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H N P D I S C U S S I O N P A P E R

Economics of Tobacco Control Paper No. 32

The Determinants of Smoking Behavior among Teenagers in East Java Province, Indonesia

Santi Martini and Muji Sulistyowati

December 2005

Tobacco Free Initiative
World Health Organization

HNP
HEALTH, NUTRITION, AND POPULATION
THE WORLD BANK

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Health, Nutrition and Population (HNP) Discussion Paper

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Health, Nutrition and Population (HNP) Discussion Paper

ECONOMICS OF TOBACCO CONTROL PAPER NO. 32

The Determinants of Smoking Behavior among Teenagers in East Java Province, Indonesia

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Background Paper prepared for the World Bank Study on the Economics of Tobacco and Tobacco Control in Indonesia, with financial support from SIDA and US CDC/OSH. Completed March 2004.

Abstract: The Surabaya youth survey used a modified version of the Global Youth Tobacco Survey questionnaire to investigate knowledge, attitudes and practices concerning smoking among 1,630 students in 40 high schools in Madiun City, Malang City, Jember Regency and Bangkalan Regency in 2003. Factors which predispose, enable, and reinforce smoking were examined to identify where tobacco control interventions might be appropriate and effective. Female students showed an unexpectedly high smoking rate. Students were aware of the health risks associated with smoking but underestimated how addictive cigarettes are. Generally, they found cigarettes affordable and accessible, but those who perceived cigarettes not very easy to obtain smoked less. Schools appeared to be smoker-friendly environments. Students who lived in households with smokers were more likely to smoke, but parental disapproval of smoking was associated with a lower smoking rate. Smokers, in particular, affirm many social and personal reasons to smoke. These findings suggest many possibilities for interventions.

Keywords: youth smoking, KAP, cigarettes, Indonesia, smoking prevalence, health risks

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FOREWORD

Of 1.2 billion people who smoke worldwide, 452 million (38%) live in developing countries in the East Asia and the Pacific Region and among those 51.4 million (11.4%) live in Indonesia. There is no doubt that smoking is harmful to health; half of long term smokers will die from a smoking-related disease and half of these deaths will occur prematurely in middle age between 35-64 years.

The World Bank tobacco report *"Curbing the Epidemic: Governments and the Economics of Tobacco Control*" notes that millions of premature deaths and disabilities could be prevented if governments were to adopt effective, proved measures to reduce demand for tobacco. These measures include higher taxes, a complete ban on all tobacco advertising and promotion, bans on smoking in work- and other public places, disseminating research evidence on smoking and health, and providing help and support to smokers who want to quit.

Nicotine makes tobacco highly addictive, and makes it hard to quit. In developing countries including Indonesia the age at which people typically start to smoke has been getting younger, and young women are now almost as likely to smoke as young men – a dramatic and serious change in a country were traditionally very few women have smoked. Currently 60% of adult men in Indonesia smoke. Given the large percentage of youngsters in the total population, widespread experimentation with smoking among young people today will dramatically increase the number of smokers in Indonesia in the near future, and contribute to a fast growing burden of non-communicable disease.

There is a clear and urgent need to prevent youth from starting to smoke. What can be done? First, we need a good understanding of why young people smoke and what factors play a significant role in their decisions to start smoking and in influencing how heavily they smoke. Country-specific evidence would help to identify appropriate tobacco control measures to deter young Indonesians from starting to smoke.

This report makes a valuable contribution to our understanding of youth smoking behavior in Indonesia, and compliments the information collected in the Global Youth Tobacco Survey. Our hope is that the information, analysis and recommendations will prove helpful to policy makers, and help result in stronger policies to discourage smoking among young people, who are Indonesia's future.

ACKNOWLEDGEMENTS

This analysis was supported by funding provided to the World Bank by the Swedish International Development Association (SIDA) and by the US Centers for Disease Control and Prevention, Office on Smoking and Health. The authors are grateful for technical assistance from Hana Ross, to the reviewers of the study, and to Betsy Gilpin for her editing assistance.

The study would not have been possible without the hard work and dedication of research assistants Endria T.K., Sofi Fitrandini, Ismael Saleh, Wuri Nurhidayat, and Eko Prasetyo, who helped collect the survey data.

We would like to express our sincere gratitude to the school principals who allowed us to conduct the survey in their schools and to the students who voluntarily participated in the survey in Madiun City, Malang City, Jember Regency and Bangkalan Regency.

We hope the results of this study provide valuable information to policy makers in the central and district Government that helps to identify and implement effective measures to prevent youth from smoking.

Santi Martini

Principal Investigator

1. INTRODUCTION

Thousands of studies attest to the harmful effects of smoking. The longer people smoke, the greater the risks they face. Tobacco contains nicotine, a highly addictive substance and more than 4000 other substances that are potentially harmful to health when smoked or chewed.

In developed countries, most smokers start young; eight out of ten smokers begin in their teens (World Bank, 1999). In low- and middle income countries, smokers typically start at a slightly older age, in their late teens or early twenties, but the peak age of uptake is getting younger. For example, in 1995, 9% of Indonesian smokers said they had started smoking when they were 10-14 year old, and 55% said they started while 15-19 years old (Susenas 1995). In 2001, 10% of smokers had started when aged 10-14 years, and 59% when they were 15-19 years old (Adioetomo, 2001). Moreover, smoking rates among youth have been increasing: smoking prevalence among males aged 15-19 years increased dramatically from 4% in 1995 to 24% in 2001.

Falling age of smoking initiation is especially of concern for developing countries with large populations and a high proportion of young people. Indonesia is the fourth most populous nation in the world with over 217 million people, and 30 percent of the population is under 15 years of age. High and increasing youth smoking prevalence means that Indonesia will face a huge burden of premature morbidity and mortality from tobacco-attributable diseases in future decades if nothing is done.

The evidence identifies effective measures for reducing smoking among adults and youth (World Bank, 1999). Measures should be evaluated and adapted to the specific culture, traditions and other characteristics in each country. Indonesia offers particular challenges, since smoking is still an accepted part of social interaction, at least among men.

This study investigates smoking behavior among high school students in Madiun and Malang City, Jember and Bangkalan Regency in Surabaya Province of Indonesia. It aims to analyze the impact of socio-economic, demographic, cultural and ethnic factors and exposure to cigarette advertising on youth smoking behavior. The theoretical framework identifies predisposing, enabling and reinforcing factors. Predisposing factors include knowledge of the adverse health affects of tobacco use, and social norms and cultural or personal beliefs about smoking. Enabling factors are the accessibility and availability of cigarettes at home and school. Reinforcing factors include smoking by family members, peers and teachers, and cigarette advertising. The goal of the analysis is to identify factors related to youth smoking that can be potentially altered by public policy interventions.

The paper is structured as follows: First, available data on smoking prevalence among youth in Indonesia are summarized. Next, the study methodology is described, including definitions for key variables. In the results section, descriptive statistics are presented, as well as the results of simple multivariate analysis to consider all significant factors simultaneously. Finally, the results are summarized and policy implications are discussed.

2. BACKGROUND

2.1 East Java Province

The study site was East Java province, one of six provinces in Java, Indonesia (the other provinces are DKI Jakarta, Banten, West Java, Central Java and Yogyakarta). East Java province comprises 29 Regencies and 9 cities, with a regional government in each. East Java has a population of 35 million, 26% younger than 15 years of age. The distribution by educational attainment is: 37% have no education or an incomplete elementary education, 32% completed elementary school, 15% junior high, 13% high school and 3% have more than a high school education.

Nearly a quarter of the population (23%) is considered poor (Hadiwijoyo et al., 2001), 43% live on less than one US$ a day (US$11.76/month), 56% spend US$1-2/day (US$11.77-US$58.8) (Central Statistics Bureau 2001a). In 2000, the monthly regional minimum wage varied between Rp.202,000 (US$23.76) and Rp.236,000 (US$27.76), while the monthly minimum cost of living was between Rp.202,748 (US$23.85) and Rp. 251,371 (US$29.57) in 1999 (Central Statistics Bureau, 2000b).

