# The Journal of Clinical Psychiatry

## Supplementary Material

## LIST OF SUPPLEMENTARY MATERIAL FOR THE ARTICLE

## DISCLAIMER

**Supplementary Table 1**. Comparison of latent growth models

| Model fit Statistics | No-growth model | Linear model | Quadratic model |
|---|---|---|---|
| RMSEA | 0.064 | 0.048 | 0.026 |
| CFI | 0.947 | 0.981 | 0.999 |
| TLI | 0.960 | 0.978 | 0.993 |
| SRMR | 0.045 | 0.024 | 0.006 |

RMSEA: root mean square error of approximation; CFI: comparative fit index; TLI: Tucker-Lewis index; SRMR: standardized root mean squared residual

Compared with the no-growth and linear models, the quadratic model showed better model fit statistics for all four fit indices. Therefore, the quadratic GMM was selected.

**Supplementary Table 2**. Model fit statistics by growth mixture models with different numbers of latent classes

| Model statistics | Number of latent classes | | | | |
|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 |
| AIC | 159723.685 | 159055.977 | 158268.182 | 157581.864 | 157292.942 |
| BIC | 159820.954 | 159181.037 | 158421.033 | 157762.507 | 157501.376 |
| SABIC | 159776.465 | 159123.837 | 158351.122 | 157679.884 | 157406.042 |
| LMR LRT ($p$ value) | < 0.001 | < 0.001 | 0.037 | < 0.001 | 0.159 |
| BLRT ($p$ value) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Entropy | 0.848 | 0.777 | 0.802 | 0.804 | 0.808 |
| Proportion of each class | | | | | |
| 1 | 83.5% | 76.7% | 74.7% | 68.1% | 62.7% |
| 2 | 16.5% | 10.4% | 10.2% | 12.1% | 13.7% |
| 3 | | 12.9% | 9.9% | 10.7% | 9.7% |
| 4 | | | 5.2% | 5.5% | 5.5% |
| 5 | | | | 3.6 % | 3.1% |
| 6 | | | | | 2.3% |

The AIC, BIC, and SABIC decreased as the number of latent classes increased. The rates of change in AIC, BIC, and SABIC remained constant as the number of classes increased from 2 to 5; however, the rate of change became flat when the number of classes reached 6. Furthermore, the LMR-LRT of six-class model was greater than 0.05. Based on the changes in AIC, BIC, and SABIC values, as well as entropy and LMR-LRT p-value, the five-class GMM was selected as the optimal choice.

**Supplementary Table 3** Association between depressive symptom trajectories and risks of underweight and obesity according to each survey year. Models adjusted for age, education, marital status, household income, employment status, and comorbidity.

| | 2014 OR (95% CI) | 2016 OR (95% CI) | 2018 OR (95% CI) | 2020 OR (95% CI) |
|---|---|---|---|---|
| **Underweight (BMI < 18.5 kg/m²)** | | | | |
| Persistent low symptoms | Reference | Reference | Reference | Reference |
| Decreasing symptoms | 0.84 (0.58–1.20) | 0.90 (0.60–1.36) | 0.95 (0.61–1.47) | 0.71 (0.41–1.21) |

| | | | | |
|---|---|---|---|---|
| Transient high symptoms | 1.01 (0.59–1.72) | 1.28 (0.76–2.14) | 1.44 (0.83–2.49) | 1.13 (0.59–2.15) |
| Increasing symptoms | 1.01 (0.69–1.50) | 0.98 (0.65–1.49) | 1.19 (0.78–1.80) | 1.21 (0.79–1.86) |
| Persistent high symptoms | 2.27 (1.32–3.92) | 2.71 (1.51–4.87) | 3.03 (1.66–5.54) | 3.39 (1.90–6.03) |
| **Class I or II obesity (BMI ≥ 25 kg/m²)** | | | | |
| Persistent low symptoms | Reference | Reference | Reference | Reference |
| Decreasing symptoms | 0.92 (0.76–1.12) | 0.89 (0.73–1.09) | 1.00 (0.83–1.22) | 1.09 (0.90–1.33) |
| Transient high symptoms | 1.33 (1.04–1.70) | 1.17 (0.91–1.50) | 1.29 (1.01–1.64) | 1.32 (1.03–1.70) |
| Increasing symptoms | 1.07 (0.88–1.30) | 0.97 (0.80–1.18) | 0.93 (0.77–1.12) | 0.96 (0.79–1.16) |
| Persistent high symptoms | 1.37 (1.02–1.83) | 1.17 (0.86–1.59) | 1.31 (0.97–1.78) | 1.33 (0.97–1.83) |

