### Supplement Table 1. Analyses of socioeconomic determinants in relation to self-reported oral and general health, stratified for males and females. Prevalence ratio1

|  |  |  |
| --- | --- | --- |
|  | **Oral Health**2 | **General Health**2 |
|  | **Male****PR (95% CI)** | **Female****PR (95% CI)** | **Male****PR (95% CI)** | **Female****PR (95% CI)** |
|  Education level |  |  |  |  |
| Primary school ≤ 10 years | 1.35 (1.12-1.62) | 1.50 (1.24-1.82) | 1.40 (1.16-1.69) | 1.64 (1.37-1.96) |
| High school 11-13 years | 1.22 (1.06-1.41) | 1.42 (1.21-1.66) | 1.24 (1.06-1.44) | 1.39 (1.19-1.62) |
| Higher education ≥ 14 years | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) |
|  |  |  |  |  |
|  Personal annual income, quintiles |  |  |  |  |
| Q1 (Lowest) | 1.47 (1.17-1.84) | 2.84 (1.89-4.26) | 2.25 (1.78-2.85) | 2.41 (1.71-3.40) |
| Q2 | 1.51 (1.25-1.84) | 2.53 (1.69-3.79) | 2.24 (1.82-2.76) | 2.20 (1.57-3.10) |
| Q3 | 1.24 (1.03-1.49) | 2.24 (1.49-3.37) | 1.76 (1.44-2.15) | 1.73 (1.22-2.45) |
| Q4 | 1.09 (0.91-1.30) | 1.94 (1.27-2.95) | 1.46 (1.20-1.78) | 1.29 (0.89-1.87) |
| Q5 (Highest) | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) |
|  |  |  |  |  |
|  Economic security |  |  |  |  |
| No | 1.73 (1.48-2.03) | 1.92 (1.65-2.24) | 1.55 (1.31-1.83) | 1.61 (1.39-1.86) |
| Yes | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) | 1.00 (ref.) |
| Participants  | 4052 | 4537 | 4046 | 4535 |
|  |  |  |  |  |

1 Models were adjusted for age categories, marital status and centrality.

2 Binary outcome for general health and oral health: ‘0’ as good health, and ‘1’ as poor health.

### Supplement Table 2 Analyses of socioeconomic determinants in relation to self-reported oral and general health, stratified for two age groups. Prevalence ratio1

|  |  |  |
| --- | --- | --- |
|  | **Oral Health**2 | **General Health**2 |
|  |  **Age < 55****PR (95% CI)** | **Age ≥ 55****PR (95% CI)** | **Age < 55****PR (95% CI)** | **Age ≥ 55****PR (95% CI)** |
|  Education level |  |  |  |  |
| Primary school ≤ 10 years | 1.66 (1.36-2.03) | 1.26 (1.06-1.50) | 1.98 (1.61-2.42) | 1.35 (1.14-1.59) |
| High school 11-13 years | 1.35 (1.15-1.58) | 1.24 (1.07-1.43) | 1.46 (1.23-1.73) | 1.24 (1.08-1.42) |
| Higher education ≥ 14 years | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
|  |  |  |  |  |
|  Personal annual  income, quintiles |  |  |  |  |
| Q1 (Lowest) | 1.83 (1.42-2.34) | 1.59 (1.29-1.98) | 2.12 (1.61-2.78) | 2.33 (1.87-2.90) |
| Q2 | 1.60 (1.24-2.05) | 1.52 (1.24-1.86) | 2.11 (1.62-2.76) | 2.09 (1.70-2.57) |
| Q3 | 1.45 (1.14-1.85) | 1.24 (1.01-1.52) | 1.67 (1.28-2.17) | 1.61 (1.30-1.99) |
| Q4 | 1.37 (1.09-1.72) | 0.98 (0.79-1.22) | 1.44 (1.11-1.86) | 1.26 (1.00-1.58) |
| Q5 (Highest) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
|  |  |  |  |  |
|  Economic security |  |  |  |  |
| No | 1.91 (1.63-2.23) | 1.77 (1.52-2.06) | 1.67 (1.42-1.97) | 1.44 (1.24-1.67) |
| Yes | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) | 1.00 (ref) |
| Participants  | 3929 | 4660 | 3931 | 4650 |

