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Addressing Tobacco Problems in Developing Countries

Economic Impact of Tobacco Use

Social Determinants of Tobacco Use and Demand Reduction Interventions

Culture, Employment and Agriculture: Between Tobacco Myth and Reality

Tobacco Use and Health

Youth, Cigarettes, and Drugs



Wednesday - Thursday, December 5-6, 2012

University of Muhammadiyah Yogyakarta

conference and exhibition

Addressing Tobacco Problems In Developing Countries

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**CALL FOR PAPERS
PRESENTATION**

Abstract

CIGARETTE ADVERTISING EXPOSURE AND SMOKING BEHAVIOUR AMONG TEENAGERS AT JUNIOR HIGH SCHOOL IN BANTUL DISTRICT YOGYAKARTA

Heni Trisnowati¹, Yayi Suryo Prabandari², Retna Siwi Padmawati²

ABSTRACT

Background : The high cost of cigarette advertising in the Yogyakarta City leads to a trend of the promotion shift to the rural areas such as Bantul district. The age group of 13-15 years generally categorized as teenagers of junior high school age and they are easily provoked by the advertisement.

Objective : The study is aim to determine the correlation between cigarette advertising exposure and smoking behavior among teenagers at junior high schools in Bantul District, Yogyakarta.

Methods: This study is an observational analytical research with cross sectional design used to determine the correlation between cigarette advertising exposure and smoking behavior among teenagers at junior high schools of Bantul District. The populations are all the students at junior high schools in Bantul District. Total sample are 185 pupils from six randomly selected schools. Unit variant, bi variant and multi variant analysis are performed to the questionnaire answers.

Result : The number of teenagers who had tried smoking is 39.5%, current smoker is 58.9% and susceptible to smoking is 11.6%. The proportion of boys who tried smoking is higher (63.5%) compare to girls (8.6%). The analysis shows that there is a significant correlation between cigarette advertising exposure and smoking behavior among teenagers at Junior High School in Bantul District ($p = 0.00$). The main factors associated with teenagers smoking behavior are the male gender, high level of cigarette advertising exposure, peer group, influence of siblings and lack of parents attention.

Conclusion : Cigarette advertising exposure has a considerable influence on teenagers smoking behavior at junior high school of Bantul District. The effective health promotion programs need to be enrolled to reduce the influence of cigarette advertising exposure and appropriate policies are urgently needed to restrict the cigarette's advertising exposure in the vicinity of school areas.

Keywords: cigarette advertising exposure, smoking behavior, teenagers at junior high school, Bantul District

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Full Paper

CIGARETTE ADVERTISING EXPOSURE AND SMOKING BEHAVIOUR AMONG TEENAGERS AT JUNIOR HIGH SCHOOL IN BANTUL DISTRICT YOGYAKARTA

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INTRODUCTION

Chronic non communicable diseases are the largest cause of death in the world, such as heart disease, chronic lung disease, cancer, diabetes and stroke. As many as 80% of these diseases are occur in developing countries. Tobacco that is used especially in cigarettes is one of the causes of mortality and morbidity in chronic disease. There were an estimated 10 million deaths from tobacco use by 2030 (1)

There is an extensive literature on quitting studies indicating that many smokers who have difficulty stopping because the success of quitting smoking is the hardest lifestyle change to achieve(2). Furthermore, Quit Tobacco Indonesia(3) reported that of 882 junior high school students surveyed contained 88.8% of students stating that smoking was a problem of young people today. That age group of 13-15 years was the highest frequency of smoker on teenagers (4)

Factors that encourage youth smoking are the influence of friends or the environment, eliminating loneliness and stress, social tools, increase the concentration of study, to be approved as adult, following the idol and parental smoking(5). Some of the factors that encourage teenagers to have smoking behavior are imitation attitude towards favored people, teenager social environment such as home and school environment, and access to cigarettes(6).

The demographic factors, social environmental factors and exposure to cigarette advertising were associating with smoking behavior in adolescents (8). The same thing was also said by Tyas & Pederson that the smoking behavior of adolescents associated with several psychosocial factors that include as social demographic factors, environmental factors, behavioral factors and personal factors. Social demographic factors associated with adolescent smoking behavior such as age, race, family structure and social economic status, parental and personal income (9).

The other factors that causing smoking on teenagers are smoking status of the older brother, control of the external environment, lack of assertiveness skills, and single parent household(10). Meanwhile, according Al-Mohammed and Amin, the predictor factors in Saudi Arabia adolescent smoking were an older age, living in boarding houses or living without parents, family or friends who smoking, and exposure tobacco promotion(11).