BMI: body mass index; OR: odds ratio; CI: confidence interval
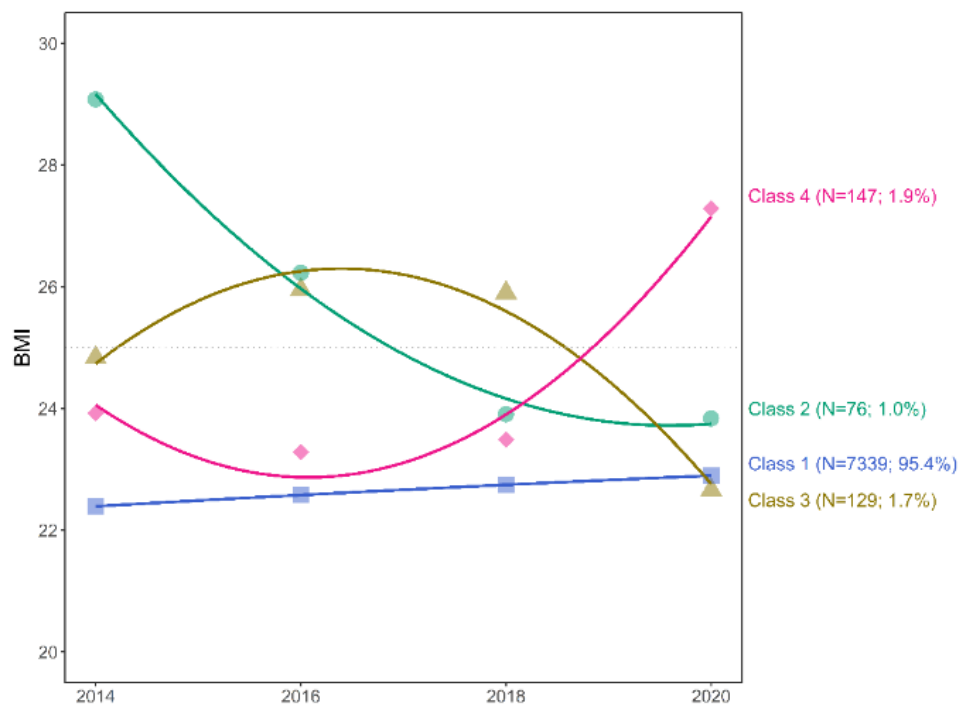


**Supplementary Figure S1** Trajectory of body mass index (N=7691)

**Supplementary Table 4** Association between trajectories of body mass index and risks of depressive symptoms (CES-D-10 ≥10) according to each survey year.

| | 2014 | 2016 | 2018 | 2020 |
|---|---|---|---|---|
| | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| **Depressive symptoms** | | | | |
| Class 1 | Reference | Reference | Reference | Reference |
| Class 2 | 1.01 (0.94–1.09) | 0.99 (0.92–1.07) | 1.07 (0.98–1.16) | 1.07 (0.97–1.17) |
| Class 3 | 1.10 (1.03–1.17) | 1.07 (1.01–1.13) | 1.09 (1.02–1.16) | 1.08 (1.01–1.15) |
| Class 4 | 1.03 (0.97–1.09) | 1.01 (0.97–1.08) | 0.97 (0.91–1.03) | 1.06 (1.00–1.13) |

Models adjusted for age, education, marital status, household income, employment status, and comorbidity.