Supplementary file 1

Table 1: Rotated Component Matrix showing Loading Scores for the Food Groups for the Derived Dietary Patterns

|  |  |  |
| --- | --- | --- |
|  |  | **Dietary Patterns** |
| **Food Group** | **Traditional 2003** | **Traditional 2014** | **Mixed 2003** | **Mixed 2014** | **Western 2003** | **Western 2014** | **Flatbread & beverage 2003** | **Noodles & Meat 2014** |
| Alcoholic beverages |  |  |  |  |  |  |  | .630 |
| bread |  |  | .481 | .401 |  | .385 |  |  |
| Carbonated beverages |  |  |  |  | .212 | .558 | .753 |  |
| Confectionary | .295 | .206 | .376 | .247 |  | .470 |  |  |
| Corn |  |  | .364 | .369 |  |  |  |  |
| Creamer | .287 |  |  |  |  |  | .243 |  |
| Eggs | .237 | .360 |  |  | .272 |  |  | .236 |
| Fast\_foods |  |  |  |  | .602 | .616 |  |  |
| Fish and seafood | .319 | .489 |  |  |  |  |  |  |
| Fruits |  |  | .356 | .504 |  | .271 |  |  |
| Indian flat bread |  |  |  |  |  |  | .300 |  |
| Legumes |  | .201 | .305 | .551 |  |  |  |  |
| Local\_kuih | .355 | .261 | .286 |  |  | .413 |  | -.271 |
| Malted chocolate drink |  |  | .305 | .206 |  |  | .224 |  |
| Meat |  |  |  |  | .700 |  |  | .742 |
| Milk and products |  |  | .332 | .557 |  |  |  |  |
| Noodles |  |  |  |  | .521 |  |  | .501 |
| Other beverages |  |  |  |  |  | .498 | .747 |  |
| Pasta |  | -.227 |  | .342 | .332 |  |  |  |
| Ready-to-eat\_cereals |  |  | .320 | .437 |  |  |  |  |
| Rice |  | .446 |  |  | .336 |  | -.278 |  |
| Sagu |  | .262 |  |  |  |  |  |  |
| Soya\_milk |  |  | .295 | .245 |  |  | .239 |  |
| Spices & condiments | .785 | .419 |  |  |  | .222 |  |  |
| Spreads |  |  | .461 | .211 |  | .570 |  |  |
| Sugar & honey | .790 | .426 |  |  |  |  |  |  |
| Tea & coffee | .488 | .463 |  |  |  |  |  |  |
| Vegetables |  | .323 | .491 | .379 |  |  |  |  |

*Footnotes: Extraction Method: Principal Component Analysis with Varimax Rotation . Rotation converged in 6 iterations for 2003 and 7 for 2014.Loadings< 0.2 were suppressed*