1 Models were adjusted for sex, marital status and centrality.

2 Binary outcome for general health and oral health: ‘0’ as good health, and ‘1’ as poor health.

### Supplement Table 3 Multilevel analyses between socioeconomic determinants and self-reported oral and general health. Odds Ratio1

|  |  |  |
| --- | --- | --- |
|  | **Oral health** | **General health** |
|  | **Model 1****OR (95% CI)** | **Model 2****OR (95% CI)** | **Model 3****OR (95% CI)** | **Model 1****OR (95% CI)** | **Model 2****OR (95% CI)** | **Model 3****OR (95% CI)** |
| Fixed effect |  |  |  |  |  |  |
|  Intercept\* | 0.340 (0.014) | -1.852 (0.026) | 0.165 (0.022) | -1.024 (0.040) | -2.596 (0.097) | -2.534 (0.122) |
|  |  |  |  |  |  |  |
| **Individual-level factors** |  |  |  |  |  |  |
|  Education level |  |  |  |  |  |  |
| Primary school ≤ 10 years |  | 1.67 (1.42-1.96) | 1.66 (1.42-1.94) |  | 1.88 (1.60-2.19) | 1.86 (1.59-2.18) |
| High school 11-13 years |  | 1.44 (1.28-1.63) | 1.43 (1.27-1.62) |  | 1.44 (1.28-1.63) | 1.43 (1.27-1.62) |
| Higher education ≥ 14 years |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
|  |  |  |  |  |  |  |
|  Personal annual income, quintiles |  |  |  |  |  |  |
| Q1 (Lowest) |  | 2.02 (1.66-2.45) | 2.00 (1.65-2.43) |  | 3.17 (2.60-3.88) | 3.16 (2.58-3.86) |
| Q2 |  | 1.82 (1.52-2.19) | 1.81 (1.51-2.18) |  | 2.80 (2.31-3.38) | 2.79 (2.30-3.37) |
| Q3 |  | 1.43 (1.20-1.71) | 1.43 (1.19-1.71) |  | 1.95 (1.61-2.35) | 1.94 (1.61-2.34) |
| Q4 |  | 1.20 (1.00-1.44) | 1.20 (1.00-1.43) |  | 1.47 (1.22-1.78) | 1.47 (1.22-1.78) |
| Q5 (Highest) |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
|  |  |  |  |  |  |  |
|  Economic security |  |  |  |  |  |  |
| No |  | 2.58 (2.44-2.97) | 2.58 (2.24-2.97) |  | 2.10 (1.82-2.42) | 2.10 (1.82-2.42) |
| Yes |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
|  |  |  |  |  |  |  |
| **Random-effectparameters** |  |  |  |  |  |  |
| Level 1 (individuals)  | 8975 | 8589 | 8589 | 8973 | 8581 | 8581 |
| Level 2 (municipalities) | 44 | 44 | 44 | 44 | 44 | 44 |
| Level 2, Variance, σ2u (SE) | 0.011(0.007) | 0.004(0.005) | 0.0005(0.0034) | 0.008(0.005) | 8.22x10-34(2.51x10-18) | 2.09x10-34(8.51x10-34) |
| PVC (%) | Ref.  | 63.6 | 95.4 | Ref. | 99.9 | 99.9 |
| ICC (%) | 0.89 | 0.55 | 0.27 | 0.71 | 7.51x10-32 | 7.36x10-32 |
|   Model fit statistics |  |  |  |  |  |  |
| AIC | 10000.17 | 8946.109 | 8946.839 | 10134.67 | 8953.322 | 8953.681 |
| BIC | 10014.37 | 9055.983 | 9073.887 | 10148.88 | 9052.125 | 9073.655 |

1 Model 2 was adjusted for (age categories), sex and marital status. Model 3 includes variables in Model 2 plus centrality.
OR: Odds Ratio. SE: Standard Error. PVC: Proportional Change in Variance. ICC: Intra class correlation. AIC=Akaike information criterion, BIC = Bayesian information criterion. Proportion change in variance (PVC%), a measure of change in area level variance between the empty model and a given successive model was computed using formulae (σ2empty model - σ2adjusted model/ σ2empty model) x 100. The value of AIC and SBIC were used as model fit statistics.

\*Intercept is presented as coefficient (standard error).