self-explained)**  **(N = 1646)** | | **Sri Lanka**  **(N =4393))** | | **Myanmar**  **(N=8324)** | | **Timor-Leste**  **(N =2424)** | | **Bangladesh**  **(N = 8185)** | | **Nepal**  **(N = 4989)** | |
|  | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** |
| **Socio-economic background** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Age (18 years or above)*** |  |  |  |  |  |  |  |  |  |  |  |  |
| 18-29 | 12 (1.87) | <0.001 | 15 (2.62) | <0.001 | 8 (1.12) | <0.001 | 5 (1.04) | 0.229 | 436 (4.48) | <0.001 | 23 (2.40) | <0.001 |
| 30-44 | 16 (2.83) |  | 80 (5.91) |  | 119 (4.16) |  | 25 (1.31) |  | 660 (8.97) |  | 105 (6.54) |  |
| 45-59 | 56 (10.09) |  | 158 (11.13) |  | 283 (8.40) |  | 21 (2.58) |  | 470 (11.27) |  | 123 (10.49) |  |
| 60 or above | 23 (20.49) |  | 89 (11.83) |  | 103 (11.49) |  | 13 (1.41) |  | 139 (14.38) |  | 57 (8.00) |  |
| ***Sex*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Men | 27 (2.48) | 0.010 | 128 (6.58) | 0.614 | 111 (4.51) | <0.001 | 29 (1.32) | 0.837 | 834 (9.57) | 0.084 | 130 (6.25) | 0.275 |
| Women | 80 (4.94) |  | 214 (7.00) |  | 402 (6.65) |  | 35 (1.44) |  | 871 (7.98) |  | 178 (5.33) |  |
| ***Highest level of education*** |  |  |  |  |  |  |  |  |  |  |  |  |
| No formal schooling/Basic literacy | 57 (8.41) | <0.001 | 14 (4.52) | 0.074 | 62 (6.03) | 0.108 | 18 (0.98) | 0.635 | 409 (8.40) | <0.001 | 7 (15.97) | 0.114 |
| Less than primary/Primary school completed | 30 (5.25) |  | 49 (9.12) |  | 277 (4.84) |  | 32 (1.75) |  | 725 (7.93) |  | 97 (5.88) |  |
| Secondary school completed/High school completed | 12 (1.84) |  | 109 (7.67) |  | 132 (6.74) |  | 12 (1.17) |  | 372 (8.61) |  | 64 (4.77) |  |
| College/University completed/Post graduate degree | 8 (3.81) |  | 169 (6.06) |  | 40 (7.14) |  | 1 (2.3) |  | 197 (19.15) |  | 17 (8.39) |  |
| ***Marital status*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Currently Married | 82 (4.69) | 0.008 | - | - | 409 (5.94) | 0.019 | 54 (1.35) | 0.944 | 1570 (8.97) | 0.161 | 287 (6.51) | <0.001 |
| Not Married | 24 (2.15) |  | - |  | 104 (4.39) |  | 10 (1.40) |  | 198 (6.79) |  | 21 (1.87) |  |
| ***Work status*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Employee/Business/Agriculture/Labour | 21 (2.49) | 0.041 | 74 (6.67) | 0.091 | 50 (4.11) | 0.259 | 13 (3.73) | <0.001 | 771 (9.52) | 0.064 | 38 (7.24) | 0.065 |
| Home maker/Other voluntary work | 49 (4.33) |  | 197 (7.70) |  | 408 (5.70) |  | 38 (0.92) |  | 817 (7.84) |  | 239 (6.08) |  |
| Unemployed | 37 (5.86) |  | 71 (5.11) |  | 55 (6.74) |  | 12 (0.99) |  | 116 (11.05) |  | 30 (3.29) |  |