Table 2: Association between Age and Dietary Patterns

|  |  |  |
| --- | --- | --- |
| Age Group | Dietary Pattern Quartiles (2003) | Dietary Pattern Quartiles (2014) |
| Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |  | Quartille1 | Quartile 2 | Quartile 3 | Quartile 4 |  |
| n | % | n | % | n | % | n | % | P value | n | % | n | % | n | % | n | % | P value |
| Traditional (2003) | *Traditional (2014)* |
| 18 -19 | 124 | 29 | 98 | 23.0 | 101 | 23.7 | 104 | 24.4 | 0.267 | 32 | 24.2 | 37 | 28.0 | 29 | 22.0 | 34 | 25.8 | 0.917 |
| 20 - 29 | 480 | 24 | 524 | 25.7 | 502 | 24.6 | 533 | 26.1 | 187 | 27.1 | 163 | 23.7 | 173 | 25.1 | 166 | 24.1 |
| 30 - 39 | 475 | 24 | 503 | 25.5 | 510 | 25.8 | 486 | 24.6 | 197 | 23.7 | 217 | 26.1 | 214 | 25.7 | 204 | 24.5 |
| 40 - 49 | 385 | 25 | 374 | 24.3 | 392 | 25.5 | 386 | 25.1 | 180 | 23.8 | 185 | 24.4 | 194 | 25.6 | 198 | 26.2 |
| 50 - 60 | 257 | 28 | 224 | 24.6 | 215 | 23.6 | 214 | 23.5 | 154 | 26.1 | 148 | 25.1 | 140 | 23.7 | 148 | 25.1 |
| Mixed (2003) | *Mixed (2014)* |
| 18 -19 | 98 | 23.0 | 98 | 23.0 | 110 | 25.8 | 121 | 28.3 | 0.015 | 45 | 34.1 | 32 | 24.2 | 22 | 16.7 | 33 | 25.0 | 0.086 |
| 20 - 29 | 503 | 24.7 | 510 | 25.0 | 498 | 24.4 | 528 | 25.9 | 161 | 23.4 | 189 | 27.4 | 169 | 24.5 | 170 | 24.7 |
| 30 - 39 | 483 | 24.5 | 502 | 25.4 | 489 | 24.8 | 500 | 25.3 | 211 | 25.4 | 189 | 22.7 | 214 | 25.7 | 218 | 26.2 |
| 40 - 49 | 365 | 23.7 | 374 | 24.3 | 416 | 27.1 | 382 | 24.9 | 192 | 25.4 | 188 | 24.8 | 178 | 23.5 | 199 | 26.3 |
| 50 - 60 | 272 | 29.9 | 237 | 26.0 | 209 | 23.0 | 192 | 21.1 | 140 | 23.7 | 152 | 25.8 | 167 | 28.3 | 131 | 22.2 |
| Western (2003) | *Western (2014)* |
| 18 -19 | 90 | 21.1 | 93 | 21.8 | 91 | 21.3 | 153 | 35.8 | <0.001 | 20 | 15.2 | 20 | 15.2 | 30 | 22.7 | 62 | 47.0 | <0.001 |
| 20 - 29 | 387 | 19.0 | 475 | 23.3 | 546 | 26.8 | 631 | 30.9 | 112 | 16.3 | 151 | 21.9 | 181 | 26.3 | 245 | 35.6 |
| 30 - 39 | 464 | 23.5 | 499 | 25.3 | 512 | 25.9 | 499 | 25.3 | 194 | 23.3 | 198 | 23.8 | 214 | 25.7 | 226 | 27.2 |
| 40 - 49 | 460 | 29.9 | 394 | 25.6 | 378 | 24.6 | 305 | 19.8 | 214 | 28.3 | 204 | 26.9 | 194 | 25.6 | 145 | 19.2 |
| 50 - 60 | 322 | 35.4 | 258 | 28.4 | 192 | 21.1 | 138 | 15.2 | 210 | 35.6 | 177 | 30.0 | 131 | 22.2 | 72 | 12.2 |
| Flatbread and Beverage 2003 | *Noodles and Meat 2014* |
| 18 -19 | 78 | 18.3 | 73 | 17.1 | 89 | 20.8 | 187 | 43.8 | <0.001 | 33 | 25.0 | 33 | 25.0 | 33 | 25.0 | 33 | 25.0 | 0.663 |
| 20 - 29 | 356 | 17.5 | 430 | 21.1 | 556 | 27.3 | 697 | 34.2 | 168 | 24.4 | 177 | 25.7 | 171 | 24.8 | 173 | 25.1 |
| 30 - 39 | 500 | 25.3 | 521 | 26.4 | 518 | 26.2 | 435 | 22.0 | 200 | 24.0 | 199 | 23.9 | 203 | 24.4 | 230 | 27.6 |
| 40 - 49 | 462 | 30.1 | 426 | 27.7 | 365 | 23.7 | 284 | 18.5 | 182 | 24.0 | 204 | 26.9 | 192 | 25.4 | 179 | 23.6 |
| 50 - 60 | 326 | 35.8 | 266 | 29.2 | 199 | 21.9 | 119 | 13.1 | 166 | 28.1 | 137 | 23.2 | 151 | 25.6 | 136 | 23.1 |

