Supplemental Material 1. General characteristics according to the COVID-19-related family economic hardship among Korean adolescents

|  |  |  |  |
| --- | --- | --- | --- |
|  | Boys | 　 | Girls |
| Total | Severe | Moderate | Not so much | No | 　 | Total | Severe | Moderate | Not so much | No |
| N | (%) | N | (%) | N | (%) | N | (%) | N | (%) | 　 | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| **Total** | 22823 |  | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |  | 22085 | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| **Grade** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7th | 4256 | 17.4 | 214 | 4.7 | 1013 | 23.7 | 1597 | 37.2 | 1432 | 34.4 |  | 4181 | 17.7 | 154 | 3.7 | 918 | 20.9 | 1742 | 41.6 | 1367 | 33.8 |
| 8th | 4407 | 18.4 | 223 | 4.8 | 1033 | 22.9 | 1704 | 38.9 | 1447 | 33.4 |  | 4151 | 18.2 | 170 | 3.8 | 962 | 22.8 | 1744 | 41.9 | 1275 | 31.5 |
| 9th | 4163 | 16.5 | 245 | 5.5 | 1033 | 24.0 | 1699 | 41.1 | 1186 | 29.3 |  | 3899 | 16.2 | 157 | 3.7 | 904 | 22.8 | 1685 | 43.1 | 1153 | 30.4 |
| 10th | 3584 | 15.7 | 195 | 5.0 | 895 | 24.8 | 1429 | 40.4 | 1065 | 29.8 |  | 3342 | 15.6 | 156 | 4.6 | 855 | 25.0 | 1475 | 44.1 | 856 | 26.3 |
| 11th | 3474 | 16.1 | 213 | 6.1 | 921 | 26.3 | 1387 | 39.6 | 953 | 28.0 |  | 3366 | 15.9 | 190 | 5.5 | 880 | 25.6 | 1461 | 43.6 | 835 | 25.3 |
| 12th | 2939 | 16.0 | 187 | 6.3 | 762 | 25.6 | 1161 | 39.2 | 829 | 28.8 |  | 3146 | 16.4 | 189 | 5.8 | 845 | 26.3 | 1353 | 42.9 | 759 | 25.0 |
| **Residential area** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| Mereopolitan | 1788 | 5.8 | 98 | 5.3 | 453 | 25.0 | 730 | 41.1 | 507 | 28.6 |  | 1583 | 5.3 | 55 | 3.9 | 371 | 23.2 | 743 | 45.9 | 414 | 27.0 |
| Urban | 11018 | 51.8 | 588 | 5.1 | 2745 | 24.5 | 4377 | 39.7 | 3308 | 30.7 |  | 10708 | 52.2 | 507 | 4.4 | 2616 | 23.9 | 4638 | 43.4 | 2947 | 28.3 |
| Rural | 10017 | 42.5 | 591 | 5.8 | 2459 | 24.4 | 3870 | 38.7 | 3097 | 31.1 |  | 9794 | 42.6 | 454 | 4.7 | 2377 | 23.8 | 4079 | 41.7 | 2884 | 29.8 |
| **Co-residence with parents** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| Yes | 21950 | 96.7 | 1217 | 5.3 | 5398 | 24.3 | 8652 | 39.5 | 6683 | 30.9 |  | 21371 | 97.5 | 965 | 4.4 | 5159 | 23.7 | 9174 | 42.9 | 6073 | 29.0 |
| No | 873 | 3.3 | 60 | 7.2 | 259 | 29.8 | 325 | 36.9 | 229 | 26.1 |  | 714 | 2.5 | 51 | 7.2 | 205 | 28.8 | 286 | 40.0 | 172 | 24.1 |
| **Subjective family economic status** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| Low | 2519 | 10.7 | 481 | 19.3 | 1021 | 41.1 | 762 | 29.9 | 255 | 9.6 |  | 2297 | 9.9 | 401 | 17.1 | 1035 | 44.6 | 717 | 32.0 | 144 | 6.2 |
| Middle | 10910 | 47.5 | 491 | 4.3 | 3069 | 28.0 | 4843 | 44.4 | 2507 | 23.2 |  | 11635 | 52.2 | 444 | 4.0 | 3238 | 27.6 | 5568 | 47.7 | 2385 | 20.8 |
