**Supplemental Table 1.** Missing values for each variable.

|  |  |  |
| --- | --- | --- |
| Variables | Number of missing | Types of variable in the imputation |
| n | % | (Categorical or numerical variables) |
| Age | 0 | 0.0 | Categorical |
| Sex | 0 | 0.0 | Categorical |
| Residential prefecture | 0 | 0.0 | Categorical |
| Living status | 0 | 0.0 | Categorical |
| Type of higher education institution | 0 | 0.0 | Categorical |
| Household income change during the pandemic | 527 | 55.0 | Categorical |
| Receiving a student loan or scholarship  | 0 | 0.0 | Categorical |
| Receiving Special Cash Payment | 0 | 0.0 | Categorical |
| Part-time job loss | 25 | 2.6 | Categorical |
| Unpaid wages | 0 | 0.0 | Categorical |
| Insufficient money to buy necessities | 0 | 0.0 | Categorical |
| Insufficient money to pay school fees | 0 | 0.0 | Categorical |
| Insufficient money to buy food | 0 | 0.0 | Categorical |
| School closure during the pandemic | 25 | 2.6 | Categorical |
| Attending online lectures | 25 | 2.6 | Categorical |
| Frequency of communication with friends and acquaintances by means of email and other messages | 0 | 0.0 | Categorical |
| K6 score | 0 | 0.0 | Categorical |
| The number of neighbors used was 5. | 　 | 　 | 　 |

**Supplemental Table 2.** Associations between severe psychological distress and potentially related factors from Poisson regression models after imputation.

|  |  |  |  |
| --- | --- | --- | --- |
| 　 | 　 | Age- and sex-adjusted model | Fully adjusted model |
|  |  | (n = 958) | (n = 958) |
| 　 | 　 | PR | 95% CI | PR | 95% CI |
| Household income change during the pandemic | Increased to >100% | 1.00 | 0.37, 2.75 | 1.01 | 0.38, 2.70 |
| Unchanged at 100% | (reference) |  | (reference) |  |
| Decreased to 50-99% | **2.10** | **1.38, 3.20** | **1.68** | **1.11, 2.56** |
| Decreased to 0-49% | **2.36** | **1.45, 3.85** | 1.13 | 0.62, 2.07 |
| Receiving a student loan or scholarship | Not received | (reference) |  | (reference) |  |
| Received | 1.24 | 0.80, 1.91 | 1.29 | 0.84, 1.99 |
| Receiving Special Cash Payment | Not received | (reference) |  | (reference) |  |
| Received | **0.66** | **0.45, 0.95** | 0.72 | 0.48, 1.07 |
| Part-time job loss | No | (reference) |  | (reference) |  |
| Yes | 1.14 | 0.76, 1.72 | 1.11 | 0.71, 1.74 |
| Not applicable | 0.62 | 0.36, 1.07 | 0.76 | 0.44, 1.33 |
| Do not know | **2.17** | **1.23, 3.82** | 1.22 | 0.56, 2.64 |
| Unpaid wages | No | (reference) |  | (reference) |  |
| Yes | **3.34** | **1.84, 6.07** | 1.20 | 0.62, 2.33 |
| Started pre-pandemic | **4.13** | **2.72, 6.28** | 1.26 | 0.62, 2.55 |
| Insufficient money to buy necessities | No | (reference) |  | (reference) |  |
| Yes | **4.02** | **2.67, 6.05** | 1.17 | 0.55, 2.48 |
| Started pre-pandemic | **3.38** | **2.12, 5.41** | 0.99 | 0.43, 2.25 |
| Insufficient money to pay for school fees | No | (reference) |  | (reference) |  |
| Yes | **4.67** | **2.93, 7.43** | 1.51 | 0.80, 2.83 |
| Started pre-pandemic | **3.64** | **2.35, 5.66** | 1.20 | 0.53, 2.73 |
| Insufficient money to buy foods | No | (reference) |  | (reference) |  |
| Yes | **4.70** | **3.11, 7.09** | **3.00** | **1.44, 6.25** |
| Started pre-pandemic | **4.64** | **3.12, 6.89** | **2.85** | **1.32, 6.17** |
| School closure during the pandemic | No | (reference) |  | (reference) |  |
| Yes | 0.70 | 0.43, 1.13 | 0.92 | 0.52, 1.63 |
| Not applicable | 0.45 | 0.19, 1.10 | 0.53 | 0.18, 1.53 |
| Do not know | 1.81 | 0.92, 3.56 | 1.09 | 0.53, 2.25 |
| Attending online lectures | No | (reference) |  | (reference) |  |
| Yes | **0.39** | **0.25, 0.62** | 0.81 | 0.41, 1.61 |
| Not applicable | 0.50 | 0.23, 1.06 | 1.52 | 0.55, 4.25 |
| Do not know | 0.56 | 0.21, 1.49 | **0.32** | **0.11, 0.96** |
| Frequency of communication with friends and acquaintances by means of email and other messages | At least once a week | (reference) |  | (reference) |  |
| One to 3 times a month | **1.90** | **1.28, 2.82** | **1.65** | **1.08, 2.52** |
| None | 0.93 | 0.56, 1.56 | 0.80 | 0.49, 1.30 |
| Fully adjusted model simultaneously includes age, sex, residential prefecture, living status, type of higher education institution, household income change during the pandemic, receiving a student loan or scholarship, special cash payment, part-time job loss, unpaid wages, insufficient money to buy necessities, to pay school fees, to buy food, school closure during the pandemic, attending online lectures, and frequency of communication with friends and acquaintances by means of email and other messages |
| Abbreviations: CI: confidence interval; PR: prevalence ratio. |
| Psychological distress was defined as 13 points or more of the total Kessler Psychological Distress Scale (K6). |