**Supplementary Table S1.** Model fits of Confirmatory Factor Analysis (CFA) of depression and school refusal.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | χ2/*df* | CFI | TLI | RMSEA | SRMR |
| Depression T1 | 64.29/27 | 0.950 | 0.933 | 0.067 | 0.032 |
| Depression T2 | 54.27/27 | 0.964 | 0.955 | 0.045 | 0.029 |
| School refusal T1 | 1063.79/179 | 0.902 | 0.886 | 0.071 | 0.069 |
| School refusal T2 | 3733.11/179 | 0.904 | 0.887 | 0.079 | 0.066 |

Note: *df*, degree of freedom; CFI, comparative fit index; TLI, Tucker-Lewis index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

**Supplementary Table S2.** Confirmatory Factor Analysis (CFA) factor loading of depression T1 and T2.

|  |  |  |
| --- | --- | --- |
| Item | Factor loading | |
| Depression T1 | Depression T2 |
| PHQ1 | 0.74 | 0.76 |
| PHQ2 | 0.75 | 0.77 |
| PHQ3 | 0.65 | 0.67 |
| PHQ4 | 0.77 | 0.78 |
| PHQ5 | 0.68 | 0.70 |
| PHQ6 | 0.73 | 0.78 |
| PHQ7 | 0.60 | 0.64 |
| PHQ8 | 0.66 | 0.70 |
| PHQ9 | 0.63 | 0.66 |

**Supplementary Table S3.** Confirmatory Factor Analysis (CFA) factor loading of school refusal T1 and T2.

|  |  |  |  |
| --- | --- | --- | --- |
| Dimension | Item | Factor loading | |
| School refusal T1 | School refusal T2 |
| Avoiding negative emotions at school | SR1 | 0.75 | 0.74 |
| SR2 | 0.81 | 0.84 |
| SR3 | 0.81 | 0.82 |
| SR4 | 0.54 | 0.56 |
| SR5 | 0.52 | 0.54 |
| Pursuit of reinforcement outside school | SR6 | 0.72 | 0.75 |
| SR7 | 0.77 | 0.79 |
| SR8 | 0.82 | 0.86 |
| SR9 | 0.63 | 0.65 |
| Frequent absenteeism to reduce psychosocial problems | SR10 | 0.76 | 0.79 |
| SR11 | 0.68 | 0.77 |
| SR12 | 0.76 | 0.89 |
| SR13 | 0.77 | 0.79 |
| Conditions that would increase motivation to go to school | SR14 | 0.81 | 0.83 |
| SR15 | 0.78 | 0.79 |
| SR16 | 0.70 | 0.76 |
| Preference to stay with family over going to school | SR17 | 0.86 | 0.86 |
| SR18 | 0.55 | 0.62 |
| SR19 | 0.89 | 0.90 |
| SR20 | 0.54 | 0.62 |
| SR21 | 0.55 | 0.58 |

**Supplementary Table S4.** Measurement invariance test across gender.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Model** | **CFI** | **RMSEA** | **SRMR** | **ΔCFI** | **ΔRMSEA** | **ΔSRMR** |
| School refusal | Configural Invariance | 0.952 | 0.069 | 0.041 | - | - | - |
| Metric Invariance | 0.948 | 0.067 | 0.048 | 0.004 | 0.002 | 0.007 |
| Scalar Invariance | 0.947 | 0.068 | 0.047 | 0.001 | 0.001 | 0.001 |
| Depression | Configural Invariance | 0.948 | 0.076 | 0.033 | - | - | - |
| Metric Invariance | 0.946 | 0.072 | 0.038 | 0.002 | 0.004 | 0.005 |
| Scalar Invariance | 0.941 | 0.071 | 0.040 | 0.005 | 0.001 | 0.002 |

Note: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

**Supplementary Table S5.** Measurement invariance test across school type.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Model** | **CFI** | **RMSEA** | **SRMR** | **ΔCFI** | **ΔRMSEA** | **ΔSRMR** |
| School refusal | Configural Invariance | 0.950 | 0.068 | 0.041 | - | - | - |
| Metric Invariance | 0.949 | 0.068 | 0.049 | 0.001 | 0.000 | 0.008 |
| Scalar Invariance | 0.948 | 0.064 | 0.045 | 0.001 | 0.004 | 0.004 |
| Depression | Configural Invariance | 0.945 | 0.062 | 0.035 | - | - | - |
| Metric Invariance | 0.942 | 0.057 | 0.043 | 0.003 | 0.007 | 0.008 |
| Scalar Invariance | 0.092 | 0.059 | 0.048 | 0.002 | 0.002 | 0.005 |

Note: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.