

## **Do adolescents under-report their smoking status? – Findings from secondary school students in Kota Tinggi, Johor**

### **ABSTRACT**

**Background:** The denormalisation of smoking behavior and anti-smoking measures taken to curb smoking prevalence have created an environment which might contribute to the under-reporting of smoking status among adolescents. The detection of under-reporting is crucial in ascertaining the accuracy of smoking data, therefore this study was undertaken to determine the prevalence of under-reporting of smoking status among school-going adolescents.

**Materials and Methods:** A total of 405 of 2700 adolescents who participated in a longitudinal study in Kota Tinggi were randomly selected and their exhaled carbon monoxide concentration was measured using a pre-calibrated carbon monoxide (CO) analyzer. The cut-off point of exhaled CO of 5 parts per million (ppm) was used to determine smoking status. A total of 343 adolescents responded (84.69%) in the study, of which 85 smokers and 8 non-smokers with recent respiratory illness were excluded from the analysis.

**Results:** Of these 250 non-smoking adolescents, 44.6% (115) were male, and 76.4% (197) were in lower secondary school. Analysis showed that the concentration of exhaled CO among 257 adolescents (99.6%) were between 0 - 5.00ppm. In addition, the CO level of all non-smoking females and lower secondary school students were in the range of 0 - 5.00ppm. This study revealed that the under-reporting of smoking status was negligible.

**Conclusion:** Self-reported smoking status among adolescents can be accepted as valid answers for their smoking status. However, more studies in different localities on a larger scale are warranted to determine that self-reported smoking status is a valid measurement of actual smoking status among adolescents in the country.

**Keyword:** Self-reported smoking; Carbon monoxide; Under-reporting; School-going adolescents