Table 3 Association between Sex and Dietary Patterns

|  |  |  |
| --- | --- | --- |
| Gender | Dietary Pattern Quartiles (2003) | Dietary Pattern Quartiles (2014) |
| Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |  | Quartille1 | Quartile 2 | Quartile 3 | Quartile 4 |  |
| n | % | n | % | n | % | n | % | P value | n | % | n | % | n | % | n | % | P value |
| Traditional (2003) | *Traditional (2014)* |
| Male | 296 | 23 | 347 | 26.7 | 319 | 24.5 | 340 | 26.1 | <0.001 | 265 | 19.1 | 332 | 23.9 | 365 | 26.3 | 426 | 30.7 | <0.001 |
| Female | 341 | 33% |  275 | 26.5 | 228 | 22.0 | 193 | 18.6 | 485 | 30.1 | 418 | 25.9 | 385 | 23.9 | 324 | 20.1 |
| Mixed (2003) | *Mixed (2014)* |
| Male | 372 | 28.6 | 335 | 25.7 | 300 | 23.0 | 295 | 22.7 | <0.001 | 455 | 32.8 | 361 | 26.0 | 276 | 19.9 | 296 | 21.3 | <0.001 |
| Female | 179 | 17.3 | 297 | 28.6 | 277 | 26.7 | 284 | 27.4 | 294 | 18.2 | 389 | 24.1 | 474 | 29.4 | 455 | 28.2 |
| Western (2003) | *Western (2014)* |
| Male | 315 | 24.2 | 301 | 23.1 | 317 | 24.3 | 369 | 28.3 | 0.076 | 318 | 22.9 | 315 | 22.7 | 352 | 25.4 | 403 | 29.0 | <0.001 |
| Female | 239 | 23.0 | 278 | 26.8 | 263 | 25.4 | 257 | 24.8 | 432 | 26.8 | 435 | 27.0 | 398 | 24.7 | 347 | 21.5 |
| Flatbread and Beverage 2003 | *Noodles and Meat 2014* |
| Male | 244 | 18.7 | 320 | 24.6 | 333 | 25.6 | 405 | 31.1 | <0.001 | 329 | 23.7 | 285 | 20.5 | 333 | 24.0 | 441 | 31.8 | <0.001 |
| Female | 277 | 26.7 | 289 | 27.9 | 242 | 23.3 | 229 | 22.1 | 420 | 26.1 | 465 | 28.8 | 417 | 25.9 | 310 | 19.2 |

