

1 **Supplementary Table 1** Missing number for variables.

| Variables                           | Missing number (%) |            |            |
|-------------------------------------|--------------------|------------|------------|
|                                     | Total              | SWB        |            |
|                                     |                    | Worse      | Better     |
| Age (years), (%)                    | 0 (0.00)           | 0 (0.00)   | 0 (0.00)   |
| Gender, (%)                         | 0 (0.00)           | 0 (0.00)   | 0 (0.00)   |
| Area of residence, (%)              | 0 (0.00)           | 0 (0.00)   | 0 (0.00)   |
| Marital status, (%)                 | 109 (0.96)         | 61 (0.54)  | 48 (0.42)  |
| Ethnicity, (%)                      | 1557 (13.72)       | 806 (7.10) | 751 (6.62) |
| Education level (years), (%)        | 1640 (14.46)       | 870 (7.67) | 770 (6.79) |
| Annual household income (yuan), (%) | 896 (7.90)         | 492 (4.34) | 404 (3.56) |
| Smoking status, (%)                 | 187 (1.65)         | 80 (0.71)  | 107 (0.94) |
| Drinking status, (%)                | 221 (1.95)         | 109 (0.96) | 112 (0.99) |
| Exercise, (%)                       | 151 (1.33)         | 71 (0.63)  | 80 (0.71)  |
| Cognitive impairment, (%)           | 1578 (13.91)       | 868 (7.65) | 710 (6.26) |
| Self-rated health, (%)              | 3 (0.03)           | 2 (0.02)   | 1 (0.01)   |
| Hypertension, (%)                   | 699 (6.16)         | 430 (3.79) | 269 (2.37) |
| Diabetes, (%)                       | 1105 (9.74)        | 639 (5.63) | 466 (4.11) |
| Heart disease, (%)                  | 1070 (9.43)        | 625 (5.51) | 445 (3.92) |
| Stroke, (%)                         | 1129 (9.95)        | 661 (5.83) | 468 (4.13) |

2 Note: Total percentages within categories may not equal the overall total due to  
3 rounding.

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5 **Supplementary Table 2** Multicollinearity Diagnostics for Independent Variables.

| Variables                         | Variance Inflation Factor<br>(VIF) | Tolerable Error<br>(TE) |
|-----------------------------------|------------------------------------|-------------------------|
| SWB                               | 1.13                               | 0.89                    |
| Age (years)                       | 1.33                               | 0.75                    |
| Gender                            | 1.79                               | 0.56                    |
| Area of residence                 | 1.46                               | 0.69                    |
| Marital status                    | 1.36                               | 0.73                    |
| Ethnicity                         | 1.02                               | 0.98                    |
| Education level (years)           | 1.68                               | 0.60                    |
| Annual household income<br>(yuan) | 1.24                               | 0.80                    |
| Smoking status                    | 1.61                               | 0.62                    |
| Drinking status                   | 1.35                               | 0.74                    |
| Exercise                          | 1.13                               | 0.89                    |
| Cognitive impairment              | 1.21                               | 0.83                    |

|                   |      |      |
|-------------------|------|------|
| Self-rated health | 1.09 | 0.92 |
| Hypertension      | 1.10 | 0.91 |
| Diabetes          | 1.11 | 0.90 |
| Heart disease     | 1.12 | 0.90 |
| Stroke            | 1.07 | 0.94 |

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6    Abbreviation: SWB: Subjective well-being.

7 **Supplementary Table 3** Association between SWB and LMM redefined by ASM/WC.

| Variables             | Model 1 |                |                | Model 2 |                |                | Model 3 |                 |                |
|-----------------------|---------|----------------|----------------|---------|----------------|----------------|---------|-----------------|----------------|
|                       | B       | (95% CI)       | <i>P</i> value | B       | (95% CI)       | <i>P</i> value | B       | (95% CI)        | <i>P</i> value |
| SWB                   |         |                |                |         |                |                |         |                 |                |
| Worse                 | Ref.    | Ref.           |                | Ref.    | Ref.           |                | Ref.    | Ref.            |                |
| Better                | 0.068   | (0.056, 0.080) | <0.001         | 0.011   | (0.001, 0.020) | 0.028          | 0.001   | (-0.010, 0.013) | 0.807          |
| SWB score, continuous | 0.009   | (0.008, 0.010) | <0.001         | 0.002   | (0.001, 0.003) | <0.001         | 0.000   | (-0.001, 0.002) | 0.921          |
| SWB score, quartile   |         |                |                |         |                |                |         |                 |                |
| Q1 (0~28)             | Ref.    | Ref.           |                | Ref.    | Ref.           |                | Ref.    | Ref.            |                |
| Q2 (29~31)            | 0.049   | (0.033, 0.065) | <0.001         | 0.013   | (0.001, 0.026) | 0.037          | -0.002  | (-0.017, 0.014) | 0.824          |
| Q3 (32~34)            | 0.079   | (0.062, 0.095) | <0.001         | 0.013   | (0.000, 0.026) | 0.051          | -0.003  | (-0.019, 0.013) | 0.734          |
| Q4 (35~40)            | 0.095   | (0.078, 0.113) | <0.001         | 0.023.  | (0.009, 0.037) | 0.001          | 0.005   | (-0.013, 0.022) | 0.589          |

8 Abbreviation: OR: Odds ratios, CI: Confidence intervals, SWB: Subjective well-being, LMM: low muscle mass, ASM: appendicular skeletal

9 muscle mass, WC: Waist Circumference, Ref: Reference, Q: Quartile.