East Java is one of the major raw tobacco and cigarette and kretek producing provinces in Indonesia. In 2001, East Java produced 53% of the country's Virginia-type tobacco (22.4 thousand MT out of 42.1 thousand MT), 58% of all Indonesia-type tobacco (101 thousand MT out of 173.7 thousand MT), and 75% (11.8 thousand MT out of 15.7 thousand MT) of Na Oogst type tobacco (mainly used for cigar production, Directorate Jenderal Perkebunan, 2002). The main tobacco producing regions in East Java are Pamekasan, Jember, Sumenep and Bojonegoro. East Java hosts 150 middle-sized and large cigarette manufacturers, employing a total of 149 thousand employees (Central Statistics Bureau, 2002). Coconut and sugar cane production are also widespread in the province.

2.2 Smoking prevalence in Indonesia and East Java

In 2001, of the 1.2 billion smokers worldwide, 4.2% were Indonesians. Adult smoking prevalence in Indonesia increased from 27% in 1995 to 32% in 2001. By 2001, 62% of Indonesian men (aged 10 years or older) smoked (Adioetomo, 2001). Male smoking prevalence increased especially dramatically in East Java, from 33% in 1995 to 62% in 2001 (Susenas Data, 2002, MOH-IN, 2003).

Very few Indonesian women smoke: 1–3% (aged 10 or older, Central Statistics Bureau, 2002, Suhardi, 1997). Smoking among women in East Java was reported to be only 0.8% in 2001 (MOH-IN, 2003), reflecting social norms and women's low economic status (Mackay and Eriksen, 2002).

A youth survey in Central Java that included 6,276 youths in 149 schools in 1999 reported a smoking prevalence rate of 8.2% among 11 year-old students and 39% among 17 year-old students (Smeta et al., 1999).

The Global Youth Tobacco Surveys (GYTS) [1] conducted in Jakarta, Indonesia and in neighboring countries find that the prevalence rate among youth in Indonesia is much higher than in neighboring countries (CDC/OSH, 2002). For example, the prevalence rate was 22% in Jakarta, Indonesia, 9% in Singapore, 18% in Philippines in 2000, and 5% in China in 1999. Not only are more Indonesian youth smoking, but they first try smoking at younger ages. In 2000, the Indonesia GYTS that included 1,490 students between ages 13 and 17 years from 50 high schools in Jakarta revealed that 47% had tried smoking cigarettes at least once (ever smokers) and 19% of ever smokers had tried their first cigarettes before the age of 10. Given the high smoking prevalence rate among males, the smoking-friendly environments where smoking is considered a way of expressing friendship and of socializing, the high smoking prevalence among Indonesian youth is not surprising.

2.3 Tobacco Control Measures and Youth

Youth have easy access to tobacco from stores or street vendors, because there are no laws that restrict the sale of tobacco to youth. Not surprisingly, 69% of current smokers in the GYTS said that they purchase their cigarettes from stores, and 72% said that they have never been refused when purchasing cigarettes. Furthermore, 13% said they were offered cigarettes by the tobacco industry, which often holds promotional activities at malls and entertainment centers, including offers of free cigarettes to young people.

Tobacco advertisement and promotion is pervasive in electronic and print media, sporting events and on billboards in Indonesia. The government only restricts electronic media (TV and radio) from advertising tobacco from 9:00PM to 7:00AM. The regulation also requires display of a health warning either in print or as an announcement after each advertisement. According to the GYTS data, 95% of youth said they noticed anti-smoking media messages (quite probably on TV after tobacco advertising). Given the content of anti-tobacco announcement or print warning such as “according to MOH, tobacco use is harmful to your health” and the way they are presented – for less than a second (displayed or announced), it may be difficult to read or understand the warning. Youth are more exposed to tobacco advertisements than to warnings and may not absorb the meaning of the warning messages.

The Ministry of National Education (MONE) works with the MOH to reduce smoking among youth, and in 1997, it issued a memorandum on smoke-free schools and distributed no-smoking pamphlets to schools. It is not known how many schools comply with MONE’s smoke-free school policy.

[1] The GYTS has been done in many countries and uses standardized methodology, definitions and instruments in all countries.

3. METHODOLOGY

3.1 Sample

The data in this report are from a survey of high school students from randomly selected high schools (n=40) from two regions and two cities (10 high schools were selected for each region and city) in East Java province of Indonesia. The regencies and cities were selected randomly in areas where three ethnic groups are located; Malang and Madium cities were chosen for the Javanese ethnic group; the Banglakan region was selected for the Maduranese ethnic group; and the Jember region was selected for the Pendalungan ethnic group. Altogether, 1,630 students participated in the study; 400 from the Jember region, 419 from the Madiun city, 408 from the Malang city and 403 from the Bangkalan region. A class from each school was also selected randomly and the self-administered survey was conducted in the class. Before the survey was conducted, the students were given information about the purpose of the survey and assured that their responses would be kept confidential. Six research assistants from the School of Public Health at Airlangga University in Surabaya City in East Java were trained to administer the survey.

3.2 Theoretical Framework for Survey Instrument Preparation:

The survey questionnaire was prepared based on Green's (1991) PRECEDE model which argues that health promotion programs can change the environment and behavior (e.g., smoking) by employing educational and organizational strategies. According to the PRECEDE model, these strategies should focus on three important factors that play significant roles in changing behavior and the environment. These are:

1) predisposing factors,
2) enabling factors, and
3) reinforcing factors.

Green argues that not all factors may have a similar impact. Therefore, the most effective ones should be identified and given priority as a focus of intervention. Then, based on their relative importance and the availability of resources, others should be considered.

Predisposing factors are those antecedents to behavior that provide the rationale or motivation for the behavior. They include individual or population knowledge, attitudes, beliefs, values, and perceptions that facilitate or hinder motivation for change. The survey questionnaire was designed to test the impact of predisposing factors, such as participants' knowledge about adverse health effects of smoking, existing social norms and beliefs about smoking behavior and participants' exposure to cigarette advertisement and perceptions of the effect of advertising on youth smoking behavior.

Enabling factors are the antecedents to behavior that enable a motivation to be realized. They are the skills, resources, or barriers that can help or hinder the desired behavioral changes as well as environmental factors. Accessibility, referrals, rules or laws are also

considered enabling factors. The survey asked questions about the accessibility and availability of cigarettes to examine the impact of enabling factors on smoking behavior.

Finally, *reinforcing factors* are those subsequent to a behavior that provide the continuing reward or incentive for the behavior and contribute to its persistence or repetition. The survey included questions to examine the association of reinforcing factors with smoking behavior, examining the attitudes and behavior of peers, teachers, parents, and family members. Exposure to tobacco advertising can also be a reinforcing factor.

3.3 Variables analyzed

As mentioned above, a primary goal of this study was to identify which of the above factors should be given priority as a focus of interventions to change smoking behavior among youth in Indonesia. A copy of the survey instrument from which the factors analyzed were derived is included in Appendix A. This section summarizes the variables used in the descriptive results that are presented in the next section.

3.3.1 Smoking Behavior and Intensity of Smoking

Ever and Current Smokers

Two questions were used to determine the smoking status of participants. To identify ever smokers, a question asked: "Have you ever smoked a cigarette, even if a few puffs?" In order to identify current smokers, a second question was asked: "Do you smoke until now?" To avoid ambiguity, the question should have asked: "Do you currently smoke?" Thus, to try and ensure that smoking status was correctly coded, we cross checked all ever smokers' and current smokers' responses to other questions that only current smokers were directed to answer, such as their weekly cigarette expenditures, whether they smoked daily, weekly, monthly or occasionally. Some students who claimed to smoke occasionally, weekly or monthly did not consider themselves to be a "current smoker". Also, some students who claimed they did not smoke currently provided answers to the questions only current smokers were supposed to answer.

Because of these inconsistencies, we examined the pattern of responses to categorize students as ever or current smokers. We identify current smokers as ever smokers who indicted that they smoked one to three times a month, once a week or daily, regardless of whether they consider themselves a current smoker.

