Supplemental Table S1. Characteristics of participants by the reason for dental visit

| | Treatment N=5,734(47.2%) | | Dental check-ups N=6,405(52.8%) | | p-value |
|---|---|---|---|---|---|
| | N | % | N | % | P |
| Dental units dedicated to dental hygienists | | | | | |
| None | 4,480 | 49.7 | 4,542 | 50.3 | p<0.01 |
| ≧1 dental unit | 1,254 | 40.2 | 1,863 | 59.8 | |
| The time spent on oral health educations | | | | | |
| 0 minute | 1,181 | 56.2 | 919 | 43.8 | p<0.01 |
| 1-9 minutes | 1,906 | 47.5 | 2,108 | 52.5 | |
| 10-19 minutes | 1,767 | 44.8 | 2,178 | 55.2 | |
| 20 minutes or more | 880 | 42.3 | 1,200 | 57.7 | |
| Number of dental hygienists (full time equivalent) | | | | | |
| 0 person | 881 | 64.3 | 489 | 35.7 | p<0.01 |
| <0 - 0.9 | 1,450 | 57.3 | 1,079 | 42.7 | |
| 1 - 1.9 | 1,307 | 48.3 | 1,397 | 51.7 | |
| 2 - 2.9 | 1,006 | 41.9 | 1,397 | 58.1 | |
| 3 people or more | 1,091 | 34.8 | 2,043 | 65.2 | |
| Number of dentists (full time equivalent) | | | | | |
| 1 person | 3,645 | 50.8 | 3,525 | 49.2 | p<0.01 |
| <1-1.9 | 1,450 | 42.8 | 1,935 | 57.2 | |
| 2 people or more | 639 | 40.3 | 945 | 59.7 | |
| Sex | | | | | |
| Male | 2,288 | 52.8 | 2,043 | 47.2 | p<0.01 |
| Female | 3,446 | 44.1 | 4,362 | 55.9 | |
| Age(years) | | | | | |
| 20-29 | 453 | 46.4 | 523 | 53.6 | p<0.01 |
| 30-39 | 689 | 46.0 | 809 | 54.0 | |
| 40-49 | 895 | 47.5 | 988 | 52.5 | |
| 50-59 | 1,016 | 48.9 | 1,062 | 51.1 | |
| 60-69 | 1,317 | 45.5 | 1,575 | 54.5 | |
| 70-79 | 1,069 | 47.7 | 1,173 | 52.3 | |
| 80-89 | 279 | 51.1 | 267 | 48.9 | |
| 90+ | 16 | 66.7 | 8 | 33.3 | |
| Subjective economic status | | | | | |
| Low | 1,277 | 53.1 | 1,129 | 46.9 | p<0.01 |
| Middle | 3,796 | 46.7 | 4,339 | 53.3 | |
| High | 662 | 41.4 | 937 | 58.6 | |
| Years of education | | | | | |
| ≦9 | 579 | 57.7 | 424 | 42.3 | p<0.01 |
| 10-12 | 2,551 | 49.5 | 2,605 | 50.5 | |
| 14-15 | 1,553 | 43.7 | 1,997 | 56.3 | |
| ≧16 | 1,052 | 43.3 | 1,378 | 56.7 | |

Supplemental Table S2. Prevalence ratio(PR), Median prevalence ratio, and variance partition coefficient for regular dental check-ups.*