| **Food intake** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Current smoking*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Daily/Yes | 12 (2.89) | 0.405 | 33 (5.59) | 0.255 | 54 (4.58) | 0.270 | 21 (1.27) | 0.760 | 374 (8.33) | 0.657 | 63 (7.94) | 0.050 |
| Less than daily/No | 95 (3.96) |  | 309 (6.99) |  | 459 (5.93) |  | 43 (1.44) |  | 1331 (8.82) |  | 245 (5.28) |  |
| ***Fruit eaten in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 75 (3.32) | 0.037 | 328 (6.82) | 0.208 | 405 (5.24) | 0.231 | 51 (1.30) |  | 1150 (7.46) | 0.015 | 232 (6.17) | 0.195 |
| No | 25 (5.99) |  | 10 (4.26) |  | 100 (7.24) |  | 11 (2.43) |  | 518 (9.61) |  | 62 (4.51) |  |
| ***Vegetables eaten in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 85 (3.60) | 0.262 | 341 (6.78) | 0.218 | 508 (5.63) | 0.222 | 62 (1.50) | 0.149 | 1693 (8.71) | 0.892 | 305 (5.72) | 0.2418 |
| No | 19 (5.31) |  | 1 (20.62) |  | 5 (2.29) |  | 2 (6.44) |  | 10 (7.80) |  | 2 (13.66) |  |
| ***Adding salt when eating*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Always/Often | - |  | 45 (3.52) | <0.001 | - |  | 59 (1.65) | 0.038 | 752 (7.96) | 0.061 | 22 (6.31) | 0.513 |
| Sometimes/Rarely | - |  | 77 (7.01) |  | - |  | 4 (0.37) |  | 290 (8.02) |  | 165 (6.21) |  |
| Never |  |  | 216 (8.13) |  | - |  | 1 (1.54) |  | 662 (10.32) |  | 121 (5.06) |  |
| ***Oil used most often*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Coconut/groundnut/ Sunflower/Mustard | 25 (4.07) | 0.883 | 301 (7.02) | 0.055 | 292 (6.96) | 0.026 | - | 0.456 | 107 (9.06) | 0.625 | 115 (5.53) | 0.755 |
| Soybean/Vegetable/ Palm | 60 (3.77) |  | 31 (4.79) |  | 165 (3.61) |  | 61 (1.34) |  | 1570 (8.71) |  | 174 (6.06) |  |
| Others/ Olive/Corn /Not specific | 7 (4.70) |  | 10 (12.37) |  | 45 (5.95) |  | 3 (2.37) |  | 28 (5.79) |  | 19 (4.91) |  |
| ***Meals eaten outside in a week*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 17 (2.07) | 0.003 | 90 (6.00) | 0.248 | 99 (4.82) | 0.557 | 8 (2.77) | 0.246 | 484 (9.69) | 0.304 | 87 (6.78) | 0.322 |
| No | 73 (5.12) |  | 247 (7.18) |  | 410 (5.75) |  | 44 (1.52) |  | 1175 (8.48) |  | 204 (5.32) |  |
| **Physical activity** |  |  |  |  |  |  |  |  |  |  |  |  |
| ***Vigorous activity at work*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 3 (1.53) | 0.203 | 44 (5.04) | 0.051 | 29 (2.19) | <0.001 | 29 (1.14) | 0.397 | 323 (6.40) | <0.001 | 96 (6.71) | 0.145 |
| No | 104 (3.91) |  | 298 (7.30) |  | 484 (6.58) |  | 35 (1.62) |  | 1382 (9.70) |  | 212 (4.6) |  |
| ***Moderate activity at work*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 11 (3.01) | 0.514 | 184 (6.48) | 0.452 | 257 (4.73) | 0.015 | 34 (0.72) | 0.001 | 1247 (8.00) | 0.002 | 228 (5.72) | 0.871 |
