

Supplementary Table S2. Correlation matrix between the indicators that form the outcomes Insulin Resistance Phenotype, Obesity and Chronic Oral Disease Burden (São Luís, Brazil, 2016).

| | TyG | TG/HDL | VLDL | Obesity | Carie | BoP | PPD \geq 4mm | CAL \geq 3mm |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------|
| TyG | 1.0000 | | | | | | | |
| TG/HDL | 0.7219 P<0.001 | 1.0000 | | | | | | |
| VLDL | 0.8469 P<0.001 | 0.8350 P<0.001 | 1.0000 | | | | | |
| Obesity | 0.0674 P<0.001 | 0.0425 P=0.042 | 0.0660 P<0.001 | 1.0000 | | | | |
| Carie | 0.0195 P=0.362 | 0.0131 P=0.538 | 0.0113 P=0.597 | 0.0207 P=0.314 | 1.0000 | | | |
| BoP | 0.0394 P=0.065 | 0.0190 P=0.375 | 0.0248 P=0.246 | 0.0286 P=0.165 | 0.0930 P<0.001 | 1.0000 | | |
| PPD \geq 4 | 0.0442 P=0.039 | 0.0398 P=0.063 | 0.0419 P=0.050 | 0.0344 P=0.094 | 0.2110 P<0.001 | 0.3590 P<0.001 | 1.0000 | |
| CAL \geq 3mm | 0.0667 P<0.001 | 0.0566 P<0.001 | 0.0622 P<0.001 | 0.0545 P<0.001 | 0.1826 P<0.001 | 0.2985 P<0.001 | 0.4887 P<0.001 | 1.0000 |

TG/HDL - Triglycerides /HDL ratio BoP - Number of teeth with bleeding on probing; PPD \geq 4mm - Number of teeth with probing depth \geq 4mm; CAL \geq 3mm - Number of teeth with clinical attachment level \geq 3mm.

Supplementary Table S1. Sensitivity analysis including the standardized coefficient, standard error and p value for the total effects of the association between Socioeconomic Inequalities, Insulin Resistance Phenotype, Chronic Oral Diseases Burden, added sugar and smoking and alcohol interaction in adolescents (São Luís, Brazil, 2016).

| Explanatory variables | Outcome | Standardized coefficient | Standardized error | p |
|-------------------------------------|-------------------------------------|--------------------------|--------------------|--------|
| <i>Socioeconomic Inequalities</i> | <i>Chronic Oral Diseases Burden</i> | 0.210 | 0.027 | <0.001 |
| <i>Socioeconomic Inequalities</i> | Obesity | -0.056 | 0.023 | 0.015 |
| <i>Socioeconomic Inequalities</i> | Added sugar | 0.102 | 0.026 | <0.001 |
| Added sugar | Obesity | -0.104 | 0.024 | <0.001 |
| Added sugar | <i>Chronic Oral Diseases Burden</i> | 0.094 | 0.029 | <0.001 |
| Obesity | <i>Chronic Oral Diseases Burden</i> | 0.069 | 0.023 | 0.003 |
| Obesity | <i>Insulin Resistance Phenotype</i> | 0.072 | 0.019 | <0.001 |
| <i>Insulin Resistance Phenotype</i> | <i>Chronic Oral Diseases Burden</i> | 0.053 | 0.025 | 0.032 |
| Smoking and Alcohol Interaction | <i>Chronic Oral Diseases Burden</i> | 0.115 | 0.055 | 0.036 |
| Smoking and Alcohol Interaction | Added sugar | 0.189 | 0.055 | 0.001 |
| Sex | <i>Chronic Oral Diseases Burden</i> | -0.145 | 0.024 | <0.001 |
| Sex | Obesity | 0.057 | 0.021 | 0.008 |
| Sex | Smoking and Alcohol Interaction | -0.163 | 0.052 | 0.002 |