Cigarette Consumption

Participants were asked: (i) how often they smoke (daily, once a week, one to three times a month, and sometimes/occasionally); (ii) the number of cigarettes smoked on the days they smoked; and (iii) their weekly expenditures on cigarettes. The frequency of smoking (i) did allow us to determine how often monthly and occasional smokers smoked. Furthermore, when we examined level of consumption and the corresponding expenditures, especially for daily and weekly smokers, there was considerable apparent

inconsistency. Most daily and weekly smokers indicated relatively low cigarette expenditures but claimed high cigarette consumption. While they probably spent some money for cigarettes, they may also have obtained cigarettes for free from others. In contrast, many occasional and monthly smokers reported higher weekly cigarette expenditures than their reported consumption seemed to warrant. They likely are sharing the cigarettes they buy with others.

In order to estimate consumption level, for smokers who failed to report any expenditure for cigarettes, we made several assumptions. First, it was assumed that daily smokers smoked 20 days[2] a month; weekly smokers smoked four days a month; monthly smokers smoked two days a month; and occasional smokers smoked one day a month. Then, the number of days smoked per month was multiplied by the number of cigarettes they reported smoking on the days they smoked. Finally, this result was divided by 4 to estimate weekly "reported" cigarette consumption.

For smokers who did report cigarette expenditures, weekly cigarette consumption was determined using the expenditure data. A continuous variable for average cigarette consumption (CON1) was created by dividing the reported weekly cigarette expenditures by 500 Rp, the price of the most popular brands smoked by youth in Indonesia.

3.3.2 Demographic and Socioeconomic Variables

A number of demographic variables were examined including, age, gender, ethnicity, family structure and size, and parental employment.

3.3.3 Predisposing Factor Variables

Data were examined from questions about students' knowledge, attitudes, beliefs and perceptions about the negative health effects of: (i) direct smoking for smokers, pregnant women and unborn babies; (ii) secondhand smoke on youth, children and others; (iii) intensity and duration of smoking for the smoker; as well (iv) beliefs about the ease and benefits of quitting. Students were also asked if they agreed that cigarette advertising influences smoking behavior.

3.3.4 Enabling Factor Variables

The survey included a set of statements to measure student's perceptions of cigarette affordability and accessibility/availability of cigarettes at home and at school.

3.3.5 Reinforcing Factor Variables

A set of questions were asked to identify the students' environment with respect to smoking by examining the smoking status of people such as parents, siblings, peers, teachers and other family members with whom the students spent time and interacted

[2] It is common practice to estimate monthly consumption by 30, but since the participants are youth, it is assumed that they won't be able to smoke at home during the weekends.

daily. Adult approval or disapproval of youth smoking as expressed by the degree of trouble a student would experience if they smoked may also play a role. Other variables assessed included students' perceptions about whether their peers and teachers think smoking is acceptable, reasons to smoke including whether people smoke to be accepted by their peers or to facilitate socialization. The extent of students' exposure to cigarette advertising in teenage magazines, adult magazines, newspapers, billboards, television and radio was also assessed.

3.3.6 Analysis

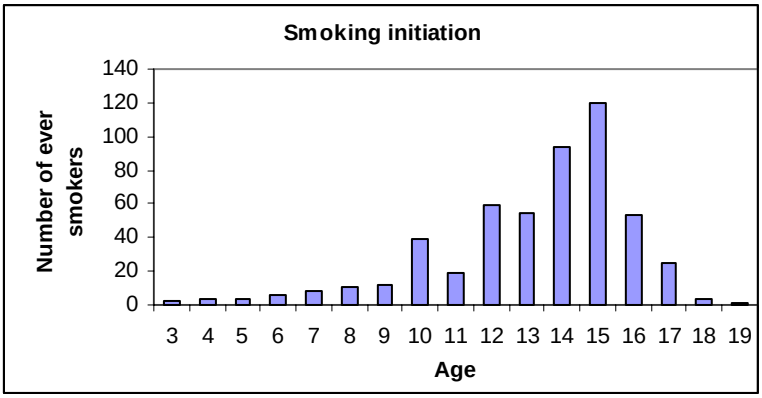
Variables were first examined descriptively both to characterize the sample and to determine whether they appeared related to smoking status. Variables that appeared related to smoking status (current smoking) were then analyzed using multivariate logistic regression analysis. Several preliminary analyses were conducted that examined demographic factors alone, and then predisposing factors, enabling factors, and reinforcing factors were added to the model. A final model included all factors statistically significant ($p<0.10$) in the preliminary models of demographics plus each group of variables alone. A backward elimination procedure was used for each model, and variables were retained if $p<0.10$.

4. RESULTS

4.1 Smoking Behavior and Demographics

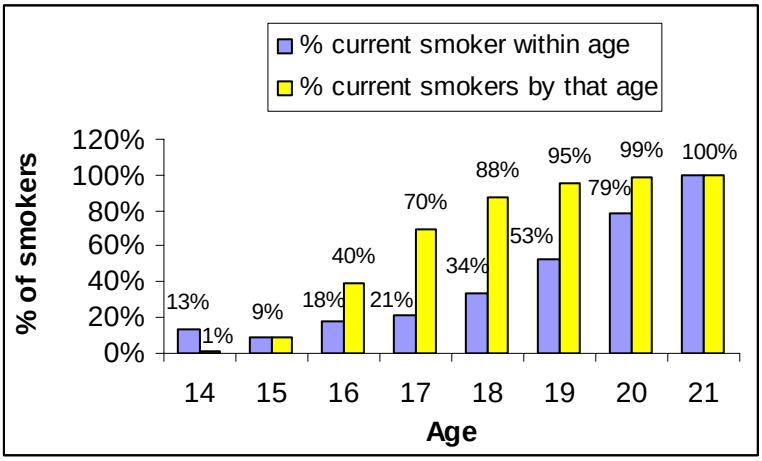
The Surabaya youth survey had 1,630 participants whose age ranged from 13 to 21 years. Among these students, 32% (521) were identified as ever smokers, and 20% (333) were identified as current smokers. Of ever smokers, 64% (333/521) were current smokers. As seen in the Figure 1, most ever smokers first smoked between the ages of 10 and 17 years, with the modal age of 15 years. Few had initiated smoking after age 17 years.

Figure 1: Smoking initiation age



Current smoking prevalence was already 13% among 14 year old students (Figure 2). The older the students, the more smoking prevalence increased. For example, 18% of 16 year olds, 21% of 17 year olds, 34% of 18 year olds, and 53% of 19 year olds were current smokers. Notably, 70% of all current smokers (233/333) are 17 years old or younger.

Figure 2: Percentage of Current Smokers within and by Age Group



For the entire sample, the mean number of cigarettes smoked was estimated as 11.6 (± 0.95SD) a month, ranging between 0 (nonsmokers) and 360 cigarettes. On average, current smoker smoked 56 (±3.8) cigarettes a month. Figure 3 shows that as the students get older, their cigarette consumption tends to increase.

Figure 3: Smoking intensity among students within and between age groups

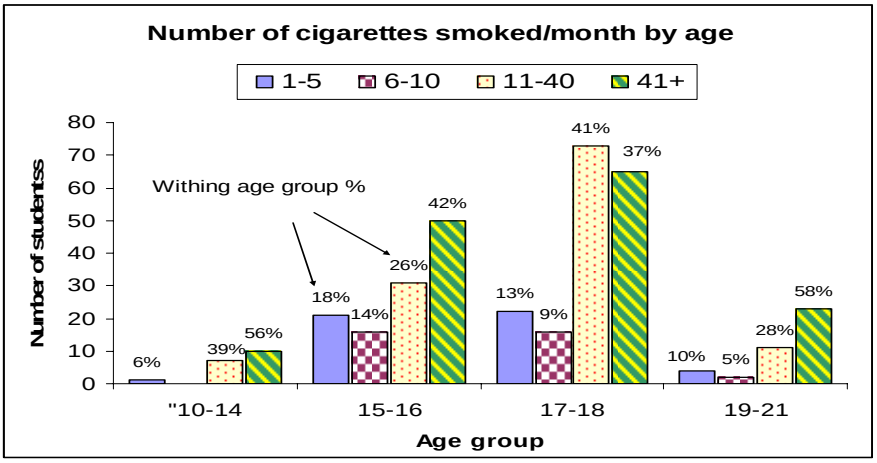


Table 1 shows the overall sample demographic distribution, subgroup current smoking prevalence, and the distribution of smokers among subgroups. For the entire sample, age ranged from 13 years (one student) to 21 years, and the mean age was 16.4 (± 1.14) years. The majority of students, 68% (1110/1630) of the sample were of Javanese

ethnicity. Current smoking prevalence rates among three ethnicities did not differ significantly.

