

# WHY YOUTH IN DEVELOPING COUNTRY START SMOKING? A STUDY IN YOGYAKARTA MUNICIPALITY, INDONESIA

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## ABSTRACT

**Objective-** To understand factors that stimulates youth to start smoking in Yogyakarta Municipality, Indonesia.

**Subject and methods-** Qualitative study was done to explore the factors influencing youth especially female to start smoking. Based on the qualitative study result, a questionnaire was developed and pre tested. A survey on the selected junior high school which selected using simple random sampling and respondents were selected using cluster random sampling design. Totally, 1270 students participate on the survey. The result was socialized to related stakeholders.

**Results-** Qualitative study found that factors influencing youth to smoke are categorized into 4 factors: 1) norms, 2) economic consideration, 3) self value and 4) coping mechanism among youth. The survey showed that role model of smoking (sibling and peer who smoking), closeness to peer, attitude toward smoking and advertisement exposure were significantly related to smoking initiation. The exposure of that factors start at very young age resulted on the early age of intention to try smoking (6-12 years) and young age of start smoking (10-13 years). Norms toward girls who smoking was extremely negative but for boy was negative. Stakeholders able to identify factors related to smoking initiation and agree on the target of short term tobacco control action were controlling existing role model among youth relatives.

**Conclusions-** Qualitative and quantitative data collection support and ensure the advocacy to stakeholders to perform tobacco control activity.

**Key words:** smoking initiation; youth; Indonesia; smoking advocacy

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## **INTRODUCTION**

Indonesia has not ratified the FCTC because the fear of economic and social impact. Although some evidences show that increasing cigarette tax will increase tobacco revenues, still there is a fear of the effect on macro economic especially on unemployed impact. Smoking prevalence in Indonesia among males is 62.2% to 84% and 2.6% to 5% among females. Meanwhile, in Yogyakarta Municipality, smoking prevalence is 55.2% among males, and 3.5% among females, based on the previous study result. Youth smoking prevalence aged 15 – 24 years is 50% of males and 7.6% of females. Female smoking prevalence among youth is higher than smoking prevalence of all female in the population. This evidence shows the tendency of increasing female smoker in the future, when there is no anticipation effort.

Yogyakarta Municipality is a city in Yogyakarta Special Province, in Java Island. This city is the second choice for tourists to visit after Bali Island and also a favorite place for students to pursue undergraduate study in Indonesia. Although there are smoking regulations in the country but the implementation so limited, it is hard to find smoke free places. People who understand the danger of passive smoking will have difficulties to avoid smoke, and foreigner who visit Indonesia do have similar problem. . The impact of tourism because of loose tobacco control policy, smoking danger among girl and discourage policy regarding smoking are the reasons of selecting study site in Yogyakarta Municipality.

This study was aimed to understand factors that stimulate youth to initiate smoking, at Yogyakarta Municipality, Indonesia.

## **METHODS**

This study was done through a qualitative and quantitative approach. The qualitative approach was exploring the factors influencing student to smoke and their perception toward tobacco control policy. On the other hand, the quantitative approach had been conducted to measure factors influencing students to smoke.

### **Subject**

The subjects of this research were junior high school students who had chosen purposively on the qualitative approach and randomly in the quantitative approach. Totally, 1270 respondents were participating on this survey.

### **Measures**

Knowledge was measured by 6 questions regarding danger of smoking for health and the importance of tobacco control policy. Each question was scored to be 1 if the answer was right and 0 if it was wrong. Attitude was measured by 8 questions included belief that smoking endangers health, belief that nicotine can cause dependency, image of men and women who smoking and belief that healthy body can relief the negative effect of smoking. A favorable question which was answered with extremely agree was scored at 4, agree, doubt, disagree and extremely disagree were scored 3, 2, 1 and 0 respectively. The higher the attitude score means the more positive attitude toward non smoking behavior.

On this study attachment to peer personality were asked with 5 questions regarding their preference to go with their peer or family, how do they feel inconvenient to have conflict with their peer and their family and how do they feel comfortable to share time with their friend and their family. Norms toward smoking habit of certain sex was measured on 2 questions asking how people impress a boy of their age who smoking and a girl of their age who smoking. The higher score of attachment to peer means the closer to peer, whereas the higher the score of norms the positive the impression of smoking habit of certain sex type.

Based on qualitative result, the factors that may influence students to start smoking were measured. Those factors consist of role model of smoker surround them, knowledge and attitude toward smoking, close to peer and advertisement exposure. Each of those factors will be analyzed each for boys and girls.