Table 4: Association between Ethnicity and Dietary Patterns

|  |  |  |
| --- | --- | --- |
| Ethnicity | Dietary Pattern Quartiles (2003) | Dietary Pattern Quartiles (2014) |
| Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |  | Quartille1 | Quartile 2 | Quartile 3 | Quartile 4 |  |
| n | % | n | % | n | % | n | % | P value | n | % | n | % | n | % | n | % | P value |
| Traditional (2003) | *Traditional (2014)* |
| Malay | 556 | 14.9 | 807 | 21.6 | 1080 | 29.0 | 1285 | 34.5 | <0.001 | 328 | 22.2 | 347 | 23.5 | 392 | 26.5 | 410 | 27.8 | <0.001 |
| Chinese | 720 | 45.2 | 490 | 30.8 | 251 | 15.8 | 131 | 8.2 | 205 | 39.5 | 153 | 29.5 | 101 | 19.5 | 60 | 11.6 |
| Indian | 200 | 31.6 | 178 | 28.2 | 155 | 24.5 | 99 | 15.7 | 54 | 40.6 | 43 | 32.3 | 20 | 15.0 | 16 | 12.0 |
| Other Bumiputeras | 102 | 31.7 | 102 | 31.7 | 75 | 23.3 | 43 | 13.4 |  | 5 | 29.4 | 5 | 29.4 | 5 | 29.4 | 2 | 11.8 |  |
| Bumiputera Sabah | 83 | 27.0 | 81 | 26.4 | 67 | 21.8 | 76 | 24.8 |  | 68 | 18.0 | 91 | 24.1 | 93 | 24.7 | 125 | 33.2 |  |
| Bumiputera Sarawak | 68 | 20.9 | 69 | 21.2 | 96 | 29.5 | 92 | 28.3 |  | 51 | 17.3 | 66 | 22.4 | 83 | 28.1 | 95 | 32.2 |  |
| Others | 3 | 13.6 | 5 | 22.7 | 8 | 36.4 | 6 | 27.3 |  | 39 | 21.4 | 45 | 24.7 | 56 | 30.8 | 42 | 23.1 |  |
| Mixed (2003) | *Mixed (2014)* |
| Malay | 988 | 26.5 | 922 | 24.7 | 887 | 23.8 | 931 | 25.0 | <0.001 | 353 | 23.9 | 385 | 26.1 | 385 | 26.1 | 354 | 24.0 | <0.001 |
| Chinese | 375 | 23.6 | 419 | 26.3 | 436 | 27.4 | 362 | 22.7 | 78 | 15.0 | 121 | 23.3 | 157 | 30.3 | 163 | 31.4 |
| Indian | 124 | 19.6 | 183 | 29.0 | 179 | 28.3 | 146 | 23.1 | 13 | 9.8 | 33 | 24.8 | 37 | 27.8 | 50 | 37.6 |
| Other Bumiputeras | 86 | 26.7 | 70 | 21.7 | 72 | 22.4 | 94 | 29.2 |  | 5 | 29.4 | 4 | 23.5 | 1 | 5.9 | 7 | 41.2 |  |
| Bumiputera Sabah | 70 | 22.8 | 67 | 21.8 | 83 | 27.0 | 87 | 28.3 |  | 120 | 31.8 | 96 | 25.5 | 70 | 18.6 | 91 | 24.1 |  |
| Bumiputera Sarawak | 86 | 26.5 | 62 | 19.1 | 70 | 21.5 | 107 | 32.9 |  | 123 | 41.7 | 71 | 24.1 | 58 | 19.7 | 43 | 14.6 |  |
| Others | 3 | 13.6 | 9 | 40.9 | 5 | 22.7 | 5 | 22.7 |  | 57 | 31.3 | 40 | 22.0 | 42 | 23.1 | 43 | 23.6 |  |
| Western (2003) | *Western (2014)* |
| Malay | 1056 | 28.3 | 1039 | 27.9 | 915 | 24.5 | 718 | 19.3 | <0.001 | 274 | 18.6 | 375 | 25.4 | 418 | 28.3 | 410 | 27.8 | <0.001 |
| Chinese | 143 | 9.0 | 312 | 19.6 | 466 | 29.3 | 671 | 42.1 | 200 | 38.5 | 135 | 26.0 | 113 | 21.8 | 71 | 13.7 |
| Indian | 320 | 50.6 | 168 | 26.6 | 79 | 12.5 | 65 | 10.3 | 23 | 17.3 | 33 | 24.8 | 39 | 29.3 | 38 | 28.6 |
| Other Bumiputeras | 98 | 30.4 | 67 | 20.8 | 69 | 21.4 | 88 | 27.3 |  | 5 | 29.4 | 6 | 35.3 | 1 | 5.9 | 5 | 29.4 |  |
| Bumiputera Sabah | 56 | 18.2 | 85 | 27.7 | 87 | 28.3 | 79 | 25.7 |  | 91 | 24.1 | 84 | 22.3 | 87 | 23.1 | 115 | 30.5 |  |
| Bumiputera Sarawak | 54 | 16.6 | 57 | 17.5 | 109 | 33.5 | 105 | 32.3 |  | 102 | 34.6 | 73 | 24.7 | 54 | 18.3 | 66 | 22.4 |  |
| Others | 6 | 27.3 | 4 | 18.2 | 6 | 27.3 | 6 | 27.3 |  | 55 | 30.2 | 44 | 24.2 | 38 | 20.9 | 45 | 24.7 |  |
| Flatbread and Beverage (2003) | *Noodles and Meat 2014* |
| Malay | 730 | 19.6 | 910 | 24.4 | 1043 | 28.0 | 1045 | 28.0 | <0.001 | 593 | 40.1 | 500 | 33.9 | 296 | 20.0 | 88 | 6.0 | 0.017 |
| Chinese | 636 | 39.9 | 439 | 27.6 | 277 | 17.4 | 240 | 15.1 | 10 | 1.9 | 45 | 8.7 | 143 | 27.6 | 321 | 61.8 |
| Indian | 57 | 9.0 | 130 | 20.6 | 219 | 34.7 | 226 | 35.8 | 32 | 24.1 | 40 | 30.1 | 35 | 26.3 | 26 | 19.5 |
| Other Bumiputeras | 99 | 30.7 | 84 | 26.1 | 68 | 21.1 | 71 | 22.0 |  | 4 | 23.5 | 7 | 41.2 | 3 | 17.6 | 3 | 17.6 |  |
| Bumiputera Sabah | 98 | 31.9 | 76 | 24.8 | 63 | 20.5 | 70 | 22.8 |  | 70 | 18.6 | 83 | 22.0 | 106 | 28.1 | 118 | 31.3 |  |
| Bumiputera Sarawak | 103 | 31.7 | 86 | 26.5 | 60 | 18.5 | 76 | 23.4 |  | 13 | 4.4 | 30 | 10.2 | 109 | 36.9 | 143 | 48.5 |  |
| Others | 9 | 40.9 | 6 | 27.3 | 3 | 13.6 | 4 | 18.2 |  | 27 | 14.8 | 45 | 24.7 | 58 | 31.9 | 52 | 28.6 |  |