Current smoking prevalence among male students was 23% (199), 36% (311/859) of male students were ever smokers and of these 64% (199) currently smoked. Indonesia is known as a predominantly male smoking country where traditionally women have tended not to smoke. In 2001, only 2% of adult females smoked (Adioetomo, 2001), but for the new generation this may be changing. In the present study, 27% of female students (210/771) were ever smokers and 17% (134) were current smokers.

Among current smokers, 43% (143) smoked daily, 21% (69) smoked once a week, 9% (31) smoked once to three times a month, and 20% (66) were occasional smokers (less than once per month).

Table 1: Demographic Characteristics of Students and Smoking Status

	Sample Distribution n (%), N=1,630 (1)	Current Smoker Prevalence n (%) (2)	Distribution of Current Smokers (2)/333
Gender			
Male	860 (53%)	199 (23%)	60%
Female	770 (47%)	134 (17%)	40%
Smoking status			
Daily	143 (8.9%)		43%
Weekly	69 (4.2%)		21%
Monthly	31 (1.9%)		9%
Occasional	66 (4.0%)		20%
Ethnicity			
Javanese	1110 (68%)	225 (20%)	66%
Madurese	435 (27%)	92 (21%)	28%
Pandulung	85 (7%)	15 (18%)	5%

Table 2 describes the students' family structure, family size and parents' employment status. The majority (69%, 1126/1630) lived with their parents and siblings, 11% lived with other family members, and 9% lived alone. The rest of the students lived either with their father only (1%), their mother only (2%), or both (3%), or with others (5%). Nearly half (46%) lived in a household with four or fewer members, but 6% lived in households with 10 or more members. Nearly one-third (30%) of students came from households where both parents worked, though 45% of fathers and 26% of mothers were already retired. Students reported that 6% of their fathers and 39% of their mothers had no employment.

It appears that students living with other family members were more likely to be current smokers (25%) when compared with students living with parents and siblings (19%). The larger the family size, the lower the smoking prevalence rate. The current smoking

prevalence rate also appeared higher in households where the parents were retired or where the mother or father worked as a laborer.

Table 2: Family Structure of Students

	Sample Distribution n (%) N=1,630 (1)	Prevalence of Current Smokers n (%) (2)	Distribution of Current Smokers n (%) (2)/ 333)
Family structure- lives with:			
Parents & siblings	1126 (69%)	215 (19%)	65%
Other family members	177 (11%)	45 (25%)	14%
Alone	148 (8%)	27 (18%)	8%
Household size			
=< 4 members	754 (46%)	154 (20%)	46%
5-7 members	681 (42%)	145 (21%)	44%
8-10 members	98 (6%)	19 (19%)	6%
>10 members	97 (6%)	15 (15%)	5%
Parent Employment*			
Both work	482 (30%)	83 (17%)	25%
Only one works	397 (24%)	80 (20%	24%
Father retired	737 (45%)	170 (23%)	51%
Mother retired	417 (26%)	94 (22%)	28%
Father works	784 (48%)	139 (18%)	42%
Mother works	577 (35%)	107 (19%)	32%
Father works for government	302 (19%)	40 (13%)	12%
Mother works for government	250 (15%)	39 (16%)	12%
Father laborer	342 (21%)	78 (23%)	23%
Mother laborer	276 (17%)	58 (21%)	17%

*categories not disjoint

4.2 Predisposing Factors

A listing of the factors analyzed that predispose youth to smoke is presented in Table 3. The level of knowledge of particular risks varies among students. For example, students do not seem to be well-informed about the harmful contents of cigarettes; only 15% knew that there are 4000 potentially harmful chemicals in cigarettes. A high percentage (87%) recognized that smoking causes disease, but only 68% knew that nicotine is addictive. Half the students believed that tar in cigarettes causes lung cancer; 62% knew that risk increases with the number of cigarettes smoked a day, and 48% knew that the duration of smoking increases the risk of lung cancer. Although most students (90%) knew that smoking by pregnant women is dangerous, only 60% knew that women who smoke during pregnancy may also cause physical and mental problem in their babies. The knowledge about second-hand smoke, or passive smoking, was not widespread among the students; 60% knew what passive smoking means, and 51% knew that second-hand

smoke exposure causes lung cancer. Many students (66%) were aware of the negative health effects of second-hand smoke exposure to children's lungs. This knowledge was present to about the same degree in smokers as in the entire sample.

Also, it appears that most students are well aware that they are not immune from the health risks associated with smoking and from exposure to second-hand smoke. Current smokers appear to be less likely to be aware of these threats to their own health, which may represent denial on their part. A relatively high percentage of the sample (80%) recognized the health benefits to a smoker of quitting, but only a minority (43%) thought it would be difficult for a smoker to quit.

As the rightmost column of Table 3 indicates, in general, knowledge of the risks of smoking did not tend to be associated with increased or decreased smoking prevalence. Students who said that even if they exercised, smoking might still be harmful were less likely to be smokers. Prevalence was also somewhat lower among those who thought that smoking didn't just harm the elderly. Smokers seem to agree more that smoking causes coughs and nasal congestion, probably from personal experience.

Thinking that advertisements promote smoking was not associated with smoking prevalence.

Table 3: Predisposing Factors: Knowledge and Perceptions

	Sample Distribution N (%) N=1,630 (1)	Distribution among Current Smokers n (%) (2)	Current Smoking Prevalence n (%) (2)/333
General knowledge*			
Causes diseases	1,588 (87%)	315 (94%)	20%
Smoking diseases are not easy to cure	1,317 (81%)	211 (63%)	16%
Causes cough and rhinorhea	348 (21%)	110 (33%)	32%
There are 4000 chemicals	241 (15%)	54 (16%)	22%
Causes Cancer	452 (28%)	82 (24%)	18%
Nicotine is addictive	1,121 (69%)	244 (73%)	22%
Tar incr. lung cancer risk	781 (48%)	187 (56%)	24%
Intensity & lung cancer risk	1,017 (62%)	200 (60%)	20%
Duration & lung cancer risk	1,179 (72%)	234 (70%)	20%
Inhale& lung cancer risk	790 (48%)	181 (54%)	23%
No inhale no risk	492 (30%)	113 (34%)	23%
Harmful to pregnant women	1,468 (90%)	276 (83%)	19%
Harmful to fetus	972 (60%)	164 (49%)	17%
Know about Second-hand smoke	967 (59%)	181 (54%)	19%
Health risk for Second-hand smoke	935 (57%)	202 (61%)	22%
SHS bad for children's lung	1,070 (66%)	194 (58%)	18%
Not only danger to elderly	1,375 (84%)	207 (62%)	15%
Potential harm to own health*			
SHS harmful to my health	1,481 (91%)	272 (82%)	18%
Even a few cigarettes harmful	947 (58%)	190 (57%)	20%
Smoking harmful to my health	1,512 (93%)	268 (80%)	18%
Smoking harmful even if the smoker is strong and healthy	1,338 (82%)	238 (71%)	18%
Smoking harmful despite exercise	1,030 (63%)	112 (34%)	9%
Quitting*			
Quitting smoking benefits health	1,296 (80%)	253 (76%)	20%
It is difficult to quit	702 (43%)	141 (42%)	20%
Perceive that advertisements promote smoking			
Yes	1,216 (75%)	250 (75%)	20%
No	414 (25%)	83 (25%)	20%

*categories are not disjoint.

