# Factors Related to the Intention to Cigarette Smoking among Junior High School Students in Jatinangor Subdistrict, West Java

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## Abstract

**Background:** Cigarette smoking is known to harm the health of smokers and causes the death of millions people around the world. Smoking initiation in Indonesia is begun early especially during teenagers year. The aim of the study was to analyze the factors related to the intention to cigarette smoking among Junior High School students in Jatinangor subdistrict.

**Methods:** A quantitative method with cross sectional study was conducted in the junior high school setting during the period of September to November 2013. Inclusion criterias were students aged 1315 years old and did not smoke. Four factors were measured in this study, which were attitudes toward cigarette smoking, parents who smoke, peers influence and advertisement where each factor had 5 questions with 'Yes' or 'No' answers. Data were collected through self-administered questionnaire among 226 students using stratified random sampling. Statistical analysis of the variables was using chi square test.

**Results:** As much as 44.25% of the respondents had intention and 55.75% had no intention to cigarette smoking. This study showed significant relation among attitudes, parents who smoke, peers influence and advertisements with the intention to cigarette smoking.

**Conclusions:** Half of the respondents have intention to cigarette smoking and the most factors related to it are peers influence. [**AMJ**.2015;2(3):314–18]

**Keywords:** Cigarette smoking, intention, Junior High School students

## Introduction

Cigarette smoking is widely known to cause health problems and is responsible for many diseases and premature death that reduce quality of life and life expectancy.[1,2] In many developed countries, the number of smokers have declined rapidly, but in Indonesia, smoking prevalence has increased substantially.[2] Approximately, 61 million Indonesians smoke[2] caused Indonesia ranks the fifth of countries with the most cigarette consumption.[3]

The majority of smokers tend to start smoking at a young age usually during teenager's period. About 78% smokers begin to smoke before 19 years old.[4] The total percentage that smokes between 1995–2007 is 0.32% aged 10–14 years and 7.1–18.8% aged 15–19 years.[5]

According to Riset Kesehatan Dasar (Riskesdas) 2007, the highest smoking prevalence above 10 years in the provinces of Indonesia was Bengkulu (29.5%), followed by Lampung and West Java (28.8% and 26.6%, respectively).[7] According to Survei Sosial Ekonomi Daerah (Suseda) 2008, the average age for smoking initiation in Sumedang district, West Java was 18.68 years old.[8]

The theory of planned behavior (TPB) is used to predict factors that affect individual intention to engage in behaviors such as cigarette smoking. TPB presumes intention to cigarette smoking is derived from behavioral attitude, subjective norms and perceived behavioral control with each contributes to achieve the cigarette smoking behavior.[9]

Hence, with the high smoking prevalence and people start smoking at a young age, a study was conducted among Junior High

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**Table 1 Respondents Characteristics**

| Demographic | Frequency | Percentage (%) |
|---|---|---|
| Gender | | |
| Male | 111 | 49.12 |
| Female | 115 | 50.88 |
| Age (years old) | | |
| 13 | 127 | 56.19 |
| 14 | 73 | 32.30 |
| 15 | 26 | 11.50 |

School students to analyze factors related to the intention to cigarette smoking in Jatinangor subdistrict.

## Methods

A cross sectional study was carried out to 226 junior high school students aged 13–15 years old in Jatinangor subdistrict. These students were selected using stratified random sampling from 11 Junior High School Madrasah Tsanawiyah (MTs) Ma'arif (Moslem junior high school and SMP Persatuan Guru Republik Indonesia (PGRI). The inclusion criteria in this study were Junior High School students aged 13–15 years who did not smoke, while exclusion criteria were students who did not agree to participate and did not fill in the questionnaire completely.

The questionnaire comprised three parts. The first part contained items on the characteristics of the respondents including sex, class and age. The second part was to determine whether the respondents had tried cigarette smoking before and their intention to cigarette smoking. The last part was about the four factors measured in this study, these were attitudes toward cigarette smoking, parents who smoke, peers influence and advertisement where each factor had 5 questions with 'Yes' or 'No' answers.

A preliminary study was conducted to 20 respondents to test the feasibility of the research questionnaire validity and reliability. All ethical issues in this study were approved by the Health Research Ethics Committee Faculty of Medicine Universitas Padjajdjaran.

Data collection was conducted in a specific classroom. Before the distribution of the questionnaire, the objective of the study was explained and the respondents were assured that all the information would be kept privately. Furthermore, consent forms with the signature of the respondents were requested to those who agreed to participate. Permission from the school authority to conduct this study was obtained previously. During the time of the questionnaire's administration, there were no teachers involved. This study explained every item in the questionnaire in detail to ensure the understanding of each respondent. Respondents who had difficulties in answering the questions, could ask for assistance from the representative of the research team. After the respondents completed answering the questionnaires, the questionnaires were checked thoroughly to determine every part of questions was answered. Each factor was categorized into low risk or high risk depending on the median, as the data were not normally distributed.