| No | 95 (3.87) |  | 158 (7.20) |  | 256 (7.01) |  | 30 (5.42) |  | 458 (11.83) |  | 80 (5.91) |  |
| ***Active transport*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 60 (3.07) | 0.135 | 179 (5.83) | 0.018 | 366 (4.59) | <0.001 | 20 (1.67) | 0.242 | 1074 (8.81) | 0.791 | 258 (5.91) | 0.423 |
| No | 47 (4.41) |  | 163 (8.01) |  | 147 (8.27) |  | 44 (1.13) |  | 631 (8.54) |  | 50 (4.94) |  |
| ***Vigorous leisure activity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 15 (3.69) | 0.954 | 4 (2.64) | 0.108 | 5 (0.83) | <0.002 | 7 (2.35) | 0.226 | 113 (11.61) | 0.182 | 11 (3.36) | 0.209 |
| No | 92 (3.77) |  | 338 (7.05) |  | 508 (5.73) |  | 57 (1.21) |  | 1592 (8.54) |  | 297 (5.95) |  |
| ***Moderate leisure activity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 24 (3.45) | 0.709 | 14 (3.42) | 0.014 | 73 (8.16) | 0.013 | 4 (0.80) | 0.337 | 114 (9.00) | 0.873 | 35 (4.65) | 0.380 |
| No | 83 (3.85) |  | 328 (7.19) |  | 440 (5.25) |  | 60 (1.45) |  | 1591 (8.68) |  | 273 (5.98) |  |
| ***Obesity*** |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 36 (9.82) |  | 36 (10.14) | 0.027 | 71 (12.04) | <0.001 | 5 (8.46) | 0.003 | 161 (16.5) | <0.001 | 32 (11.77) | 0.005 |
| No | 68 (2.85) |  | 300 (6.57) |  | 440 (5.20) |  | 58 (1.27) |  | 1481 (8.27) |  | 274 (5.50) |  |

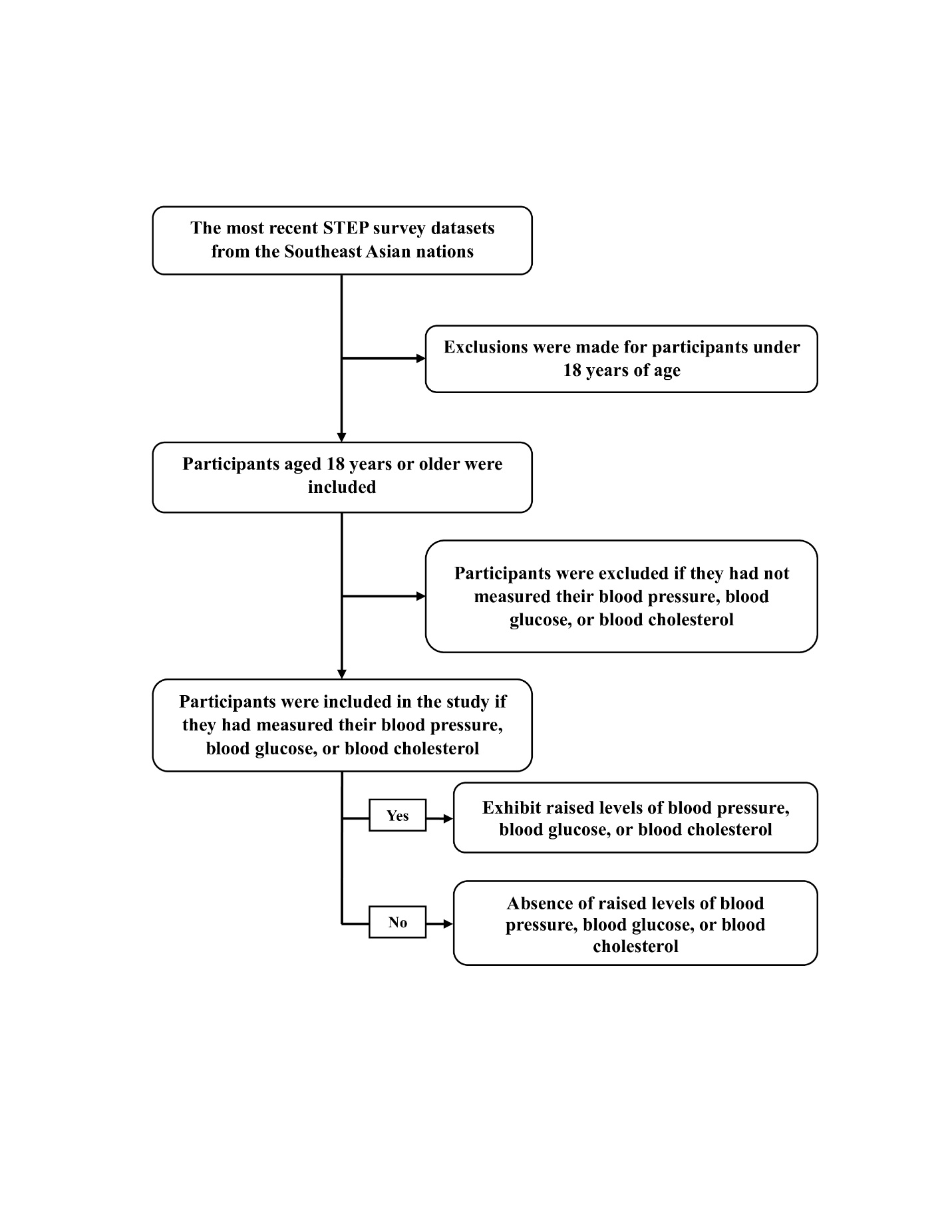
**Table 6: Weighted descriptive statistics of socio-economic variables associated with Hypercholesterolemia status in Southeast Asian adults**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Told had a high cholesterol (hypercholesterolemia), weighted n (%)** | | | | | | | | | | | | |
|  | **Maldives**  **(N = 1320)** | | **Sri Lanka**  **(N =4547)** | | **Myanmar**  **(N=8333)** | | **Timor-Leste**  **(N = 2483)** | | **Bangladesh**  **(N = 8185)** | | | **Nepal**  **(N = 5141)** | |
|  | n (%) | P-value | n (%) | P-value | n (%) | P-value | n (%) | P-value | n (%) | | P-value | n (%) | P-value |
| **Socio-economic background** |  |  |  |  |  |  |  |  |  | |  |  |  |
| ***Age (18 years or above)*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| 18-29 | - | - | 94 (13.44) | <0.001 | 168 (20.90) | <0.001 | 69 (8.48) | <0.001 | 656 (19.42) | | <0.001 | 67 (6.05) | <0.001 |
| 30-44 | - |  | 315 (18.82) |  | 1023 (31.14) |  | 115 (37.75) |  | 1227 (25.01) | |  | 215 (11.63) |  |
| 45-59 | - |  | 428 (27.53) |  | 1624 (45.35) |  | 91 (28.03) |  | 926 (34.17) | |  | 239 (16.06) |  |
| 60 or above | - |  | 204 (14.39) |  | 445 (49.06) |  | 48 (18.62) |  | 227 (35.73) | |  | 128 (21.63) |  |