4.3 Enabling Factors

The affordability and availability of cigarettes were the main enabling factors analyzed. Overall, 29% (480/1630) of the students thought that cigarettes were cheap and affordable, and 11%(1176/1630) thought they had enough money to purchase cigarettes. Among those indicating that cigarettes were affordable, 43% (205/480) were ever smokers, and 54% were never smokers. Given the average pocket money students

reported receiving of Rp.12,418 per week (range, Rp. 250 to Rp.22,500 per week), many could easily purchase cigarettes assuming that the price per single cigarette is Rp.500.

Table 4 examines the perceptions of ever smokers about cigarette affordability and describes how they and current smokers said they obtained cigarettes. Nearly half of current smokers thought that cigarettes were affordable, and 80% said they had enough money to buy them. Current smokers tend to be older and may already have income from employment. Another reason that current smokers find cigarettes affordable is probably because more than half of current smokers (53%, 176/333) bought cigarettes by the piece (single cigarettes) and 15% (50/333) don't buy them at all. Many may get cigarettes from other sources (friends and family) easily without having to pay for them.

Table 4: Ever and current smokers' purchasing power and habits

	Distribution among Ever Smokers n(%) n=521 (1)	Prevalence of Current Smokers among Ever n (%) (2)	Distribution of Current Smokers (%) (2)/333
Affordability*			
Cigarettes are affordable	205 (39%)	90 (44%)	27%
I have enough money to buy	176 (34%)	140 (80%)	42%
How I buy			
Don't buy	182 (35%)	50 (27%)	15%
Buy by piece	216 (41%)	176 (81%)	53%
Buy by pack	84 (16%)	77 (92%)	23%

*Categories are not disjoint.

Students were asked how easy it was to get cigarettes and how easy it was to get them whenever they wanted them or where ever they were. Table 7 shows that in the survey 30% of students said it was very easy and 45% of students said they could get cigarettes anytime and anywhere they wanted. Current smoking prevalence was much higher among the students who thought cigarettes were very easy to get.

In the sample, 30% of students said that it was easy to get cigarettes at home. Again, among those who said cigarettes were easy to get at home, a high percentage were current smokers. The main source of cigarettes in the home was not parents or siblings, but other family members. Unlike smokers, only 20% (75 out of 1297) of never smokers said they could get cigarettes through parents, siblings or other family members.

It appears that schools are an important source of cigarettes, mainly through friends who smoke and/or who offer cigarettes. It seems common for students in Indonesia to share cigarettes. For example, in the sample, 83% of current smokers said they asked for cigarettes from friends. If they didn't ask, friends offered them; 57% of all students and 91% smokers said that friends had offered them cigarettes. This is not surprising when considering the smoking status of friends; 72% students (1183/1630) have a friend who smokes. However only 33% (331/995) said they would take a cigarette when offered one.

This may be a sign that younger generation may be moving away from the culturally accepted social behavior of offering and accepting cigarettes.

In the sample, 64% of students said that stores and vendors sold cigarettes, but only 21% say they bought them from stores or vendors.

Table 5: Access and ease of getting cigarettes

	Sample Sample Distributon n (%) (1)	Prevalence of Prevalence of Current Smokers n (%) (2)	Distribution of Distribution of Current Smokers n (%) (2)/333
Ease of getting cigarettes			
Very easy	490 (30%)	284 (58%)	85%
Not very easy	1140 (70%)	49 (4%)	15%
Can get cigarettes whenever I want			
Agree	738 (45%)	262 (36%)	79%
Disagree	892 (55%)	71 (8%)	21%
Easy access at home			
Yes	480 (29%)	221 (46%)	66%
No	1150 (71%)	112 (10%)	34%
Access in Home*			
From parents	55 (3%)	53 (96%)	17%
From siblings	71 (4%)	64 (90%)	19%
From others	246 (15%)	192 (78%)	58%
Just take them	94 (6%)	61 (65%)	18%
Access from school and friends*			
Ask friends	391 (24%)	276 (83%)	83%
Buy at school	156 (10%)	76 (48%)	23%
Friends offer	935 (57%)	302 (32%)	91%
Access from stores*			
Stores/vendors sell	1,046 (64%)	264 (25%)	79%
I buy from store	343 (21%)	299 (87%)	90%
Someone buys for me	64 (4%)	51 (80%)	15%

*categories are not disjoint.

4.4 Reinforcing factors

Table 6 indicates that 79% (1,295) of students live with at least one smoker at home and 21% (335) live in non-smoking households. Current smoking prevalence was much higher among students who lived in households with smokers (23%) compared to those without (11%). Von Bothmer et al. (2002) have shown that adolescents' smoking behavior is influence by the existence of smokers at home, especially by smoker siblings, which is consistent with our data.

It also appears that parents' attitude towards their children's smoking is an important factor for youth smoking behavior. When students perceived that they would get in trouble, current smoking prevalence was only 16%, compared to 45% if students did not perceive this treat. This finding is consistent with Von Bothmer et al.'s (2002) findings that youth cared about their parents' attitudes towards their smoking and some said they wanted their parents to tell them not to smoke.

It appears that most teachers do not hesitate to smoke in front of their students, because the majority of students (70%) see their teachers smoke at school or in the classrooms. And unlike the home environment, 95% of students said that the teachers would not mind if they smoked at school. Despite this, many (89% or 1,448) students thought that smoking was banned at school. It may be banned, but it appears that teachers ignore the bans. In the survey, 73% of students said that their friends would not mind if they smoked. This is expected since the majority (73%) had a friend who smoked. However, it appears that current smoking prevalence is not elevated in the groups who gave these responses, which may reflect such widespread exposure of students to smoking, that these perceptions have relatively little added effect on behavior.

Table 6: Smoking environment and parents' attitudes towards students' smoking

	Sample Distribution n (%) N=1,630 (1)	Prevalence of Current Smokers n (%) (2)	Distribution of Current Smokers n (%) (2)/333
Smoking in household			
No smokers in household	335 (21%)	38 (11%)	11%
At least one smoker	1295 (79%)	295 (23%)	89%
Who smokes*			
Father smokes	1018 (63%)	235 (23%)	71%
Mother smokes	33 (2%)	10 (30%)	3%
Siblings smoke	530 (33%)	164 (31%)	49%
Parents attitudes			
Would get in trouble	1374 (84%)	219 (16%)	66%
Would not get in trouble	256 (16%)	114 (45%)	34%
Smokers in social environment*			
Friends smoke	1,183 (73%)	276 (23%)	82.9%
Teacher/s smoke	1,143 (70%)	255 (22%)	76.6%
Smoking ban in school	1,448 (89%)	307 (21%)	92.2%
Perceptions of norms about smoking*			
Friends OK with smoking	1,190 (73%)	249 (21%)	75.0%
Teacher OK with smoking	1,543 (95%)	317 (21%)	95.0%

*categories are not distinct

Table 7 presents the reasons students gave for smoking. In the entire sample, the reason most often cited was for weight control. Interestingly, this reason was not cited more often among females, 49% (378/770) than males. Contrasting the column describing the entire sample with the column describing ever smokers clearly shows that most of those who offered these reasons for smoking had already started smoking. Whether these reasons were present beforehand or were a post-hoc justification is unknown.

Among the ever smokers, the most common reasons were that smoking facilitates socializing, makes group work better, and increases self-confidence. It appears that current smokers, perhaps through their experience, accepted some reasons less and others more than the ever smokers. For instance, few said that they were forced to smoke by friends, but more believed that smoking facilitates socialization and increases self-confidence.

The prevalence of current smoking is especially high among those who think that smokers are perceived as attractive, think smoking facilitates socialization, group work, concentration, and good grades, and makes life easier.