The data were analyzed using a computer and statistically analyzed using the chi-square test ($p<0.05$).

## Results

Both genders almost evenly equivalent with 115 female and 111 male participated in this study. The majority of the respondents were

**Table 2 Intention to Cigarette Smoking**

| Intention to Cigarette Smoking | Frequency | Percentage (%) |
|---|---|---|
| Yes | 100 | 44.25 |
| No | 126 | 55.75 |
| Total | 226 | 100 |

**Table 3 Factors Related to the Intention to Cigarette Smoking**

| Factors | Intention to Cigarette Smoking | | | | p | x2 | Contingency Coefficient C |
|---|---|---|---|---|---|---|---|
| | Have Intention | | No Intention | | | | |
| | f | % | f | % | | | |
| Attitudes toward Cigarette Smoking | | | | | | | |
| Low risk | 33 | 14.60 | 100 | 44.25 | | | |
| High risk | 67 | 29.65 | 26 | 11.50 | 0.000 | 49.491 | 0.424 |
| Total | 100 | 44.25 | 126 | 55.75 | | | |
| Parents who Smoke | | | | | | | |
| Low risk | 55 | 24.34 | 118 | 52.21 | | | |
| High risk | 45 | 19.91 | 8 | 3.54 | 0.000 | 46.395 | 0.413 |
| Total | 100 | 44.25 | 126 | 55.75 | | | |
| Peers Influence | | | | | | | |
| Low risk | 22 | 9.73 | 107 | 47.35 | | | |
| High risk | 78 | 34.51 | 19 | 8.41 | 0.000 | 90.096 | 0.534 |
| Total | 100 | 44.25 | 126 | 55.75 | | | |
| Advertisements | | | | | | | |
| Low risk | 26 | 11.50 | 94 | 41.59 | | | |
| High risk | 74 | 32.74 | 32 | 14.16 | 0.000 | 52.884 | 0.435 |
| Total | 100 | 44.25 | 126 | 55.75 | | | |

**Note: x2 table = 3.841**

13 years old (56.19%).

Respondents who had the intention to cigarette smoking was less than respondents who did not have the intention to cigarette smoking (Table 2).

Based on statistical analysis, there were significant relations among attitudes toward cigarette smoking, parents who smoke, peers influence and advertisements with the intention to cigarette smoking. The relation between peers influence with the intention to cigarette smoking had the strongest relation compared to attitudes toward cigarette smoking, parents who smoke and advertisements.

## Discussions

In this study, the number of respondents who had intention to cigarette smoking was considerably high. Apparently, peers influence was the most prevailing factor associated with the intention to cigarette smoking among Junior High School students in Jatinangor subdistrict.

According to the theory of planned behavior (TPB), attitudes toward cigarette smoking and parents who smoke were determined by the individual's belief concerning the consequences of the cigarette smoking behavior and an evaluation of the values about the cigarette smoking consequences.[10] Peers influence using TPB suggest self-perception concerning others people expectation eventually acted as a source of pressure to individuals whether they should or should not engage in cigarette smoking behavior.[9] The existence of advertisements may ease or hinder individuals to have intention to cigarette smoking.[9] This study was consistent with the theory where attitudes toward cigarette smoking, parents who smoke, peers influence and advertisements were found to be associated with the intention to cigarette smoking.

Nurdin et al.[11], showed that adolescents feel insecure about how their peers think about them and want to be somehow similar to their peers so that they would not be left out. Students spend their time mostly at school with their peers and these are crucial since they are involved with each other in almost

all of the daily activities. According to Halil[12], peers influence resulted in adolescence to engage in cigarette smoking behavior as a way to be accepted into a certain peer group.

According to Braverman and Aarø[13], most people initiate cigarette smoking behavior during adolescence. Cigarette advertisements are the main tools emphasized by the tobacco industries to target this group of people by portraying positive images of cigarette smoking. Thus, adolescents are more prone to smoke when they have more positive views on cigarette smoking.

Rapeah et al.[14] showed that positive attitudes towards cigarette smoking cause an individual to engage in this behavior even though they know the danger of cigarette smoking. For instance, cigarette smoking can portray a cool image.

According to Gilman et al.[15], parents who smoke either mother or father play an important role in initiation smoking behavior among adolescents because they tend to watch their parents smoke. The adolescents believe that cigarette smoking is a normal activity of an adult as they watch their parents smoke which in turn encourage them to initiate cigarette smoking.