| ***Sex*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Men | - | - | 307 (16.40) | <0.001 | 894 (31.71) | <0.001 | 96 (25.44) | <0.001 | 1380 (25.01) | | 0.038 | 173 (7.52) | <0.001 |
| Women | - |  | 734 (24.10) |  | 2366 (39.12) |  | 227 (18.94) |  | 1656 (27.90) | |  | 476 (14.38) |  |
| ***Highest level of education*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| No formal schooling/Basic literacy | - | - | 52 (23.00) | 0.315 | 395 (28.23) | 0.013 | 117 (16.95) | 0.030 | 838 (26.15) | | 0.200 | 7 (8.25) | 0.058 |
| Less than primary/Primary school completed | - |  | 136 (20.52) |  | 1882 (34.92) |  | 107 (15.56) |  | 1345 (25.97) | |  | 153 (10.95) |  |
| Secondary school completed/High school completed | - |  | 273 (18.09) |  | 723 (41.65) |  | 90 (36.54) |  | 567 (27.24) | |  | 139 (7.41) |  |
| College/University completed/Post graduate degree | - |  | 577 (20.88) |  | 245 (34.17) |  | 8 (7.65) |  | 279 (33.83) | |  | 22 (13.37) |  |
| ***Marital status*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Currently Married | - | - | - |  | 2404 (35.39) | 0.945 | 259 (29.93) | 0.010 | 2672 (26.44) | | 0.618 | 567 (11.81) | 0.039 |
| Not Married | - |  | - |  | 854 (35.55) |  | 64 (4.19) |  | 364 (27.67) | |  | 82 (7.95) |  |
| ***Work status*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Employee/Business/Agriculture/Labour | - | - | 226 (18.32) | 0.036 | 332 (34.36) | 0.757 | 59 (46.52) | 0.017 | 1334 (25.95) | | <0.001 | 57 (10.73) | 0.131 |
| Home maker/Other voluntary work | - |  | 613 (22.25) |  | 2646 (35.33) |  | 198 (20.18) |  | 1533 (27.22) | |  | 540 (12.06) |  |
| Unemployed | - |  | 201 (18.17) |  | 279 (37.93) |  | 48 (5.87) |  | 168 (25.27) | |  | 51 (7.47) |  |
| **Food intake** |  |  |  |  |  |  |  |  |  | |  |  |  |
| ***Current smoking*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Daily/Yes | - |  | 83 (14.19) | <0.001 | 635 (33.69) | 0.190 | 88 (25.94) | <0.001 | 662 (23.08) | | 0.007 | 120 (9.88) | 0.314 |
| Less than daily/No | - |  | 957 (21.20) |  | 2623 (36.02) |  | 235 (17.37) |  | 2374 (27.63) | |  | 529 (11.48) |  |
| ***Fruit eaten in a week*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 1001 (20.26) | 0.347 | 2493 (37.41) | 0.105 | 274 (22.67) | <0.001 | 1998 (28.40) | | 0.004 | 479 (11.41) | 0.606 |
| No | - |  | 22 (15.77) |  | 665 (30.72) |  | 27 (6.12) |  | 956 (23.65) | |  | 136 (10.46) |  |
| ***Vegetables eaten in a week*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 1036 (20.16) | 0.980 | 3210 (35.40) | 0.946 | 307 (22.68) | 0.039 | 3021 (26.60) | | 0.913 | 644 (11.19) | 0.603 |
