

# **Age of smoking onset among South African youth: Results from the First South African National Health and Nutrition Examination Survey**

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## ABSTRACT

**Objective:** To estimate time to tobacco smoking onsets among South African youth aged 15 to 24 years and identify determinants of tobacco smoking onset.

**Methodology:** A multistage disproportionate nationally representative stratified cluster sample of households was selected for the first South African Health and Nutrition Examination Survey (SANHANES-1) conducted in 2012. A sample of 10 000 households was randomly sampled and visited from 500 census enumerator areas. A detailed questionnaire was administered to all consenting adults aged 15 years and older in each consenting household. Survival analysis of time to smoking onset among youth aged 15 to 24 years is implemented and Cox proportional hazards methods used to estimate the hazards of smoking onset.

**Results:** A total of 4 979 youth aged 15 to 24 years were interviewed. Among those that were interviewed 4 310 (86.6%) indicated their tobacco smoking status. Among youth 10.7% [95%CI: 9.4% - 12.2%] indicated that they have ever smoked tobacco. The median age at tobacco smoking onset among youth is 18 years. The Kaplan-Meier curves show that males were more likely to start smoking earlier than females, log-rank based  $p$ -value $<0.001$ . The hazard rate (HR) of smoking for males were HR=3.13 [95%CI: 2.57 – 3.80] time that of females. By race the hazards were the highest among Colours (HR=4.04), Whites (HR=1.76) and Indians (HR=1.67) compared to Africans. The hazards of smoking were highest among youth from urban formal (HR=3.01), urban informal (HR=2.32) and rural formal (HR=2.73) compared to rural informal areas. Those that were employed (HR=3.57) or unemployed (HR=2.58) had the highest hazards of smoking compared to those that were students. The hazards of smoking were 9.25 [95%CI: 7.45 – 11.48] times higher for those that have used other tobacco products compared to those that have never used other tobacco products. Of those that smoked 13.5% [95%CI: 9.7%-18.3%] were told to quit smoking in the last 12 months by a medical professional and 43.7% [95%CI: 36.7% - 50.9%] of those that smoke tried to quit smoking in the last 12 months.

Smoking patterns vary by geographical areas and race. Being a student is protective against smoking. Policies and programs designed to prevent the initiation of smoking and to help smokers quit are needed. These programs should target both unemployed and employed youth whilst keeping youth in educational institutions.