Table 5: Association between Household Income and Dietary Patterns

|  |  |  |
| --- | --- | --- |
| Household Income | Dietary Pattern Quartiles (2003) | Dietary Pattern Quartiles (2014) |
| Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |  | Quartille1 | Quartile 2 | Quartile 3 | Quartile 4 |  |
| n |  | n |  | n |  | n |  | P value | n |  | n |  | n |  | n |  | P value |
| Traditional (2003) | *Traditional (2014)* |
| < RM 1500 | 822 | 21 | 935 | 23.7 | 1038 | 26.4 | 1142 | 29.0 | <0.001 | 281 | 20.0 | 321 | 22.8 | 382 | 27.1 | 424 | 30.1 | <0.001 |
| 1500 - 3500 | 549 | 27 | 535 | 26.2 | 499 | 24.5 | 456 | 22.4 | 216 | 24.2 | 258 | 29.0 | 212 | 23.8 | 205 | 23.0 |
| > 3500 | 361 | 38 | 262 | 27.5 | 195 | 20.5 | 134 | 14.1 | 238 | 35.5 | 165 | 24.6 | 149 | 22.2 | 119 | 17.7 |
| Mixed (2003) | *Mixed (2014)* |
| < RM 1500 | 1101 | 28.0 | 989 | 25.1 | 935 | 23.7 | 912 | 23.2 | <0.001 | 463 | 32.9 | 369 | 26.2 | 306 | 21.7 | 270 | 19.2 | <0.001 |
| 1500 - 3500 | 451 | 22.1 | 523 | 25.6 | 524 | 25.7 | 541 | 26.5 | 187 | 21.0 | 228 | 25.6 | 251 | 28.2 | 225 | 25.3 |
| > 3500 | 180 | 18.9 | 220 | 23.1 | 273 | 28.7 | 279 | 29.3 | 96 | 14.3 | 145 | 21.6 | 185 | 27.6 | 245 | 36.5 |
| Western (2003) | *Western n (2014)* |
| < RM 1500 | 1109 | 28.2 | 1032 | 26.2 | 988 | 25.1 | 808 | 20.5 | <0.001 | 420 | 29.8 | 345 | 24.5 | 321 | 22.8 | 322 | 22.9 | <0.001 |
| 1500 - 3500 | 438 | 21.5 | 483 | 23.7 | 517 | 25.4 | 601 | 29.5 | 191 | 21.4 | 236 | 26.5 | 234 | 26.3 | 230 | 25.8 |
| > 3500 | 185 | 19.4 | 217 | 22.8 | 226 | 23.7 | 324 | 34.0 | 128 | 19.1 | 160 | 23.8 | 188 | 28.0 | 195 | 29.1 |
| Flatbread and Beverage 2003 | *Noodles and Meat 2014* |
| < RM 1500 | 1012 | 25.7 | 1005 | 25.5 | 977 | 24.8 | 943 | 24.0 | <0.001 | 370 | 26.3 | 353 | 25.1 | 366 | 26.0 | 319 | 22.7 | 0.017 |
| 1500 - 3500 | 482 | 23.6 | 492 | 24.1 | 507 | 24.9 | 558 | 27.4 | 224 | 25.1 | 212 | 23.8 | 228 | 25.6 | 227 | 25.5 |
| > 3500 | 239 | 25.1 | 233 | 24.5 | 249 | 26.2 | 231 | 24.3 | 149 | 22.2 | 179 | 26.7 | 147 | 21.9 | 196 | 29.2 |