| No | - |  | 1 (20.62) |  | 42 (34.64) |  | 2 (5.52) |  | 11 (28.50) | |  | 2 (7.23) |  |
| ***Adding salt when eating*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Always/Often | - | - | 226 (19.17) | 0.273 | - |  | 274 (12.17) | <0.001 | 1372 (24.85) | | 0.071 | 35 (11.06) | 0.189 |
| Sometimes/Rarely | - |  | 220 (18.27) |  | - |  | 36 (53.36) |  | 524 (28.82) | |  | 333 (10.21) |  |
| Never | - |  | 581 (21.64) |  | - |  | 12 (14.87) |  | 1139 (27.96) | |  | 281 (12.62) |  |
| ***Oil used most often*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Coconut/groundnut/ Sunflower/Mustard | - | - | 928 (20.92) | 0.023 | 1564 (36.34) | 0.490 |  |  | 187 (21.67) | | 0.063 | 247 (10.76) | 0.822 |
| Soybean/Vegetable/ Palm | - |  | 90 (14.92) |  | 1328 (33.88) |  | 312 (21.74) | <0.001 | 2775 (27.07) | |  | 353 (11.60) |  |
| Others/ Olive/Corn /Not specific | - |  | 20 (24.75) |  | 303 (36.83) |  | 11 (5.45) |  | 74 (29.34) | |  | 49 (10.84) |  |
| ***Meals eaten outside in a week*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 282 (20.55) | 0.636 | 536 (39.24) | 0.086 | 60 (12.02) | 0.238 | 829 (25.32) | | 0.337 | 144 (7.02) | <0.001 |
| No | - |  | 752 (19.71) |  | 2672 (34.60) |  | 213 (32.92) |  | 2110 (27.07) | |  | 471 (12.95) |  |
| **Physical activity** |  |  |  |  |  |  |  |  |  | |  |  |  |
| ***Vigorous activity at work*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 172 (15.77) | 0.001 | 388 (24.84) | <0.001 | 116 (9.95) | 0.004 | 641 (21.98) | | <0.001 | 235 (9.31) | 0.027 |
| No | - |  | 866 (21.45) |  | 2869 (38.52) |  | 207 (34.38) |  | 2395 (28.57) | |  | 414 (12.75) |  |
| ***Moderate activity at work*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 616 (21.09) | 0.202 | 1895 (34.62) | 0.4237 | 224 (22.60) | 0.040 | 2294 (25.39) | | <0.001 | 528 (10.99) | 0.602 |
| No | - |  | 422 (18.98) |  | 1362 (36.77) |  | 99 (13.28) |  | 742 (31.90) | |  | 121 (12.02) |  |
| ***Active transport*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 636 (20.96) | 0.273 | 2417 (34.94) | 0.631 | 106 (27.44) | 0.042 | 1814 (24.99) | | 0.008 | 530 (11.20) | 0.991 |
| No | - |  | 402 (19.15) |  | 840 (36.75) |  | 217 (16.76) |  | 1222 (29.21) | |  | 119 (11.18) |  |
| ***Vigorous leisure activity*** |  |  |  |  |  |  |  |  | |  |  |  |  |
| Yes | - | - | 21 (10.04) | 0.006 | 49 (27.46) | 0.074 | 23 (4.81) | 0.048 | 167 (24.29) | | 0.485 | 10 (3.33) | <0.001 |
| No | - |  | 1017 (20.77) |  | 3208 (35.66) |  | 300 (23.97) |  | 2869 (26.72) | |  | 639 (11.82) |  |
| ***Moderate leisure activity*** |  |  |  |  |  |  |  |  | |  |  |  |  |