10 Model 1 was unadjusted.

11 Model 2 was adjusted for age, gender, residence, marital status, and ethnicity.

12 Model 3 was adjusted for age, gender, residence, marital status, ethnicity, education level, annual household income, smoking status, drinking

13 status, physical activity, cognitive impairment, self-rated health, hypertension, diabetes, heart disease, and stroke.

14 **Supplementary Table 4** Association between SWB and LMM after multiple imputations.

| Variables             | Model 1            |                | Model 2           |                | Model 3           |                |
|-----------------------|--------------------|----------------|-------------------|----------------|-------------------|----------------|
|                       | OR (95% CI)        | <i>P</i> value | OR (95% CI)       | <i>P</i> value | OR (95% CI)       | <i>P</i> value |
| SWB                   |                    |                |                   |                |                   |                |
| Worse                 | Ref.               |                | Ref.              |                | Ref.              |                |
| Better                | 0.64 (0.59, 0.69)  | <0.001         | 0.78 (0.72, 0.84) | <0.001         | 0.84 (0.77, 0.92) | <0.001         |
| SWB score, continuous | 0.94 (0.93, 0.95)  | <0.001         | 0.96 (0.96, 0.97) | <0.001         | 0.97 (0.96, 0.98) | <0.001         |
| SWB score, quartile   |                    |                |                   |                |                   |                |
| Q1 (0~28)             | Ref.               |                | Ref.              |                | Ref.              |                |
| Q2 (29~31)            | 0.77 (0.70, 0.86)  | <0.001         | 0.87 (0.78, 0.97) | 0.015          | 0.94 (0.84, 1.06) | 0.317          |
| Q3 (32~34)            | 0.65 (0.59, 0.72)  | <0.001         | 0.81 (0.73, 0.91) | <0.001         | 0.89 (0.79, 1.01) | 0.065          |
| Q4 (35~40)            | 0.50, (0.45, 0.56) | <0.001         | 0.65 (0.57, 0.73) | <0.001         | 0.73 (0.64, 0.83) | <0.001         |

15 Abbreviation: OR: Odds ratios, CI: Confidence intervals, SWB: Subjective well-being, LMM: low muscle mass, Ref: Reference, Q: Quartile.

16 Model 1 was unadjusted.

17 Model 2 was adjusted for age, gender, residence, marital status, and ethnicity.

18 Model 3 was adjusted for age, gender, residence, marital status, ethnicity, education level, annual household income, smoking status, drinking  
19 status, physical activity, cognitive impairment, self-rated health, hypertension, diabetes, heart disease, and stroke.

**Supplementary Table 5** Association between SWB and LMM excluding participants who suffered from cognitive impairment.

| Variables             | Model 1           |                | Model 2           |                | Model 3           |                |
|-----------------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
|                       | OR (95% CI)       | <i>P</i> value | OR (95% CI)       | <i>P</i> value | OR (95% CI)       | <i>P</i> value |
| SWB                   |                   |                |                   |                |                   |                |
| Worse                 | Ref.              |                | Ref.              |                | Ref.              |                |
| Better                | 0.66 (0.61, 0.72) | <0.001         | 0.79 (0.72, 0.87) | <0.001         | 0.85 (0.75, 0.95) | 0.005          |
| SWB score, continuous | 0.95 (0.94, 0.95) | <0.001         | 0.97 (0.95, 0.98) | <0.001         | 0.98 (0.96, 0.99) | <0.001         |
| SWB score, quartile   |                   |                |                   |                |                   |                |
| Q1 (0~28)             | Ref.              |                | Ref.              |                | Ref.              |                |
| Q2 (29~31)            | 0.77 (0.69, 0.86) | <0.001         | 0.82 (0.72, 0.94) | 0.003          | 0.88 (0.75, 1.02) | 0.093          |
| Q3 (32~34)            | 0.68 (0.61, 0.76) | <0.001         | 0.82 (0.72, 0.93) | 0.003          | 0.91 (0.78, 1.07) | 0.256          |
| Q4 (35~40)            | 0.53 (0.47, 0.60) | <0.001         | 0.66 (0.58, 0.76) | <0.001         | 0.73 (0.62, 0.87) | <0.001         |

Abbreviation: OR: Odds ratios, CI: Confidence intervals, SWB: Subjective well-being,

LMM: low muscle mass, Ref: Reference, Q: Quartile.

Model 1 was unadjusted.

Model 2 was adjusted for age, gender, residence, marital status, and ethnicity.

Model 3 was adjusted for age, gender, residence, marital status, ethnicity, education level, annual household income, smoking status, drinking status, physical activity, cognitive impairment, self-rated health, hypertension, diabetes, heart disease, and stroke.