Table 6: *Association between Location of Household Residence and Dietary Patterns*

|  |  |  |
| --- | --- | --- |
| Location | Dietary Pattern Quartiles (2003) | Dietary Pattern Quartiles (2014) |
| Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |  | Quartille1 | Quartile 2 | Quartile 3 | Quartile 4 |  |
| n |  | n |  | n |  | n |  | P value | n |  | n |  | n |  | n |  | P value |
|  | Traditional 2003 | *Traditional 2014* |
| Urban | 1155 | 31 | 1026 | 27.7 | 873 | 23.6 | 647 | 17.5 | <0.001 | 517 | 32.5 | 413 | 26.0 | 351 | 22.1 | 310 | 19.5 | <0.001 |
| Rural | 577 | 18 | 706 | 21.9 | 859 | 26.6 | 1085 | 33.6 | 233 | 16.5 | 337 | 23.9 | 399 | 28.3 | 440 | 31.2 |
|  | Mixed (2003) | Mixed (2014) |
| Urban | 826 | 22.3 | 960 | 25.9 | 964 | 26.0 | 951 | 25.7 | <0.001 | 269 | 16.9 | 398 | 25.0 | 431 | 27.1 | 493 | 31.0 | <0.001 |
| Rural | 906 | 28.1 | 772 | 23.9 | 768 | 23.8 | 781 | 24.2 | 480 | 34.1 | 352 | 25.0 | 319 | 22.6 | 258 | 18.3 |
| Western (2003) | *Western (2014)* |
| Urban | 807 | 21.8 | 879 | 23.8 | 909 | 24.6 | 1106 | 29.9 | <0.001 | 386 | 24.3 | 372 | 23.4 | 414 | 26.0 | 419 | 26.3 | 0.044 |
| Rural | 926 | 28.7 | 853 | 26.4 | 822 | 25.5 | 626 | 19.4 | 364 | 25.8 | 378 | 26.8 | 336 | 23.8 | 331 | 23.5 |
| Flatbread and Beverage 2003 | *Noodles and Meat 2014* |
| Urban | 858 | 23.2 | 928 | 25.1 | 935 | 25.3 | 980 | 26.5 | 0.001 | 306 | 19.2 | 386 | 24.3 | 401 | 25.2 | 498 | 31.3 | <0.001 |
| Rural | 874 | 27.1 | 803 | 24.9 | 798 | 24.7 | 752 | 23.3 | 443 | 31.4 | 364 | 25.8 | 349 | 24.8 | 253 | 18.0 |

