**Appendix 3**

**Subgroup analysis among cohort (n=7) and non-randomized trial (n = 1), and among cross-sectional (n=18) and case-control studies (n = 1)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subgroup** | **Number of studies** | **RR (95% CI)a****OR (95% CI)b** | **I2** | **Test for subgroup difference** |
| ***Cohort and non-randomized trial*** |
| **Age group (years)** |  |  |  | P = 0.49; I2 = 0% |
|  < 6  | 5 | 2.00 (1.27, 1.35) | 64% |  |
|  6 to 19 | 3 | 1.58 (0.97, 2.57) | 77% |  |
| **Country** |  |  |  | P = 0.31; I2 = 1.4% |
|  Low-Middle income | 5 | 1.51 (1.25, 1.82) | 7% |  |
|  High income | 3 | 2.49 (0.95, 6.48) | 88% |  |
| **Year of publication** |  |  |  | P = 0.90; I2 = 0% |
|  < 2010 | 3 | 1.83 (0.98, 3.41) | 84% |  |
|  2010 to present | 5 | 1.74 (1.19, 2.54) | 54% |  |
| **Sample size** |  |  |  | P = 0.15; I2 = 52.4% |
|  < 500 | 2 | 3.97 (1.05; 15.00) | 70% |  |
|  500 – 1,500 | 6 | 1.47 (1.17; 1.84) | 56% |  |
| **Main confoundersc** |  |  |  | P = 0.51; I2 = 0% |
|  No | 4 | 2.00 (1.11; 3.63) | 82% |  |
|  Yes | 4 | 1.61 (1.21; 2.14) | 29% |  |
| **Risk of bias assessement** |  |  |  | P = 0.51; I2 = 0% |
|  Low | 4 | 1.61 (1.21; 2.14) | 29% |  |
|  Moderate or high | 4 | 2.00 (1.11; 3.63) | 82% |  |
| ***Cross-sectional and case-control***  |
| **Age group (years)** |  |  |  | P = 0.000; I2 = 95% |
|  < 6  | 6 | 1.09 (1.00; 1.19) | 67% |  |
|  6 to 19  | 13 | 1.86 (1.50; 2.31) | 89% |  |
| **Country** |  |  |  | P = 0.32; I2 = 0% |
|  Low-Middle income | 13 | 1.41 (1.25; 1.60) | 87% |  |
|  High income | 6 | 1.70 (1.20; 2.43) | 91% |  |
| **Year of publication** |  |  |  | P = 0.15; I2 = 52.4% |
|  < 2010 | 5 | 1.88 (1.25; 2.83) | 88% |  |
|  2010 to present | 14 | 1.38 (1.23; 1.55) | 87% |  |
| **Sample size** |  |  |  | P = 0.006; I2 = 80% |
|  < 500 | 6 | 1.81 (1.20; 2.73) | 75% |  |
|  500 – 1,500 | 8 | 1.98 (1.35; 2.91) | 93% |  |
|  >1,500 | 5 | 1.17 (1.06; 1.29) | 85% |  |
| **Main confounders**a |  |  |  | P = 0.66; I2 = 0% |
|  No | 12 | 1.61 (1.28; 2.03) | 92% |  |
|  Yes | 7 | 1.50 (1.24; 1.83) | 88% |  |
| **Risk of bias assessement** |  |  |  | P = 0.03; I2 = 79.9% |
|  Low | 8 | 1.26 (1.11; 1.43) | 89% |  |
|  Moderate or high | 11 | 1.72 (1.35; 2.19) | 85% |  |
| **Dental caries prevalence** |  |  |  | P = 0.001; I2 = 91.6% |
|  <70% | 15 | 1.41 (1.26; 1.58) | 90% |  |
|  >70% | 4 | 3.67 (2.16; 6.23) | 42% |  |

aLongitudinal studies. bCross-sectional and case-control studies. aThe main three confounders: SES/Family variables (e.g., income and education), Individual variables (e.g., brushing teeth and dental visit)

**Sensitivity analysis among 7 cohort and 1 non-randomized trial according to sample size**



Findings: Heterogeneity among studies with sample size of 500 – 1,500 participants drop to 34% when Campain et al. (2003) is removed.



Findings: Heterogeneity among studies with sample size of 500 – 1,500 participants drop to 22% when Matilla et al. (2001) is removed.

**Sensitivity analysis among 18 cross-sectional and 1 case-control studies according to year of publication**

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Findings: Heterogeneity among studies published before 2010 drop to 12% when Campus et al. (2008) is removed.

**Sensitivity analysis among 18 cross-sectional and 1 case-control studies according to sample size**

****

Findings: Heterogeneity among studies published with sample size of < 500 drop to 41% when Kierce et al. (2008) is removed.

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**Funnel plot of cross-sectional and case-control studies (n = 19)**

**Harbord’s test for small-study effect p = 0.04**