Table 7: Social and personal reasons for smoking

Reason*	Sample Distribution N=1,630 n (%) (1)	Distribution among Ever Smokers N=521 n (%) (2)	Distribution among Current Smokers N=333 n(%) (3)	Prevalence of Current Smoking. % (3)/333
To be accepted by a group	44 (3%)	45 (9%)	8 (2%)	18%
Forced by friends	99 (6%)	100 (19%)	23 (7%)	23%
Perceived as attractive	112 (7%)	113 (22%)	90 (27%)	80%
Facilitates socializing	254 (16%)	254 (49%)	192 (58%)	76%
Better work in a group	227 (14%)	228 (44%)	173 (52%)	76%
Increases concentration	91 (6%)	92 (18%)	75 (23%)	82%
Increases self-confidence	249 (15%)	249 (48%)	200 (60%)	80%
Makes life easier	158 (10%)	158 (30%)	132 (25%)	83%
Helps to get better grades	82 (5%)	82 (16%)	63 (19%)	77%
Helps to lose weight	776 (48%)	271 (52%)	179 (54%)	23%

*categories are not disjoint.

Table 8 shows the results of the questions related to students' exposure to cigarette advertising. Some exposure channels appear to be much more effective in reaching the student audience than others. Billboards and TV advertisements were seen very often by high percentages of all students. Smokers' exposure rates were very similar to the sample as a whole. Although fewer students reported seeing tobacco advertising in teen magazines than in other media, this medium appears to be associated with higher smoking prevalence.

Table 8: Exposure to cigarette advertisements

	Sample Distributon N=1630 n (%) (1)	Distribution among Current Smokers N=333 n (%) (2)	Prevalence of Current Smoking % (2)/333
Exposure to cigarette ads very often*			
Teen magazines	114 (7%)	36 (11%)	32%
Adult magazines	312 (19%)	73 (22%)	23%
Newspapers	527 (32%)	112 (34%	21%
Billboards	1,152 (75%)	236 (71%)	20%
TV	1,417 (87%)	296 (89%)	21%
Radio	684 (42%)	160 (48%)	23%

*categories are not disjoint.

4.5 Multivariate Analyses

From the results described above, we selected a number of variables to include in a series of multivariate analyses (rows in Table 9). Two key variables, knowledge concerning the harmful effects of smoking (a predisposing factor) and reasons for smoking (an enabling factor) were combined into "scores" for analysis. The number of items for which a student affirmed the adverse effects of smoking (Table 3) was calculated and the resulting "score" divided into three groups (low knowledge, medium, and high). The number of positive reasons for smoking (Table 7), was similarly scored into three groups (low number of reasons, medium, high). Age and pocket money were analyzed as continuous variables. For each of the other variables, the referent group was the complement of the variable description indicated in the first column of Table 9.

When demographic factors were considered alone (model 1), age, family structure (lives with parents [referent] vs. with others or alone), and the amount of personal disposable income (pocket money) were significantly associated with being a current smoker. Having more pocket money increased the likelihood of being a current smoker.

When predisposing variables were included along with the demographic variables (model 2), the same demographics retained significance, and having medium or high knowledge regarding the harmful effects of smoking was inversely related to being a current smoker. In addition, perceiving that there would be harmful consequences to smoking even if one exercised or was strong and healthy was associated with a much lower likelihood of being a current smoker. Those who thought that it would not be difficult to quit smoking showed a higher likelihood of current smoking.

When demographic factors and enabling factors were analyzed together (model 3), family structure and disposable income (pocket money) were no longer significant. The belief that cigarettes are easy to get was associated with nearly four times the risk of being a

current smoker. More importantly, being in the group that cited a high number of reasons to smoke increased the likelihood of being a current smoker by a factor of 36!

In the model including demographics and reinforcing factors (model 4), family structure was again significant. Having family members who smoked increased the risk of being a current smoker. Perceiving that you would get in trouble with your parents if you smoked was highly associated with a reduced risk of being a current smoker. Reporting that your peers smoked increased the risk about 75%, but perceiving that peers were supportive of smoking increased the risk by nearly 22 fold!

The final model included the variables significant in any of models 1 through 4. Age, living with family other than parents or alone, thinking that cigarettes are easy to get, having a lot of reasons to smoke, and having peers that smoke or approve of smoking were independently significantly associated with an increased likelihood of smoking. Believing that smoking carried a high number of health risks or that you would get in trouble with your parents was protective.

Table 9: Multivariate analyses.

	Model 1 – Demographics Only OR (95% CI)*	Model 2- Demographics and predisposing factors OR (95% CI)	Model 3- Demographics and enabling factors OR (95% CI)	Model 4- Demographics and reinforcing factors OR (95% CI)	Final model – Demographics and significant variables from models 1-4 OR (95% CI)
Demographics					
Age	1.84 (1.62-2.08)	1.81 (1.59 - 2.07)	1.53 (1.30 - 1.79)	1.55 (1.318 - 1.811)	1.40 (1.17- 1.68)
Javanese					
Family structure	1.44 (1.03 - 2.01)	1.40 (0.99 – 2.00)	1.37 (0.90 - 2.09)	1.60 (1.052 - 2.433)	1.59 (0.99 - 2.57)
Pocket money	1.000018 (1.000006–1.000029)	1.000024 (1.000011– 1.000036)			
Predisposing factors					
Knowledge of harm: Low		1.00			
Med		0.76 (0.537 - 1.085)			
High		0.48 (0.321 - 0.713)			
Smoking still bad even if I exercise or am strong and healthy		0.24 (0.174 - 0.327)			0.44 (0.28-0.67)
Difficult to quit		1.54 (1.130 - 2.106)			
Enabling factors					
Believe cigarettes easy to get			3.93 (2.73 - 5.67)		2.84 (1.88 - 4.30)
Reasons for smoking score: Low			1.00		1.00
Med			2.22 (1.22 - 4.05)		1.73 (0.91 - 3.28)
High			36.10 (20.98- 62.12)		12.98 (7.18 - 23.46)
Reinforcing factors					
Family members smoke				1.73 (1.04 - 2.89)	
Trouble if smoked in front of parents				0.30 (0.20 - 0.46)	0.36 (0.22 – 0.59)
Teachers smoke					
Peers smoke				1.74 (1.07 - 2.82)	7.85 (5.09 – 12.11)
Teachers okay with smoking					
Peers okay with smoking				21.97 (14.99 - 32.20)	7.85 (5.09 – 12.11)
School smoke-free					
See lots of cig ads in teen magazines					

5. DISCUSSION AND CONCLUSIONS

Contrary to what would be expected from existing data for Indonesian adults, a surprisingly high percentage of female students in this sample were current smokers. Women have begun to smoke in other nations as they have modernized and women have sought more independence compared to their traditional roles in society. When other variables (e.g., pocket money) were included in multivariate analyses, gender was no longer statistically significantly associated with the probability of smoking, indicating that teenage girls are just as likely to smoke as boys, other things being equal.

Most ever smokers had their first cigarette between 10 and 17 years of age, with age 15 years being the most common age of initiation. In general, today's Indonesian youth may be adopting smoking earlier than in the past, perhaps as a way of presenting themselves as more modern and part of a global youth culture, promoted through music, music videos, movies, fashion, etc. It would be important for tobacco control efforts to try to break the link between smoking and modernity. Developing countries might seek to avoid the pitfalls experienced by those further along in the development and modernization processes.

While it is impossible to alter some factors that appear to encourage people to smoke, others can be addressed. For instance, the smoking rate was higher among students who did not live in a family that included parents, and there is little to be done about this social factor. But, as mentioned above and with other examples below, tobacco control counter measures can potentially have an effect. Any measure that promotes the idea that smoking is not the norm might discourage youth smoking.

Predisposing factors

While there are other predisposing factors, we focused on the knowledge of the health risks associated with smoking. This knowledge was present but uneven among the Indonesian students. Rather than focus on the health risks faced by long-term smokers, it might be more important for tobacco control practitioners to address the health risks of smoking to younger people, such as women during pregnancy and of environmental tobacco smoke to nonsmokers, particularly babies and children. Such information might increase the number of students with a high knowledge of the adverse health consequences of smoking. Also, it would be important to educate students about the danger of nicotine addiction and the difficulty of quitting smoking. Many probably think that they could quit smoking before the long-term health effects would endanger their personal health. The belief that smoking is harmful personally even if one exercises and is otherwise healthy appeared to be associated with reduced smoking prevalence. Public health messages emphasizing this theme might deter youth smoking.