Table 7: *Association between Dietary Patterns and Prevalence of Overweight*

|  |  |
| --- | --- |
| 2003 | Percentage of subjects (n= 6766) |
|  | Traditional Diet | Mixed Diet | Western Diet | Flatbread and Beverage Diet |
|  | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |
| BMI<25 kg/m2 | 59.05 | 57.81 | 58.25 | 59.02 | 59.05 | 57.81 | 58.25 | 59.02 | 54.83 | 57.74 | 59.48 | 59.02 | 59.33 | 57.96 | 57.72 | 59.02 |
| BMI>=25 kg/m2 | 40.95 | 42.19 | 41.75 | 40.98 | 40.95 | 42.19 | 41.75 | 40.98 | 45.17 | 42.26 | 40.52 | 40.98 | 40.67 | 42.04 | 42.28 | 40.98 |
| Chi-square Value | 3.483 | 4.146 | 31.041 | 4.917 |
| P value | 0.323 | 0.246 | <0.001 | 0.178 |

|  |  |
| --- | --- |
| 2014 | percentage of subjects (n= 2811) |
|  | Traditional Diet | Mixed Diet | Western Diet | Noodle and Meat Diet |
|  | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 | Quartile 1 | Quartile 2 | Quartile 3 | Quartile 4 |
| BMI<25 kg/m2 | 48.88 | 48.17 | 46.07 | 51.09 | 51.58 | 47.22 | 46.57 | 48.81 | 46.69 | 45.22 | 48.82 | 53.46 | 47.16 | 45.11 | 47.84 | 54.07 |
| BMI≥=25 kg/m2 | 51.12 | 51.83 | 53.93 | 48.91 | 48.42 | 52.78 | 53.43 | 51.19 | 53.31 | 54.78 | 51.18 | 46.54 | 52.84 | 54.89 | 52.16 | 45.93 |
| Chi-square Value | 3.754 | 4.321 | 11.157 | 12.933 |
| P value | 0.289 | 0.229 | 0.011 | 0.005 |

Table 8 Dietary patterns and presence of overweight (BMI>=25 kg/m2) among MANS respondents in 2003 and 2014 (Excluding Underweight)