| High | 9394 | 41.8 | 305 | 3.0 | 1567 | 16.2 | 3372 | 36.1 | 4150 | 44.7 |  | 8153 | 37.9 | 171 | 2.0 | 1091 | 13.2 | 3175 | 38.9 | 3716 | 46.0 |
| **Subjective health status** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| Unhealthy | 1660 | 7.5 | 144 | 8.8 | 494 | 29.9 | 658 | 39.6 | 364 | 21.7 |  | 2175 | 9.8 | 184 | 8.4 | 650 | 29.6 | 850 | 39.5 | 491 | 22.6 |
| Normal | 5054 | 22.0 | 310 | 6.0 | 1354 | 26.2 | 2091 | 41.7 | 1299 | 26.1 |  | 6603 | 29.9 | 313 | 4.6 | 1724 | 25.8 | 2997 | 45.1 | 1569 | 24.5 |
| Healthy | 16109 | 70.4 | 823 | 4.8 | 3809 | 23.4 | 6228 | 38.6 | 5249 | 33.2 |  | 13307 | 60.3 | 519 | 3.8 | 2990 | 21.9 | 5613 | 42.2 | 4185 | 32.1 |
| **Depressive mood** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| None | 18038 | 79.0 | 882 | 4.6 | 4339 | 23.9 | 7172 | 39.9 | 5645 | 31.6 |  | 15449 | 70.3 | 532 | 3.4 | 3461 | 22.1 | 6758 | 43.6 | 4698 | 31.0 |
| Exist | 4785 | 21.0 | 395 | 8.2 | 1318 | 26.9 | 1805 | 37.5 | 1267 | 27.4 |  | 6636 | 29.7 | 484 | 7.2 | 1903 | 27.9 | 2702 | 41.0 | 1547 | 23.9 |
| **Difference in wake-up time during weekdays and weekends** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| More than 5 hours | 2934 | 12.6 | 232 | 7.6 | 820 | 27.7 | 1099 | 37.6 | 783 | 27.0 |  | 3607 | 15.9 | 224 | 6.1 | 1005 | 27.1 | 1551 | 43.5 | 827 | 23.3 |
| Less than 5 hours | 19889 | 87.4 | 1045 | 5.1 | 4837 | 24.0 | 7878 | 39.6 | 6129 | 31.3 |  | 18478 | 84.1 | 792 | 4.2 | 4359 | 23.2 | 7909 | 42.7 | 5418 | 30.0 |
| **Average smartphone usage time per day** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| More than 8 hours 30minutes | 2241 | 9.7 | 212 | 9.3 | 627 | 28.8 | 824 | 36.1 | 578 | 25.7 |  | 3374 | 14.5 | 229 | 6.5 | 981 | 28.5 | 1404 | 42.0 | 760 | 22.9 |
| Less than 8 hours 30minutes | 20582 | 90.3 | 1065 | 5.0 | 5030 | 24.0 | 8153 | 39.7 | 6334 | 31.3 |  | 18711 | 85.5 | 787 | 4.2 | 4383 | 23.0 | 8056 | 42.9 | 5485 | 29.9 |
| **Average time spent sitting down per day** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| More than 15 hours | 2570 | 11.4 | 134 | 4.9 | 643 | 24.9 | 975 | 37.9 | 818 | 32.3 |  | 3233 | 15.1 | 161 | 4.9 | 745 | 22.8 | 1368 | 41.7 | 959 | 30.5 |
| Less than 15 hours | 20253 | 88.6 | 1143 | 5.4 | 5014 | 24.4 | 8002 | 39.6 | 6094 | 30.5 |  | 18852 | 84.9 | 855 | 4.4 | 4619 | 24.0 | 8092 | 43.0 | 5286 | 28.6 |
| **Smoking status** | 　 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 　 |
| No | 21730 | 95.0 | 1205 | 5.3 | 5338 | 24.2 | 8573 | 39.5 | 6614 | 30.9 |  | 21626 | 98.0 | 971 | 4.4 | 5226 | 23.7 | 9266 | 42.8 | 6163 | 29.1 |
| Yes | 1093 | 5.0 | 72 | 6.3 | 319 | 29.6 | 404 | 37.1 | 298 | 27.1 | 　 | 459 | 2.0 | 45 | 8.9 | 138 | 30.4 | 194 | 42.2 | 82 | 18.5 |