Enabling factors

Smoking prevalence was lower among those who did not think that cigarettes were very easy to get. In general, smokers said that cigarettes were affordable and readily attainable. While instituting and enforcing access-to-minor laws may not be practical, there are other steps that might reduce the accessibility and affordability of cigarettes. Many smokers bought cigarettes, and many also obtained them from others, including peers and family. Siblings and other household members were more likely to be a source than parents. Letting people know that facilitating youth smoking by giving them cigarettes is not doing them a favor might be a message to counteract social sources. Another emphasis that might be practical is limiting access during the school day. If no one, including teachers, other staff, and visitors, was allowed to smoke or bring cigarettes onto the school campus, social sources should decline. This would also set an expectation and could help lead to a change in the perception (norm) that smoking is acceptable. Currently, there was not much of an association between saying that smoking was not allowed in schools and smoking prevalence, but if smoke-free schools were universal and adequately enforced, this might change. This action would explicitly and clearly indicate that smoking is not acceptable, especially if accompanied by measures to make other public spaces where adults spent time together (all workplaces, transportation, etc) smoke-free as well.

Another obvious step would be to sell cigarettes only by the pack. Many smokers bought single cigarettes, and found smoking easily affordable. Having to pay the price for an entire pack at once might deter smoking. Increasing the price of cigarettes significantly through taxation is another obvious measure that has proven effective in many countries.

Reinforcing factors

Our results indicate that students with smokers in the household were more likely to smoke. It could be argued that family smoking is a predisposing factor (children may think that if their parents smoke, then smoking is acceptable), an enabling factor (others in the household are a ready source of cigarettes), and a reinforcing factor (students may smoke socially with other family members). Only tobacco control measures that discourage and reduce adult smoking prevalence will reduce the number of households with smokers and thus the perception that smoking is the norm.

However, parents' attitudes about youth smoking appear to be a deterrent. Enlisting parents in the fight against youth smoking may be an effective strategy. Even parents who smoke, but emphatically express the wish that they did not smoke (and that it is very difficult to quit) and that their children should not smoke, may make a difference. Currently, having friends or teachers who smoke and the perceived norms of these groups regarding smoking do not appear to be associated with youth smoking, perhaps because smoking is so pervasive. As mentioned above, a completely smoke-free school environment may make a difference. If smoking is observed less, it will be perceived as less acceptable and less "normal" and be less of a fixture in the social environment. Social norms against smoking, particularly among peers, need to be increased.

While some non-smoking students perceived smoking as socially helpful, these views were much more prevalent among smokers. Smokers were also more likely to perceive a personal benefit (increased concentration, better grades, etc). Whether these beliefs led to smoking or were a result of smoking cannot be addressed with cross-sectional data. In this study, those who perceived smokers as attractive were particularly likely to be smokers. Images of beautiful, healthy people in social settings are pervasive advertising themes. While youth can learn of benefits of smoking from smokers, banning cigarette advertising is a powerful way to undermine the (erroneous) associations of smoking with glamour, beauty etc. that is a key message of cigarette advertising. Results will likely be limited unless a complete ban on advertising is mandated – cross country research shows that weak or partial advertising bans are ineffectual (World Bank, 1999). At the very least, however, tobacco advertising should be banned anywhere near schools and in teen magazines (smoking prevalence was higher among those who saw cigarette advertisements very often in teen magazines). And all advertising should be required by law to carry large, prominent, specific health education messages about the risks of smoking and benefits of quitting.

Independent factors associated with current smoking

Counteracting the belief that smoking is not harmful if one exercises or is otherwise strong and healthy should be a public health priority. Another priority would be emphasizing the reasons not to smoke to counteract the perceive reasons for smoking. Endorsing a high number of reasons to smoke appeared to eclipse having a high number of health concerns about smoking. Reversing this balance might help reduce smoking. Parents who give the impression to their teens that smoking would get them into serious trouble also appear to deter smoking. This perception needs to be broadened to include other role models (teachers), and also peers. As long as smoking is perceived as the norm in a society, it will be difficult to dissuade youth from smoking. Adults need to set an example. The idea that smoking is an adult behavior is one of the powerful motivators for young people to smoke – in order to appear or feel older and more mature, and can only be undermined when most adults do not smoke themselves.

Limitations

This study has the same limitations inherent in any school survey. The Surabaya youth survey was cross-sectional, and smoking status is by self-report. Further, some students may not have understood some of the questions. In the present study, translation problems may have led to some confusion as to the definition of current smokers. In the future, when designing similar surveys, it would be important to ask additional questions to verify or cross check the validity of responses. Asking for more details on frequency of smoking would be important for validating responses and estimating monthly cigarette consumption.

Conclusions

Tobacco control measures that show that most people in many European countries (as well as in some other high- and medium incomes countries, including Thailand, Canada, America and South Africa) no longer smoke, that many cities have decided to make all enclosed public places smoke free, and that people are increasingly recognizing the risks of smoking and benefits of not smoking, might send a powerful and compelling message to modernizing nations. Stressing reasons to avoid smoking that are related to addiction, the difficulty of quitting, and the dangers of environmental tobacco smoke to nonsmokers might be relatively new themes addressing predisposing factors that would attract attention. Enabling and reinforcing factors such as enlisting parents both to express their disapproval of youth smoking and not to facilitate smoking among their children by giving them cigarettes and to set an example is another strategy worth considering. Enforcing laws and regulations to make school campuses, from daycare centers to universities, smoke-free could reduce both the acceptability (norms) and availability of tobacco to youth. Any policy that can reduce the perception that smoking is normal and acceptable will likely reduce youth smoking. Finally, measures that make cigarettes less affordable (allowing sales only by the pack, significantly increased taxation and minimum prices) might also help discourage youth smoking.

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APPENDIX 1: SAMPLE SURVEY QUESTIONNAIRE

Instruction: Circle the answers, which are true as your opinion or fill in the blank area. Thank you for your participation.

1. How old are you? ---------- years old	2. What is your sex? 1. Male 2. Female
3. Where do you live? (write down your campong and village, without number) ……..	
4. Where were you born? (name of town) ……	
5. How long have you been living in this town? …….years	
6. What is your ethnicity? ----------	
7. With whom do you live? a. Only father b. Only mother c. Father and mother d. Father, mother, and brother/sister e. Other members of the family f. None of the above all	
8. How many persons do you live with? ---------- a. 4 persons or less b. 5 – 7 persons c. 8 –10 persons d. more than 10 persons	
9. What is your father occupation? a. No work b. Government worker c. Army or Police d. Private sectors e. Retirement f. Farmer g. Labor or diver h. Others 10. What is your mother occupation? a. No work b. Government worker c. Army or Police d. Private sectors e. Retirement f. Farmer g. Labor or diver h. Others	
11. How much money do you spend in a week? (only pocket money, not including money for school goods) a. I have never brought any money b. Rp ……. (local currency)	

12.	Have you ever smoked cigarettes, even only few puffs? a. a. Yes b. No
13.	Do you smoke cigarettes until now? a. Yes b. No c. I don't smoke
14.	How often do you smoke, even if only few puffs? a. I don't smoke b. Sometimes c. Once to three times a month d. Once a week e. Everyday f. Others: ……..
15.	How many cigarettes (mean) do you usually smoke per day during the day when you smoke? a. I don't smoke b. …… pieces
16.	How much money do you spend for cigarettes in a week? a. I don't smoke b. I have never bought any cigarettes c. Rp …….. (local currency)
17.	1. "How much do you think cost one pack of cigarettes, which contains 16 pieces cigarettes?" (even if you don't smoke cigarettes) Rp ……. 2. How many cigarettes are in one pack, which are usually bought? a. I don't smoke b. I don't buy c. ……cigarettes 3. How do you buy cigarettes in a pack or per pieces? a. I don't smoke b. I don't buy it c. I buy in a pack d. I buy per pieces e. Others:……. 4. What is brand of cigarette you are usually smoked? (Choose only one) a. I don't smoke a. Sampurna Hijau b. Bentoel c. Jarum Coklat d. Star Mild e. Marlboro f. Wismilak g. I don't have certain brand i. Others:…….
18.	When did you start smoking cigarettes? ……years old