Lastly, this study did not vary from the theory and the results found were consistent with other studies. However, there were limitations in this study. Since the questionnaire was completed individually at school, there was a possibility that some respondents may have given inaccurate answers either on purpose or unintentionally on any of the questions inquired. Furthermore, the research method conducted in this research was the quantitative method which did not enable the researcher to have more understanding on the associated factors with the desire to cigarette smoking.

From this study, it can be concluded that there were relations among attitudes toward cigarette smoking, parents who smoke, peers influence and advertisements with the intention to cigarette smoking. In the end, it was found that peers influence had the strongest relation with the intention to cigarette smoking among Junior High School students in Jatinangor subdistrict.

For future research, it is recommended to use qualitative measures to achieve a better understanding on how these factors involved are associated with desire to cigarette smoking among adolescents and also other factors that may be involved. Health institutions were recommended to be more proactive in organizing campaign regarding the dangers of cigarette smoking. Moreover, the school should share a vital part in promoting the danger of cigarette smoking where strong cooperation between education and health institutions are important in the school setting when promoting programs regarding the cigarette smoking prevention. Most of the time is spent by the adolescents at school and effective cigarette smoking prevention programs need to be established before the students graduate from school. School based health programs especially the Usaha Kesehatan Sekolah (UKS) can integrate anti-smoking programs in any form into the school activities and carried out frequently where the students can be actively involved in it.

## References

1. Centers for Disease Control and Prevention. Health effects of cigarette smoking. 2013 [cited 2013 February 2]; Available from: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/
2. Adioetomo SM, Djutaharta T, Hendratno. Cigarette consumption, taxation and household income: Indonesia case study. In: de Beyer J, editor. Health, nutrition population discussion paper, economics of tobacco control No.26. Washington: The International Bank for Reconstruction and Development/The World Bank; 2005.
3. Ministry of Health Republic of Indonesia. The tobacco source book: data to support a national tobacco control strategy (English translation). Jakarta: Ministry of Health, Republic of Indonesia; 2004.
4. Barber S, Adioetomo SM, Ahsan A, Setyonaluri D. Tobacco economics in Indonesia. Paris: International Union Against Tuberculosis and Lung Disease. 2008.
5. Reimondos A, Utomo ID, McDonald P, Terence Hull, Suparno H, Utomo A. Policy background No. 2: smoking and young adults in Indonesia. In: Australian Demographic and Social Research Insitute, editor. The 2010 Greater Jakarta Transition to Adulthood Survey. Canberra: The Australian National University. 2012.
6. Tobacco Control Support Center, Ikatan Ahli Kesehatan Masyarakat Indonesia (TCSC-IAKMI). Bunga rampai: fakta tembakau dan permasalahannya di Indonesia tahun 2010. Jakarta: TCSC-IAKMI. 2010.
7. Departemen Kesehatan RI. Riset kesehatan dasar (Riskesdas) 2007: laporan nasional.

Jakarta; 2008 [cited 2013 January 28]. Available from: http://www.riskesdas.litbang.depkes.go.id/download/TabelRiskesdas2010.pdf.
8. BPS Provinsi Jawa Barat. Penyusunan data sosial ekonomi daerah provinsi Jawa Barat tahun 2008.2008 [cited 2013 February 3]. Available from: http://www.jabarprov.go.id/assets/data/menu/Data_Sosial_Ekonomi_Provinsi_Jawa_Barat_Tahun_2008.pdf.
9. Reinecke J. Testing the theory of planned behavior with latent markov models. In: Reinecke J, Langeheine R, editors. Applications of latent trait and latent class models in the social sciences. Münster: Waxmann; 1997. p. 398–411
10. Brannon L, Feist J. Health psychology: an introduction to behavior and health. 7th ed. Belmont: Wadsworth, Cengage Learning; 2009.
11. Nurdin, Hongkrailert N, Chompikul J. Smoking behavior among senior high school students in Banda Aceh Municipality, Nanggroe Aceh Darussalam Province, Indonesia. Journal of Public Health and Development. 2008;6(3):85–93.
12. Halil E. Examining the adolescents' smoking according to their peer pressure levels and gender. Acad Med. 2003;3(1):179–88.
13. Braverman MT, Aarø LE. Adolescent smoking and exposure to tobacco marketing under a tobacco advertising ban: finding from 2 Norwegian national samples. Am J Public Health. 2004;94(7):1230–8.
14. Rapeah MY, Munirah Y, Latifah O, Faizahl K, Norsimahl S, Maryana M. Factors influencing smoking behaviours among male adolescents in Kuantan District. Ann Dent. 2008;15(2):77–81.
15. Gilman SE, Rende R, Boergers J, Abrams DB, Buka SL, Clark MA, et al. Parental smoking and adolescent smoking initiation: an intergenerational perspective on tobacco control. Pediatrics. 2009;123(2):e274–81.