| | Crude | | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PR | 95%CI | PR | 95%CI | PR | 95%CI | PR | 95%CI | PR | 95%CI |
| Fixed-effects | | | | | | | | | | |
| Dental units dedicated to dental hygienists | | | | | | | | | | |
| None | 1.00 | | 1.00 | | | | | | 1.00 | |
| 1 dental unit or more | 1.19 | 1.11 - 1.28 | 1.15 | 1.08 - 1.23 | | | | | 1.11 | 1.04 - 1.18 |
| The time spent on oral health educations | | | | | | | | | | |
| 0 minute | 1.00 | | | | 1.00 | | | | 1.00 | |
| 1-9 minutes | 1.19 | 1.07 - 1.32 | | | 1.14 | 1.03 - 1.26 | | | 1.10 | 0.99 - 1.22 |
| 10-19 minutes | 1.26 | 1.14 - 1.40 | | | 1.19 | 1.08 - 1.32 | | | 1.11 | 1.00 - 1.23 |
| 20 minutes or more | 1.33 | 1.20 - 1.49 | | | 1.26 | 1.14 - 1.39 | | | 1.15 | 1.04 - 1.28 |
| ımber of dental hygienists (full time equivale | | | | | | | | | | |
| 0 person | 1.00 | | | | | | 1.00 | | 1.00 | |
| <0 - 0.9 | 1.20 | 1.05 - 1.36 | | | | | 1.20 | 1.06 - 1.37 | 1.17 | 1.02 - 1.34 |
| 1 - 1.9 | 1.45 | 1.25 - 1.69 | | | | | 1.43 | 1.24 - 1.66 | 1.38 | 1.18 - 1.61 |
| 2 - 2.9 | 1.62 | 1.39 - 1.89 | | | | | 1.60 | 1.38 - 1.86 | 1.55 | 1.33 - 1.81 |
| 3 people or more | 1.88 | 1.61 - 2.21 | | | | | 1.84 | 1.56 - 2.16 | 1.76 | 1.49 - 2.09 |
| Number of dentists (full time equivalent) | | | | | | | | | | |
| 1 person | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| <1-1.9 | 1.14 | 1.05 - 1.23 | 1.11 | 1.04 - 1.20 | 1.10 | 1.02 - 1.18 | 1.04 | 0.97 - 1.11 | 1.03 | 0.96 - 1.11 |
| 2 people or more | 1.21 | 1.09 - 1.34 | 1.15 | 1.04 - 1.26 | 1.14 | 1.03 - 1.26 | 0.99 | 0.89 - 1.09 | 0.95 | 0.87 - 1.05 |
| Sex | | | | | | | | | | |
| Male | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Female | 1.18 | 1.13 - 1.24 | 1.17 | 1.13 - 1.22 | 1.17 | 1.13 - 1.22 | 1.17 | 1.13 - 1.22 | 1.17 | 1.13 - 1.22 |
| Age (years) | | | | | | | | | | |
| 20-29 | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| 30-39 | 1.00 | 0.92 - 1.10 | 1.01 | 0.93 - 1.09 | 1.01 | 0.93 - 1.10 | 1.00 | 0.92 - 1.09 | 1.00 | 0.92 - 1.09 |
| 40-49 | 0.98 | 0.91 - 1.05 | 1.00 | 0.93 - 1.07 | 1.00 | 0.93 - 1.07 | 0.99 | 0.92 - 1.07 | 1.00 | 0.93 - 1.07 |
| 50-59 | 0.96 | 0.87 - 1.04 | 0.98 | 0.90 - 1.07 | 0.98 | 0.90 - 1.07 | 0.99 | 0.90 - 1.08 | 0.98 | 0.90 - 1.08 |
| 60-69 | 1.01 | 0.92 - 1.11 | 1.06 | 0.97 - 1.15 | 1.06 | 0.98 - 1.15 | 1.07 | 0.98 - 1.17 | 1.07 | 0.98 - 1.16 |
| 70-79 | 0.97 | 0.87 - 1.07 | 1.05 | 0.96 - 1.15 | 1.05 | 0.96 - 1.15 | 1.07 | 0.97 - 1.17 | 1.07 | 0.97 - 1.17 |
| 80-89 | 0.91 | 0.81 - 1.01 | 1.03 | 0.93 - 1.14 | 1.03 | 0.93 - 1.14 | 1.06 | 0.96 - 1.17 | 1.06 | 0.96 - 1.17 |
| 90+ | 0.63 | 0.35 - 1.13 | 0.84 | 0.48 - 1.45 | 0.84 | 0.49 - 1.45 | 0.85 | 0.50 - 1.46 | 0.86 | 0.50 - 1.47 |
| Subjective economic status | | | | | | | | | | |
| Low | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Middle | 1.13 | 1.07 - 1.19 | 1.09 | 1.04 - 1.14 | 1.09 | 1.04 - 1.14 | 1.08 | 1.03 - 1.13 | 1.08 | 1.03 - 1.13 |
| High | 1.23 | 1.14 - 1.32 | 1.15 | 1.08 - 1.24 | 1.15 | 1.07 - 1.23 | 1.15 | 1.07 - 1.23 | 1.14 | 1.07 - 1.22 |
| Years of education | | | | | | | | | | |
| ≦9 | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| 10-12 | 1.19 | 1.09 - 1.29 | 1.13 | 1.04 - 1.23 | 1.13 | 1.04 - 1.23 | 1.13 | 1.05 - 1.23 | 1.14 | 1.05 - 1.23 |
| 14-15 | 1.31 | 1.20 - 1.43 | 1.22 | 1.13 - 1.32 | 1.22 | 1.13 - 1.32 | 1.22 | 1.13 - 1.32 | 1.22 | 1.13 - 1.32 |
| ≧16 | 1.32 | 1.21 - 1.44 | 1.27 | 1.17 - 1.38 | 1.27 | 1.17 - 1.38 | 1.27 | 1.17 - 1.38 | 1.28 | 1.18 - 1.39 |
| Random effects (SE) | | | | | | | | | | |
| Prefecture | 0.02** | (0.01) | 0.01 | (0.01) | 0.01 | (0.00) | 0.02 | (0.00) | 0.02 | (0.00) |
| Dental clinic | 0.12** | (0.02) | 0.10 | (0.01) | 0.09 | (0.01) | 0.07 | (0.01) | 0.06 | (0.01) |
| Median prevalence ratio (MPR) | MPR | 95%CI | MPR | 95%CI | MPR | 95%CI | MPR | 95%CI | MPR | 95%CI |
| Prefecture | 1.14** | 1.10 - 1.18 | 1.10 | 1.10 - 1.18 | 1.10 | 1.10 - 1.18 | 1.14 | 1.10 - 1.18 | 1.14 | 1.10 - 1.18 |
| Dental clinic | 1.39** | 1.33 - 1.45 | 1.35 | 1.29 - 1.41 | 1.33 | 1.29 - 1.39 | 1.29 | 1.24 - 1.33 | 1.26 | 1.24 - 1.33 |
| Variance partition coefficient(VPC) | VPC | | VPC | | VPC | | VPC | | VPC | |
| Prefecture | 0.6%** | | 0.3% | | 0.3% | | 0.6% | | 0.6% | |
| Dental clinic | 3.5%** | | 2.9% | | 2.7% | | 2.1% | | 1.8% | |

* The reason of dental visit were dichotomized as follows: (0) treatment and (1) regular check-ups, with or without treatment.

**Random effects, MPR, and VPC for the null model; the model includes only a constant.