Supplemental table 2. Diet quality as assessed using the Korean Healthy Eating Index (KHEI) according to regional factors in metropolitan cities and provinces

|                                     | Metropolitan cities |                 |                 |      | Provinces  |                 |                 |                 |      |            |
|-------------------------------------|---------------------|-----------------|-----------------|------|------------|-----------------|-----------------|-----------------|------|------------|
|                                     | Low                 | Middle          | High            | P    | Adjusted p | Low             | Middle          | High            | P    | Adjusted p |
| Population with higher education, % | $53.1 \pm 0.4$      | $58.2 \pm 0.8$  | $63.4 \pm 2.5$  |      |            | $45.3 \pm 1.8$  | $49.7 \pm 0.3$  | $52.9 \pm 3.5$  |      |            |
| (range)                             | (52.7-53.5)         | (57.2-59.2)     | (61.4-66.9)     |      |            | (42.8-46.7)     | (49.3-50.0)     | (50.2-57.9)     |      |            |
| Participants, % (SE)                | 10.7 (0.41)         | 49.7 (0.55)     | 39.9 (0.53)     |      |            | 42.5 (1.90)     | 21.6 (1.57)     | 35.9 (1.65)     |      |            |
| KHEI                                | $62.4 \pm 0.41$     | $62.6\pm0.20$   | $63.3 \pm 0.24$ | 0.02 | 0.01       | $62.4 \pm 0.38$ | $63.0\pm0.56$   | $62.9 \pm 0.43$ | 0.38 | 0.51       |
| Income per capita, 1,000 KRW        | $17,234 \pm 32$     | $18,205 \pm 17$ | $21,115 \pm 64$ |      |            | $16,342 \pm 77$ | $16,677 \pm 58$ | 17,258          |      |            |
| (range)                             | (16,783-17,694)     | (18,189–18,222) | (21,051-21,178) |      |            | (16,243-16,431) | (16,603–16,747) | (17,258)        |      |            |
| Participants, % (SE)                | 27.8 (0.53)         | 38.3 (0.53)     | 33.8 (0.50)     |      |            | 33.1 (1.77)     | 45.6 (1.73)     | 21.2 (1.00)     |      |            |
| KHEI                                | $62.8 \pm 0.26$     | $62.5 \pm 0.23$ | $63.3 \pm 0.26$ | 0.17 | 0.45       | $62.7 \pm 0.41$ | $62.4 \pm 0.38$ | $63.4 \pm 0.59$ | 0.46 | 0.81       |
| Food security, %                    | $52.9\pm1.8$        | $56.3 \pm 0.9$  | $61.7 \pm 1.6$  |      |            | $49.5\pm0.05$   | $55.4 \pm 0.5$  | $60.0 \pm 0.6$  |      |            |
| (range)                             | (50.3–54.3)         | (55.3–57.2)     | (59.4–63.0)     |      |            | (49.4–49.5)     | (54.9–56.0)     | (59.2–60.6)     |      |            |
| Participants, % (SE)                | 17.7                | 14.6            | 67.7            |      |            | 21.8            | 43.9            | 34.3            |      |            |
| KHEI                                | $62.9 \pm 0.35$     | $62.6\pm0.36$   | $62.9 \pm 0.18$ | 0.98 | 0.38       | $63.1 \pm 0.51$ | $62.1 \pm 0.37$ | $63.3 \pm 0.45$ | 0.62 | 0.80       |
| Facilities for physical activity    | $5.6 \pm 0.7$       | $8.4 \pm 0.2$   | $9.9 \pm 0.4$   |      |            | $100.5\pm0.6$   | $115.0\pm1.1$   | $127.2\pm3.7$   |      |            |
| (range)                             | (4.7-6.3)           | (8.2-8.6)       | (9.4-10.4)      |      |            | (99.9-101.2)    | (114.2-116.5)   | (122.1-130.6)   |      |            |
| Participants, % (SE)                | 20.0 (0.47)         | 64.8 (0.57)     | 15.2 (0.48)     |      |            | 35.1 (1.25)     | 40.4 (1.92)     | 24.5 (1.78)     |      |            |
| KHEI                                | $63.1 \pm 0.33$     | $62.9 \pm 0.18$ | $62.4\pm0.38$   | 0.18 | 0.92       | $62.9 \pm 0.43$ | $62.5 \pm 0.42$ | $62.7 \pm 0.45$ | 0.60 | 0.91       |
| Time to nearest large retailer, min | $18.3\pm0.6$        | $15.2 \pm 0.3$  | $12.5 \pm 1.1$  |      |            | $54.9 \pm 6.7$  | $41.3\pm0.5$    | $33.7 \pm 0.2$  |      |            |
| (range)                             | (18.8-17.7)         | (15.5-14.8)     | (13.9-11.3)     |      |            | (63.5-47.1)     | (41.9-40.8)     | (33.9-33.5)     |      |            |
| Participants, % (SE)                | 36.8 (0.52)         | 16.4 (0.48)     | 46.8 (0.55)     |      |            | 39.9 (1.62)     | 35.4 (1.66)     | 24.7 (1.14)     |      |            |
| KHEI                                | $62.5\pm0.23$       | $62.6 \pm 0.33$ | $63.2 \pm 0.22$ | 0.02 | 0.95       | $62.3\pm0.39$   | $62.7 \pm 0.42$ | $63.3 \pm 0.54$ | 0.11 | 0.34       |
| Internet use, %                     | 87.7                | $91.9 \pm 0.6$  | $94.7 \pm 0.4$  |      |            | $77.5 \pm 0.3$  | $82.7 \pm 0.5$  | $86.3 \pm 0.7$  |      |            |
| (range)                             | (87.7)              | (91.4–92.8)     | (94.1–95.2)     |      |            | (77.1-77.8)     | (82.1–83.3)     | (85.4–87.2)     |      |            |
| Participants, % (SE)                | 33.9 (0.50)         | 47.9 (0.55)     | 18.3 (0.50)     |      |            | 21.1 (1.78)     | 35.4 (1.66)     | 43.5 (1.71)     |      |            |
| KHEI                                | $62.4 \pm 0.24$     | $63.1 \pm 0.21$ | $63.0 \pm 0.37$ | 0.13 | 0.71       | $62.6 \pm 0.48$ | $62.7 \pm 0.42$ | $62.8 \pm 0.41$ | 0.78 | 0.39       |

KHEI, Korean Healthy Eating Index; KRW, South Korean won. Values are expressed as weighted mean  $\pm$  SE or % (SE). Higher education was defined as  $\geq$  college for adults  $\leq$  60 years of age and  $\geq$  high school for adults  $\geq$  60 years of age. Physical activity facilities were defined as urban park area per 1,000 population (1,000 m<sup>2</sup>) for metropolitan cities and number of sports facilities per 100,000 population for provinces. Time to the nearest large retailer was categorized into low = long, middle = intermediate, and high = short. *P*-values for KHEI differences by regional factors were calculated using analysis of variance after adjusting for age, sex, disease, physical activity, BMI, education, and income were not adjusted for in the higher education and income per capita/food security analyses, respectively.