Among boys, their smoking status were classified as never smoke, experimenter and smoker. Never smoke was boy who never try to smoke even one puff of cigarette, experimenter was boy who has tried to smoke even one puff but not routinely smoke. Smoker was boy who routinely smoking cigarette. Each boy then asked whether their relatives smoke or not. Their relatives divided into parental smoking if at least one of their parents is smoker, sibling smoking if at least one of their sibling is smoker, peer smoking if at least one of their close friend is smoker, teacher smoking if at least one of their teacher is smoker.

Advertisement exposure was measured on 7 questions. The first 6 questions asking the students to write the characteristic of advertisement the students remember and also the brand of the cigarette, as much as the students can (maximum 6 brands of cigarettes).

Some questions of tobacco control policy were asked for to understand the student's perception toward the policy. The questions were whether students agree or not for increasing price of cigarette, clear information of nicotine and tar level, health warning label on the cigarette package, and involvement of citizen on tobacco control policy. The possible answer of those questions were extremely agree, agree, doubt, disagree and extremely disagree.

## **Procedures**

The qualitative data have been collected through focus group discussion (FGD) and in-depth interview. Meanwhile, the quantitative data was collected by using questionnaire that had been developed based on existing questionnaire and adjusted to the result of qualitative study.

Sampling selection was a combination of simple random sampling and cluster sampling design. The first step was simple random sampling to select 11 junior high schools out of 66 existing schools, there were 3 classes selected from each selected school. All students on the selected class were asked for their participation. Next, students were received the questionnaire wrote down the answer on their own school. The surveyor were there and ready to answer any question.

The result of this data collected from quantitative study was occupied on the socialization action to highlight the importance of controlling tobacco among youth especially girls.

## RESULTS

### A. Qualitative research result:

Qualitative study tried explore factors that influence smoking behavior among youth showed that those factors were 1) norms, 2) economic consideration, 3) self value and 4) coping mechanism among youth.

### B. Quantitative research result:

#### 1. Knowledge and attitude toward smoking

The result of this study found that student's knowledge about the danger of smoking are already high. Half of the students (50.2%) reached the highest score of knowledge. Attitude toward smoking among girls were higher than among boys. The girls more disagree with smoking habit than the boys. Most of students (86.8%) had bad impression toward girl who smoking. Only 52.2% of students had bad impression toward boy who smoking.

#### 2. Smoking practice among students

The intention of smoking among boy and girl were measured with the question "whether they are interested to try to smoke". Boys (69.6%) were more interested to try to smoke than girls (47.2%). Both sexes start to try to smoke at the same age. Girls were at earlier age to be more interested to try smoking than boys.

The smoking status in table 1 showed that boy who already became smoker was 7.7% and only 0.7% among girl. This result need to be cautiously interpreted because the data was collected at their school. There are strict regulation at most of school that their student are prohibited to smoke, with very heavy penalty. This regulation may introduce bias because the students feel unsafe to declare that they are smoker. Few of students started to smoke at very young age (6 years), most of them started to smoke at 12 years of age. This age correspond with the time when the students graduate from elementary school. Prevention action should be performed before pupils graduate their elementary school.

Table 1. Smoking status among boy and girl

Smoking status	Boy		Girl		Total (n)
	n	%	n	%	
Never try to smoke	279	52.2	641	87.2	920
Experimenter	214	40.1	89	12.1	303
Smoker	41	7.7	5	0.7	46
Total	534	100	735	100	1269

### 3. Factors that influencing students to start smoking

There were significant relationships between smoking status of boy and the smoking status of their sibling and peer. These relationships were not significant between smoking status of the boy and the smoking status of their parents and their teacher (table 2). It was found that role model of smoking surrounding the girl was significantly correlated with smoking status. Smoking status of the girls significantly correlated with having sibling who smoking, peer who smoking and teacher who smoking. Parental smoking was not significantly correlated with smoking status of the girl.

Table 2. Smoking status and the role model of smoking surrounding the boy and girl

Role model/ Smoking status		Smoking status			Chi- square (p)	Smoking status			Chi- square (p)
		Never smoke	Experi- menter	Smoker		Never smoke	Experi- menter	Smoker	
<b>Parental smoking</b>	n	227	266	41		620	110	5	
Non smoker	%	47.4	44	8.6		88	11.4	0.6	
Smoker	%	39.4	53.5	7.1	0.099	81.5	17.8	0.7	0.051
<b>Sibling smoking</b>	n	216	249	38		583	103	4	
Non smoker	%	52.3	42.7	5		89.6	10	0.4	
Smoker	%	28.9	59.7	11.4	0.000	71.9	27.1	1	0.000
<b>Peer smoking</b>	N	217	260	39		601	105	5	
Non smoker	%	64.1	35.3	0.5		90.8	9.2	0	
Smoker	%	29.8	58.7	11.4	0.000	69.7	28	2.4	0.000
<b>Teacher smoking</b>	N	221	253	40		580	103	4	
Non smoker	%	47.4	46.1	6.6		88.5	11.2	0.3	
Smoker	%	41.2	50.6	8.3	0.406	80.8	18.4	0.8	0.019