| Yes | - | - | 59 (15.97) | 0.085 | 343 (40.10) | 0.151 | 31 (3.74) | 0.015 | 213 (27.40) | | 0.787 | 79 (7.87) | 0.018 |
| No | - |  | 979 (20.65) |  | 2914 (34.82) |  | 292 (24.08) |  | 2823 (26.53) | |  | 570 (11.85) |  |
| ***Obesity*** |  |  |  |  |  |  |  |  |  | |  |  |  |
| Yes | - | - | 74 (20.04) | 0.952 | 283 (45.73) | <0.001 | 12 (22.17) | 0.876 | 258 (38.94) | | <0.001 | 69 (21.37) | <0.001 |
| No | - |  | 940 (19.87) |  | 2919 (34.53) |  | 281 (21.02) |  | 2678 (25.38) | |  | 564 (10.46) |  |

**Table 7: Weighted descriptive statistics of socio-economic variables associated with three major NCDs among Southeast Asian adults.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Hypertension**  **(N = 17398)** | | **Hyperglycemia**  **(N=16317)** | | **Hypercholesterolemia (N=14980)** | |
|  | **n (%)** | **P-value** | **n (%)** | **P-value** | **n (%)** | **P-value** |
| **Socio-economic background** |  |  |  |  |  |  |
| ***Age (18 years or above)*** |  |  |  |  |  |  |
| 18-29 | 366 (14.19) | <0.001 | 40 (1.65) | <0.001 | 331 (17.91) | <0.001 |
| 30-44 | 1564 (24.35) |  | 240 (4.37) |  | 1453 (29.50) |  |
| 45-59 | 2424 (39.43) |  | 518 (8.84) |  | 2143 (42.18) |  |
| 60 or above | 1099 (48.04) |  | 228 (11.37) |  | 697 (42.55) |  |
| ***Sex*** |  |  |  |  |  |  |
| Men | 1986 (28.51) | 0.668 | 295 (4.88) | <0.001 | 1297 (28.42) | <0.001 |
| Women | 3467 (29.20) |  | 731 (6.66) |  | 3327 (35.99) |  |
| ***Highest level of education*** |  |  |  |  |  |  |
| No formal schooling/Basic literacy | 995 (35.61) | 0.112 | 151 (5.73) | 0.041 | 564 (27.38) | <0.001 |
| Less than primary/Primary school completed | 2135 (27.98) |  | 388 (5.00) |  | 2125 (33.96) |  |
| Secondary school completed/High school completed | 1220 (29.73) |  | 265 (6.87) |  | 1086 (35.82) |  |
| College/University completed/Post graduate degree | 1069 (25.79) |  | 218 (6.43) |  | 830 (25.66) |  |
| ***Marital status*** |  |  |  |  |  |  |
| Currently Married | 2778 (29.24) | <0.001 | 545 (5.86) | 0.013 | 2663 (35.24) | 0.794 |
| Not Married | 845 (24.89) |  | 138 (4.31) |  | 918 (34.63) |  |
| ***Work status*** |  |  |  |  |  |  |
| Employee/Business/Agriculture/Labour | 891 (25.24) | 0.057 | 158 (5.06) | 0.601 | 617 (28.65) | 0.045 |
| Home maker/Other voluntary work | 3728 (29.42) |  | 692 (5.90) |  | 3457 (33.38) |  |
| Unemployed | 798 (30.14) |  | 175 (5.90) |  | 528 (28.78) |  |
| **Food intake** |  |  |  |  |  |  |
| ***Current smoking*** |  |  |  |  |  |  |
| Daily/Yes | 959 (28.04) | 0.528 | 120 (4.61) | 0.189 | 806 (31.13) | 0.387 |
| Less than daily/No | 4488 (29.09) |  | 906 (6.13) |  | 3815 (32.48) |  |
