

Changes in tar yields and cigarette design in samples of Chinese cigarettes, 2009 and 2012

Schneller, L., Zwierzchowski, B., Caruso, R., Li, Q., Jiang, Y., Fong, G.T., & O'Connor, R.J.

Abstract

Background: China is home to the greatest number of smokers as well as the greatest number of smoking-related deaths. An active and growing market of cigarettes marketed as 'light' or 'low tar' may keep health-concerned smokers from quitting, wrongly believing that such brands are less harmful.

Objective: This study sought to observe changes in cigarette design characteristics and reported tar, nicotine and carbon monoxide (TNCO) levels in a sample of cigarette brands obtained in seven Chinese cities from 2009 to 2012.

Methods: Cigarettes were purchased and shipped to Roswell Park Cancer Institute, where 91 pairs of packs were selected for physical cigarette design characteristic testing and recording of TNCO values. Data analysis was conducted using SPSS, and was initially characterised using descriptive statistics, correlations and generalised estimating equations to observe changes in brand varieties over time.

Findings: Reported TNCO values on packs saw mean tar, nicotine and CO levels decrease from 2009 to 2012 by 7.9%, 4.5% and 6.0%, respectively. Ventilation was the only cigarette design feature that significantly changed over time ($p < 0.001$), with an increase of 31.7%. Significant predictors of tar and CO yield overall were ventilation and per-cigarette tobacco weight, while for nicotine tobacco moisture was also an independent predictor of yield.

Conclusions: The use of ventilation to decrease TNCO emissions is misleading smokers to believe that they are smoking a 'light/low' tar cigarette that is healthier, and is potentially forestalling the quitting behaviours that would begin to reduce the health burden of tobacco in China, and so should be prohibited.

Recommended Citation

Schneller, L., Zwierzchowski, B., Caruso, R., Li, Q., Jiang, Y., Fong, G.T., & O'Connor, R.J. (2015). Changes in tar yields and cigarette design in samples of Chinese cigarettes, 2009 and 2012. *Tobacco Control*, 24(Suppl 4), iv60-iv63.

Link To PDF: <http://tobaccocontrol.bmj.com/content/early/2014/10/28/tobaccocontrol-2014-051803.full>