**Supplementary file 3.**

**Outlier tests for the study model resulted from multivariable logistic regression of study primary outcome (Smoking cessation at any duration)**

**1) Pregibon dbeta:**

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**2) Pearson’s Residuals:**

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**3)** **Deviance Residuals:**

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- **Study model (without outlier covariate patterns):**

Adjusted odds ratio (aOR), 95% Confidence interval (95% CI), and p-value of waterpipe smoking cessation (primary outcome) after dropping outlier covariate patterns (462, 418, 403, 398, 259, 240, 191, and 147):

|  |  |  |  |
| --- | --- | --- | --- |
| **Explanatory Variables** | **OR** | **95% CI** | **P-value** |
| **Age** | 1.00 | (0.98-1.03) | 0.935 |
| **Sex** |  |  |  |
| Female  | R\* |  |  |
| Male  | 4.92 | (2.23-10.85) | <0.001 |
| **Level of Education**  |  |  |  |
| No formal education | R |  |  |
| At least primary school education  | 1.02 | (0.60-1.74) | 0.927 |
| **Marital status** |  |  | 0.205 |
| Married | R |  |  |
| Widowed/Separated/Divorced | 0.25 | (0.05-1.30) | 0.100 |
| Single | 1.32 | (0.52-3.34) | 0.561 |
| **Wealth index** |  |  |  |
| Low wealth | R |  |  |
| High wealth | 1.45 | (0.89-2.36) | 0.133 |
| **Number of people living at home** |  |  |  |
| ≤ 5 people | R |  |  |
| > 5 people | 0.71 | (0.44-1.16) | 0.175 |
| **Smoking rules in the house**  |  |  |  |
| No restrictions | R |  |  |
| Some restrictions or not allowed to smoke | 2.87 | (1.04-7.91) | 0.041 |
| **Having children under 18 years of age** |  |  |  |
| Yes | R |  |  |
| No | 1.01 | (0.58-1.75) | 0.981 |
| **Comorbidity** |  |  |  |
| No | R |  |  |
| Yes | 1.35 | (0.38-4.83) | 0.647 |
| **Nicotine dependency LWDS\_11 scale** | 0.89 | (0.83-0.95) | <0.001 |
| **Withdrawal symptoms MPSS scale** | 1.10 | (1.04-1.16) | 0.001 |
| **Dual smoker status**  |  |  |  |
| No | R |  |  |
| Yes | 3.49 | (2.14 -5.69) | <0.001 |
| **Sharing waterpipe with others**  |  |  |  |
| Yes | R |  |  |
| No | 2.59 | (1.19-5.62) | 0.016 |
| **Age at starting smoking** |  |  |  |
| <20 years  | R |  |  |
| > 20 years | 0.80 | (0.47-1.37) | 0.424 |
| **Smoking duration** |  |  |  |
| <25 years | R |  |  |
| >25 years | 0.87 | (0.43-1.76) | 0.701 |
| **Smoking frequency** |  |  |  |
| Whole day (continuously for several hours)  | R |  |  |
| Less than whole day | 1.87 |  (1.03-3.37) | 0.039 |
| **Waterpipe session length** | 1.00 | (0.97-1.02) | 0.729 |
| **Past quit attempt** |  |  |  |
| Yes | R |  |  |
| No | 2.23 | (1.17-4.26) | 0.015 |
| **Trial arm** |  |  |  |
| Intervention | R |  |  |
| Control | 1.29 | (0.82-2.02) | 0.270 |

**\*Reference**