Mean of score of knowledge of boy toward danger of smoking was lower among smoker than among never smoke or experimenter, but this different was not statistically significant. Boy who smokes has more positive attitude toward smoking ( $19.6 \pm 4.1$ ) compared with experimenter ( $21.9 \pm 4.5$ ) and never smoke ( $23.9 \pm 4.8$ ), this difference was statistically significant. Attachment to peer had strong relationship with the student smoking status ( $p < 0.001$ ). Advertisement exposure was also statistically significant related to smoking status of the boy.

Mean score of knowledge of girl who smoking was higher than non smoker and experimenter. Smoking girl had more positive attitude toward smoking, they also closer to their peer and had higher cigarette advertisement exposure. Only correlation of knowledge and cigarette advertisement exposure which was not statistically significant which probably due to small number of smoking girl (table 3).

Table 3. Anova test of knowledge, attitude toward smoking, attachment to peer and advertisement exposure among different smoking status of boy and girl

Smoking status	Boy				Girl			
	N	Mean	Std. Deviation	ANOVA (p)	N	Mean	Std. Deviation	ANOVA (p)
<b>Knowledge</b>								
Never smoke	227	5.1	1.1	0.387	620	5.3	1	0.441
Experimenter	266	5.1	1		110	5.2	1	
Smoker	41	4.9	1.2		5	5.8	0.4	
<b>Attitude</b>								
Never smoke	227	23.9	4.8	0	620	25.3	3.9	0
Experimenter	266	21.9	4.5		110	22.4	5.5	
Smoker	41	19.6	4.1		5	15.6	6.8	
<b>Attachment to peer</b>								
Never smoke	227	8.5	2	0	620	8.8	1.9	0
Experimenter	266	9.2	1.9		110	9.7	2.5	
Smoker	41	9.7	2		5	11.6	3.8	
<b>Advertisement exposure</b>								
Never smoke	227	9.5	3.2	0	620	9.2	3.2	0.055
Experimenter	266	10.2	2.7		110	9.8	2.9	
Smoker	41	11.3	1.7		5	11.4	1.3	

#### 4. Student's perception of tobacco control policy

Only few students disagree and extremely disagree to any of those policies perhaps because of worrying to declare do not supporting the policy that had been applied. The preferred tobacco control policies were different among different smoking status. Non smoker and experimenter tend to agree all the policy, while smoker tend to disagree to those policy. The most preferred policy was information of nicotine and tar level on the cigarette package, followed by involvement of citizen on tobacco control policy, health warning label and the least popular policy was increasing the price of cigarette. Increasing price of cigarette, nicotine and tar level information, and involvement of citizen on tobacco control action policy were not preferred by smoker but more preferred by never smoke and experimenter.

## DISCUSSION

It was found that the trend of attachment score between boy and girl were quite equal. If this is a strong factor that influence the smoking habit than the proportion of smoking among boys will be similar to among girl. Beside the attachment to peer personality, there are also norms toward boy and girl who smoking. The norms among students showed that smoking habit was perceived as negative behavior both if the smoker is a boy or girl, yet their impression was much more negative toward girl who smoke. Barraclough (1997) founded that the prevalence of women smoker was still low in Indonesia, because the smoking women are perceived as morally flawed<sup>i</sup>.

It was found that the girls had only 5 smokers among 620 girl respondents. Consequently, the interpretation of the statistic result of girl who smoking needs to be carefully understood. Although only few girl who smoking, the result show quite similar pattern of boy who smoking. In Taiwan, parental smoking together with adolescent attachment to family are stronger than peer smoking<sup>ii</sup>. A study in America shows that the reason of initiate smoking among adolescent girls was as the stress reduction and relaxation, not because of peer pressure<sup>iii</sup>. The huge culture difference between America and Indonesia is the reason of the different result.

Peer smoking has long defined as predicting factors of smoking, and so do parental smoking. The attachment to peer and norms toward smoking habit of certain sex type are related to smoking habit according to several studies<sup>iv,v</sup>. The boy who smoking was related to higher exposure of cigarette advertisement. A study in Australia find that youth perceived that cigarette advertisement on media as usual and become more tolerant to smoking habit<sup>vi</sup>.

Children who perceived that smoking addiction will happened quickly tend to try smoking but children who perceived that smoking addiction will depends on the amount of cigarette smoked tend to try smoking<sup>vii</sup>. Boys who feel more comfortable getting close to their peer than their family, had more tendencies to be a smoker.

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