19.	(ways of getting cigarettes) If you smoke, how do you <u>usually</u> get your own cigarettes? 1. I buy it in a store or from vendor a. Yes b. No 2. My parents (father/mother) give it for me a. Yes b. No 3. My brother or my sister gives it for me a. Yes b. No 4. Someone else (not my parents) gives it for me a. Yes b. No 5. My friends give it for me a. Yes b. No 6. I just take it a. Yes b. No 7. I ask for someone to buy it for me a. Yes b. No
20	I always have enough money to buy cigarettes a. Yes b. No
21.	Dou you think it would be easy to obtain your own cigarettes if you wanted to? Is it easy of getting your own cigarettes? (even if you don't smoke cigarettes) Yes b. No c. I don't know
22.	(availability of cigarettes) 1. Shops always sell cigarettes Yes b. No c. I don't know 2. I can always buy cigarettes at school Yes b. No c. I don't know 3. I can get cigarettes easily at home Yes b. No c. I don't know 4. In my opinion, cigarettes are quite cheap and affordable Yes b. No c. I don't know
23.	Do you think you can get anywhere you are and whenever you want them? (even you don't smoke) a. Yes b. No c. I don't know
Read the sentences carefully. Circle the right answer.	
24.	(questions about knowledge of smoking) 1. Smoking cigarettes can cause health disorders a. True b. False c. I don't know
	2. The smoking man possibly gets cough and rhinorhea a. True b. False c. I don't know
	3. A cigarette contains more than 4000 kinds of chemical materials a. True b. False c. I don't know
	4. A cigarette contains 40 materials that can cause cancer

	a. True b. False c. I don't know
	5. Cigarettes can't cause impacts on your body in a few minutes a. True b. False c. I don't know
	6. Nicotine in cigarettes can cause addiction a. True b. False c. I don't know
	7. Tar level in cigarettes is a factor that influences lung cancer incidence a. True b. False c. I don't know
	8. The number of inhaled cigarettes in a day are a factor that influences lung cancer incidence a. True b. False c. I don't know
	9. The length of smoking habits is a factor that influences lung cancer incidence a. True b. False c. I don't know
	10. The depth of inhaled cigarettes is a factor that influences lung cancer incidence a. True b. False c. I don't know
	11. A pregnant woman who smokes cause disturbances to her pregnancy a. True b. False c. I don't know
	12. A smoking pregnant woman doesn't cause developmental disturbances on her born child physically and mentally a. True b. False c. I don't know
	13. If I smoke without inhaling, it won't cause effects on my body a. True b. False c. I don't know
	14. I am a passive smoker if there is a smoking man surrounded me a. True b. False c. I don't know
	15. Inhaling the cigarettes smoke from other persons doesn't have bad effects to my body a. True b. False c. I don't know
	16. Passive smokers are not at risk to get lung cancer a. True b. False c. I don't know
	17. Children who are surrounded by smoking man don't experience disturbances on their lung development a. True b. False c. I don't know
	18. Smoking a few cigarettes won't damage my health a. True b. False c. I don't know
	19. There are no benefits if I quit of smoking cigarettes a. True b. False c. I don't know
	20. Smokers can quit smoking easily whenever a. True b. False c. I don't know
25.	(smoking behavior among friends) 1. Do your friends (friends at school or home) smoke cigarettes? a. Yes b. No c. I don't know
	2. Have your friends ever offered you a cigarette? a. Yes b. No c. I don't know
	3. If one of your friends offers you smoking, will you do smoking? a. Yes b. No c. I don't know
26	1. Friends think that it's nothing extraordinary if I smoke a cigarette a. I definitely agree c. I disagree b. I agree d. I definitely disagree

	2. I smoke a cigarette in order to be accepted as a member of my group a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	3. I smoke because of being forced by friend a. I definitely agree c. I disagree b. I agree d. I definitely disagree
27.	(Smoking behavior among teachers) 1. Do your teacher smoke a cigarette at school or in a class? a. Yes b. No c. I don't know
	2. Are smoking cigarettes forbidden at school? a. Yes b. No c. I don't know
	3. Has one of your teachers ever offered you a cigarette? a. Yes b. No c. I don't know
28.	My teacher think that it's nothing extraordinary if I smoke at school or in a class a. I definitely agree c. I disagree b. I agree d. I definitely disagree
29.	Smoking Behavior among family 1. Does your father smoke cigarettes? a. Yes b. No c. I don't know
	2. Does your mother smoke cigarettes? a. Yes b. No c. I don't know
	3. Do other adult persons smoke cigarettes in your family? a. Yes, Who are they? ---------- b. No one else c. I don't know
30.	1. I will get in trouble or will be punished if my parents know that I smoke cigarettes a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	2. I smoke cigarettes because one of adult persons in my house is smoking a. I definitely agree c. I disagree b. I agree d. I definitely disagree
31.	Social Norms on Smoking Behavior 1. I associate cigarette smoking with masculinity a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	2. Cigarettes must be always available on social events (wedding party, other ceremony, etc.) a. I definitely agree c. I disagree b. I agree d. I definitely disagree

	3. Working in group, a block or a village (such as maintaining our environmental living) won't achieve good results if cigarettes are not available a. I definitely agree c. I disagree b. I agree d. I definitely disagree
32.	Beliefs on Smoking Behavior 1. Smoking cigarettes doesn't do any harm to my health a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	2. I am quite strong and healthy not be affected from smoking related diseases a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	3. Smoking related diseases are easy and able to be cured a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	4. Smoking related diseases won't emerge if I do some exercises regularly a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	5. Smoking cigarettes doesn't influence my grade level a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	6. Study concentration will increase if I smoke a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	7. I will be more attractive (to another sex) if I smoke a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	8. Smoking cigarettes make me easier in socialization a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	9. Smoking cigarettes is only dangerous to elderly people a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	10. Cigarettes smoke that is exhaled won't cause health disturbances to others a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	11. Do you think that smoking cigarettes makes you lose weight? a. I definitely agree c. I disagree b. I agree d. I definitely disagree

	12. Smoking cigarettes make me more confident a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	13. Smoking cigarettes make me have a strong opinion a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	14. Smoking cigarettes make me run my life easier a. I definitely agree c. I disagree b. I agree d. I definitely disagree
	15. Smoking cigarettes make me work in group easier a. I definitely agree c. I disagree b. I agree d. I definitely disagree
33	(Cigarettes advertisement) 1. Have you ever read or listen to cigarette advertisements in the last month (30 days)? a. Yes b. No 2. Where did you ever read or listen to cigarette advertisements? (you can choose more than one) a. Teenager magazines b. Adult magazines c. Newspaper d. Billboard e. Television f. Radio g. Others:…… 3. As long as you have read teenager magazine / adult magazine/ newspaper/ billboard/ TV or listen radio, how often do you read or hear cigarettes being promoted? Often Rare Never a. Teenager magazines ☐ ☐ ☐ b. Adult magazines ☐ ☐ ☐ c. Newspaper ☐ ☐ ☐ d. Billboard ☐ ☐ ☐ e. Television ☐ ☐ ☐ f. Radio ☐ ☐ ☐ g. Others:……

33.	(Cigarettes advertisement) 4. Do you have something (t-shirt, pen, backpack, etc.) with a cigarette brand logo on it? a. Yes b. No 5. As my opinion, cigarette advertisement or promotion can influence someone to smoke. a. I definitely agree c. I disagree b. I agree d. I definitely disagree

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The Economics of Tobacco Control sub-series is produced jointly with the Tobacco Free Initiative of the World Health Organization. The findings, interpretations and conclusions expressed in this paper are entirely those of the authors and should not be attributed in any manner to the World Health Organization or to the World Bank, their affiliated organizations or members of their Executive Boards or the countries they represent.

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