|  |  |  |  |
| --- | --- | --- | --- |
| *Dietary Pattern* | *DP Quartile§* | *OR (95% CI)* † |  |
| *Unadjusted* | *Adj. for age* | *Adj. for age and sex* | *Adj. for age, sex and ethnicity* | *Adj. for age, sex, ethnicity and household income* |
| *Traditional Diet 2003* | Q1 | 1.035 (0.897 – 1.194) | 1.020 (0.882-1.179) | 0.990(0.856-1.146) | 1.203 (1.029-1.407)\* | 1.179 (1.007-1.380)\* |
| Q2 | 1.107 (0.960-1.276) | 1.111 (0.961-1.283) | 1.091(0.944-1.261) | 1.233 (1.061-1.433)\*\* | 1.216(1.046-1.413)\* |
| Q3 | 1.076 (0.932-1.241) | 1.069 (0.925-1.236) | 1.056(0.913-1.220) | 1.105 (0.955-1.280) | 1.094(0.945-1.267) |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Mixed diet 2003* | Q1 | 1.073 (0.930-1.239) | 1.052 (0.910-1.216) | 1.084( 0.936- 1.255) | 1.073(0.926-1.243) | 1.100 (0.948-1.276) |
| Q2 | 1.110 (0.954-1.268) | 1.089(0.943-1.259) | 1.098(0.950-1.269) | 1.099(0.950-1.272) | 1.113( 0.961-1.288) |
| Q3 | 1.093 (0.947-1.261) | 1.077(0.931-1.245) | 1.082(0.935-1.251) | 1.092(0.943-1.264) | 1.100 (0.950-1.274) |
| Q4 | 1 | 1 | 1 | 1 | 1.000 |
| *Western 2003* | Q1 | 1.433 (1.241- 1.654)\*\*\* | 1.227 (1.059-1.422)\*\* | 1.210 (1.044-1.402)\* | 0.985(0.842-1.152) | 1.004(0.858-1.175) |
| Q2 | 1.246 (1.079- 1.438)\*\* | 1.134 (0.980-1.312) | 1.112 (0.961-1.288) | 0.969(0.834-1.128) | 0.983(0.845-1.144) |
| Q3 | 1.160 (1.005 – 1.344)\* | 1.094 (0.945-1.265) | 1.077(0.931-1.247) | 1.009(0.870-1.170) | 1.022(0.881-1.186) |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Flatbread & Beverages diet 2003* | Q1 | 1.017 (0.882- 1.174) | 0.824(0.710-0.956)\* | 0.789( 0.679-0.917)\*\* | 0.912(0.781-1.066) | 0.921 (0.788-1.076) |
| Q2 | 1.054 (0.914- 1.215) | 0.895(0.772-1.036) | 0.866(0.747-1.004) | 0.930( 0.801-1.080) | 0.935(0.805-1.087) |
| Q3 | 1.110 (0.962- 1.280)\* | 1.002(0.866-1.159) | 0.979 (0.846-1.134) | 0.986(0.851-1.143) | 0.986(0.851-1.143) |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Traditional Diet 2014* | Q1 | 1.085 (0.877-1.342) | 1.100 (0.888-1.364) | 1.018 (0.819-1.267) | 1.136 (0.906-1.424) | 1.055 (0.838-1.329) |
| Q2 | 1.119 (0.904-1.385) | 1.130 (0.911-1.402) | 1.077 (0.867-1.339) | 1.171(0.938-1.461) | 1.124(0.899-1.406) |
| Q3 | 1.238 (1.001-1.532)\* | 1.255(1.012-1.556)\* | 1.216 (0.979-1.509) | 1.277 (1.026-1.589)\* | 1.250 (1.003-1.558)\* |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Mixed diet 2014* | Q1 | .953 (0.770-1.179) | 0.943 (0.760-1.169) | 1.012 (0.814-1.259) | 0.968 (0.774-1.210) | 1.051(0.837-1.320) |
| Q2 | 1.123 (0.907- 1.391) | 1.114(0.897-1.382) | 1.149 (0.925-1.427) | 1.115 (0.895-1.388) | 1.161(0.929-1.450) |
| Q3 | 1.110 (0.897-1.374) | 1.081(0.872-1.341) | 1.071 (0.863-1.329) | 1.066 (0.858-1.326) | 1.095(0.878-1.364) |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Western 2014* | Q1 | 1.293 (1.045-1.600)\* | 1.076 (0.863-1.342) | 1.034 (0.828-1.292) | 1.156 (0.921-1.451) | 1.218 (0.967-1.533) |
| Q2 | 1.355 (1.095-1.679)\*\* | 1.175(0.943-1.463) | 1.130 (0.906-1.409) | 1.185 (0.948-1.481) | 1.213 (0.969-1.519) |
| Q3 | 1.243 ( 1.004- 1.540)\* | 1.120 (0.900-1.392) | 1.095(0.880-1.363) | 1.122 (0.900-1.400) | 1.143 (0.915-1.428) |
| Q4 | 1 | 1 | 1 | 1 | 1 |
| *Noodles and meat 2014* | Q1 | 1.408 (1.138-1.744)\*\* | 1.375 (1.108-1.706)\*\* | 1.309 (1.053-1.627)\* | 0.976 (0.751-1.267) | 1.029 (0.790-1.340) |
| Q2 | 1.532 (1.236- 1.899)\*\*\* | 1.521 (1.225-1.889)\*\*\* | 1.421 (1.141-1.770)\*\* | 1.166 (0.868-1.436) | 1.158(0.898-1.493) |
| Q3 | 1.272 (1.030 -1.572)\* | 1.262(1.020-1.563)\* | 1.200 (0.968-1.489) | 1.037(0.826-1.302) | 1.082 (0.859-1.362) |
| Q4 | 1 | 1  | 1 | 1  | 1  |

*Footnotes:*

Abbreviations: DP- dietary Pattern, OR- Odds ratio, Adj.- adjusted

*§*DP quartile refers to the quartile of adherence. Q1 and Q4 are the lowest and highest quartiles of adherence, respectively.

† Odds ratios are calculated with the highest quartile as the reference.

Asterisks indicate statistical significance (\* indicates P<0.05; \*\*P< 0.01 and \*\*\*P< 0.001)