

## PREVALENCE OF SMOKING AMONG SECONDARY SCHOOL STUDENTS IN SARAWAK

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### ABSTRACT

Adolescent smoking is an emerging health concern in the developing countries. A cross-sectional study is conducted to determine the prevalence and smoking behaviour of adolescents in Sarawak. The prevalence of smoking is 32.8% with mean age of initiation at 12.8±1.9 years. Most (67.2%) adolescents are experimental smokers and the majority (67.9%) did not smoke on a daily basis. Branded cigarettes are preferred (83.1%) and the cigarettes are obtained either from friends (49.1%) or self purchased (43.6%). Students prefer to smoke at their friend's house (31.0%) or at school (25.3%). Smoking prevalence among adolescents in Sarawak is high and begins early. Early intervention on smoking prevention and risk awareness is perhaps more effective if initiated before the age of 12 years.

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### INTRODUCTION

Locally, there is abundance of data on adolescent smoking in Malaysia. However, there is limited data, particularly from East Malaysia. The objective of this study is to determine the smoking prevalence and smoking behaviour among the adolescents in Sarawak.

### METHOD

A cross-sectional study was conducted at a secondary school in Kuching, East Malaysia, in the year 2006. Students were selected using stratified cluster random sampling (single stage). The students were stratified into five stratum starting from Form One to Form Five. Three classes were selected randomly from five in each stratum using paper ballot method. Each class consists of 30-35 students and all the students from the selected classes were included. Students who were absent and did not consent were excluded. Prior parental consent was obtained and students were assured of anonymity and confidentiality.

The contents of the self-administered questionnaire were:

1. Smoking status:
  - a. Ever or experimental smoker: one who reported smoking only few puffs in the last 30 days.<sup>1,2</sup>
  - b. Current smoker: one who has smoked cigarette on one or more days during the last 30 days preceding the survey.<sup>1,2</sup>
  - c. Non-smoker: one who had never tried smoking before.<sup>1,2</sup>

2. Smoking habits were divided based on the WHO categories:<sup>3</sup>
  - a. Young daily smoker: one who smokes any tobacco product daily at the time of filling the questionnaire.
  - b. Young weekly smoker: one who smokes at least once a week, but not every day at the time of filling the questionnaire.
  - c. Young uncommitted smoker or occasional/sporadic smoker: one who smokes less than once a week.
3. Age of smoking initiation/first started smoking (based on student's recall).
4. Types of cigarette smoked.
5. Source of cigarette.
6. Number of cigarettes smoked per day.
7. Place of smoking.

The questionnaire was translated to national language, back translated and a pilot study was done on students from another school and minor amendments were made.

### RESULTS

A total of 445 students were selected and 399 completed questionnaire (response rate of 89.6%).

The prevalence of smoking among these students is 32.8% (n=131). Most (67.2%, n=88) of them belonged to the category of ever or experimental smokers while the rest were current smokers (10.7%, n=43). The common age of initiating the habit was between 12 to 14 years with the mean age of 12.8±1.9 years.

Most (67.9%, n=89) of them did not smoke on a daily basis. The majority (74.8%) of daily smokers consumed an average of one to three cigarettes a day. Branded cigarette (83.1%, n=113) was the preferred choice among students. Cigarettes were obtained either from friends (49.1%, n=81) or self purchased (43.6%, n=72). Students preferred to smoke at their friend's house (31.0%, n=49) and at school (25.3%, n=40). Smoking habit of students is depicted in Table 1.

**Table 1: Smoking habits**

	N (%)
<i>Smoking status (n=399)</i>	
Non-smokers	268 (67.2)
Ever/experimental smokers	88 (22.1)
Current smokers	43 (10.7)
<i>Age of smoking initiation (n=131)</i>	
<12 years old	26 (19.8)
12-14 years old	86 (65.7)
>14 years old	19 (14.5)
<i>Frequency (n=131)</i>	
Daily	31 (23.7)
Once a week	51 (38.9)
Once a month	38 (29.0)
Did not respond	11 (8.4)
<i>Number of cigarettes smoked (n=123)</i>	
1-3	92 (74.8)
4-6	23 (18.6)
7-10	4 (3.3)
>10	4 (3.3)
<i>Types of cigarette smoked (n=136)*</i>	
Branded cigarette	113 (83.1)
Hand-rolled	12 (8.8)
Pipes/Cigars	4 (2.9)
Others	7 (5.2)
<i>Source of cigarette (n=165)*</i>	
Friends	81 (49.1)
Self-purchased	72 (43.6)
Home	8 (4.9)
Others	4 (2.4)
<i>Place where students usually smoked (n=158)*</i>	
Friend's house	49 (31.0)
School	40 (25.3)
Parties	38 (24.1)
Home	31 (19.6)

\*Participants were allowed to give more than one answer

## DISCUSSION

Smoking prevalence among adolescents in this study is 32.8%. This shows a growing trend from previous figures (Lee LK, 14.7% and NHMM II, 22.3%).<sup>4,5</sup> A majority (67.2%) of the adolescent smokers in this study were experimental smokers.

This is higher compared to Singapore (21.9%), Indonesia (46.7%) and Philippines (41.9%).<sup>1,6</sup>

About 19.8% of students started smoking before the age of 12 years. These figures are similar to other local and regional studies.<sup>1,7</sup> The early initiation of smoking predicts stronger dependence even before the development of nicotine addiction.<sup>8</sup>

Branded cigarette although highly priced, is the preferred choice among adolescents and a similar trend was noted in the NHMS III.<sup>9</sup> Possible contributing factors include rising standard of living, easily available and fashionable. Students commonly smoked at their friend's home or at the school and obtain their cigarettes either from friends or purchased it themselves. Parents need to monitor their children's activities and expenses while school authorities need to prevent students from smoking within school compound. Perhaps installation of smoke detectors in school toilets could be beneficial.

The prevalence of smoking among adolescents in Sarawak is high with initiation of the habit as early as twelve years of age. This suggests that any intervention on smoking prevention or risk awareness is probably best implemented before the age of 12 years. Joint effort from parents, school and enforcement authorities can change the smoking trend of the future.

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