| ***Fruit eaten in a week*** |  |  |  |  |  |  |
| Yes | 4479 (28.75) | 0.912 | 859 (5.58) | 0.414 | 3768 (32.87) | 0.468 |
| No | 776 (29.06) |  | 146 (7.12) |  | 714 (30.08) |  |
| ***Vegetables eaten in a week*** |  |  |  |  |  |  |
| Yes | 5323 (28.80) | 0.665 | 996 (5.81) | 0.272 | 4553 (32.14) | 0.850 |
| No | 79 (25.76) |  | 27 (2.93) |  | 45 (34.05) |  |
| ***Adding salt when eating*** |  |  |  |  |  |  |
| Always/Often | 575 (38.57) | 0.386 | 104 (3.15) | <0.001 | 500 (17.78) | 0.355 |
| Sometimes/Rarely | 98 (43.41) |  | 81 (6.61) |  | 256 (20.36) |  |
| Never | 25 (32.90) |  | 217 (8.12) |  | 593 (21.63) |  |
| ***Oil used most often*** |  |  |  |  |  |  |
| Coconut/groundnut/ Sunflower/Mustard | 3588 (30.73) | <0.001 | 679 (6.85) | 0.002 | 2804 (31.54) | 0.424 |
| Soybean/Vegetable/ Palm | 1474 (25.18) |  | 259 (3.69) |  | 1429 (32.52) |  |
| Others/ Olive/Corn /Not specific | 328 (28.17) |  | 77 (6.27) |  | 323 (36.16) |  |
| ***Meals eaten outside in a week*** |  |  |  |  |  |  |
| Yes | 979 (23.90) | 0.041 | 214 (5.23) | 0.569 | 878 (32.05) | 0.919 |
| No | 4235 (29.64) |  | 774 (5.95) |  | 3637 (32.27) |  |
| **Physical activity** |  |  |  |  |  |  |
| ***Vigorous activity at work*** |  |  |  |  |  |  |
| Yes | 943 (21.73) | 0.005 | 105 (2.71) | <0.001 | 676 (22.58) | <0.001 |
| No | 4494 (30.84) |  | 921 (6.68) |  | 3942 (35.05) |  |
| ***Moderate activity at work*** |  |  |  |  |  |  |
| Yes | 2999 (28.14) | 0.453 | 486 (4.97) | 0.003 | 2735 (31.90) | 0.751 |
| No | 2438 (29.64) |  | 539 (7.05) |  | 1883 (32.56) |  |
| ***Active transport*** |  |  |  |  |  |  |
| Yes | 3287 (26.68) | <0.001 | 625 (4.76) | <0.001 | 3159 (31.19) | 0.501 |
| No | 2152 (33.21) |  | 401 (8.00) |  | 1459 (32.58) |  |
| ***Vigorous leisure activity*** |  |  |  |  |  |  |
| Yes | 161 (24.48) | 0.329 | 31 (1.48) | <0.001 | 93 (20.89) | <0.001 |
| No | 5375 (28.89) |  | 995 (5.93) |  | 4525 (32.58) |  |
| ***Moderate leisure activity*** |  |  |  |  |  |  |
| Yes | 501 (30.54) | 0.577 | 115 (7.14) | 0.142 | 433 (35.07) | 0.345 |
| No | 4937 (28.49) |  | 911 (5.59) |  | 4185 (31.78) |  |
| ***Obesity*** |  |  |  |  |  |  |
| Yes | 642 (56.83) | <0.001 | 148 (11.64) | <0.001 | 369 (40.46) | <0.001 |
| No | 4499 (26.44) |  | 866 (5.41) |  | 4140 (31.39) |  |

**Figures**



**Figure 1: Outcome extracting criteria**

|  |  |
| --- | --- |
|  |  |
| (a) | (b) |
|  | |
| (c) | |
| **Figure 2a. Prevalence of hypertension among Southeast Asian adult people. 2b. Prevalence of hyperglycemia/diabetes among Southeast Asian adult people. 2c: Prevalence of hypercholesterolemia among Southeast Asian adult people** | |