Yogyakarta City Government issued Regulation No. 26 Year 2010 Mayor of the operating license of advertisement. This resulted in the cost of cigarette advertising in the city of Yogyakarta four times more expensive than the other products. The high cost of cigarette advertising in the Yogyakarta city leads to a trend of the promotion to the rural areas such as Bantul District. The policy of Bantul Government also supports the development of the tobacco industry (12).

Based on preliminary survey conducted by researcher in the area of Bantul, It showed that along the ring road selatan of Bantul .it is so easy to find billboards of cigarette advertising. On the main street in Bantul city and districts, there are also several cigarette advertising such as

billboards and banners. The location of cigarette advertising generally placed near the schools because the cigarette advertising is targeting the teenagers. Cigarette advertising exposure can increase the initiation and smoking behavior on teenagers(8). Therefore, there's a need to know the relationship between exposure cigarette advertising exposure and smoking behavior among teenagers at junior high school in Bantul District, Yogyakarta.

METHODS

This study uses an observational analytic study with cross sectional design (14). Research has been conducted through a survey using a structured questionnaire. The questionnaire was made by the researchers that adapted from Hanewinkel research (8).

POPULATION AND SAMPLE

The populations in this study were all teenagers among junior high school at Bantul district of Yogyakarta. Bantul has 47 public junior high school and 38 private junior high schools. The numbers of teenagers who smoke because of cigarette advertising exposure are 30% boys and 10% girls (15). The population of teenagers smoker in Bantul has known yet, so as to calculate a sample size for hypothesis testing using the following formula of Lemesow(16). The total study sample was 185 students.

REASEACH VARIABLES

Social demographic factors consist of age, gender, school achievement, and socioeconomic status. Socio-economic status asked by the amount of pocket money per month, people who living with the respondent, parental employment, and parental characteristics. Social environment was the environmental conditions of families and peers are associated with smoking including the smoking status of father, mother, brother, sister, grandfather, grandmother, siblings and peers. The knowledge about the impact of smoking on health defined as the things that are known by respondent about the dangers of smoking to health. This information was obtained through a knowledge questionnaire. where the correct answer was coded 2 and the wrong answer was coded 1.

Cigarette advertising exposure was the level of exposure among teenagers by cigarette advertising images commonly found such as media TV, billboards, banners, magazines, and newspapers. Answer choices can be divided into four include were 1 = if the respondent had never seen cigarette advertisements; 2 = if the respondent is rarely seen cigarette advertisements; 3 = if the respondent is sometimes seen cigarette advertisements, and 4 = if the respondent is often seen cigarette advertisements. Respondents were also asked to write down the brand of cigarettes. The range is 1 month's time. Meanwhile, to know the respondent impression toward cigarette advertising images, the answer choices were 1 = not impressed and not interested in smoking, 2 = not impressed but interested in smoking; 3 = impressed but was not interested in smoking; 4 = impressed and interested in smoking, and 5 = another answer, respondents were asked to write their impressions on cigarette advertising that has been seen.

Smoking behavior was a statement about the respondent habits to smoke or not smoke. To find out if the respondents had tried smoking by asking the question "How many cigarettes have you smoked during your life?" The answers are categorized into never smokers, and other

answers (only once, 1-19 cigarettes, 20-100 cigarettes and more than 100 cigarettes) categorized as tried smoking. While current smokers were measured with the question “How often do you smoke at present?” and respondents could choose an answer “I do not smoke”, “less than once in a month”, “at least once a month”, “once a week”, and “every day”. Respondents who smoked at least once a month were categorized as current smokers. Then, to determine the susceptibility to smoke in never smokers group measured by the question “Do you think you will try a cigarette soon?” and “if one of your friends offered you cigarettes, would you smoke it? “ Response categories for both items were “definitely not”, “probably not”, “probably yes” and “definitely yes”. Only those who respond with definite answer not to both questions were categorized as not susceptible to smoking.

Data analysis in this study carried out by unit variant, bi variant and multi variant. Bi variant analysis is using chi square test , while the analysis of multi variant is using logistic regression test.

RESULT AND DISCUSSION

The numbers of male and female respondents were almost equal (43.8%: 56.2%). The most value report of the respondents ranged from 6.00 to 7.50 (93.0%). Respondents generally lived with their parents and majority of their parents worked as informal workers and labors. Most of the respondents parents aware with respondents (77.8%). Age of most respondents in the age group of 13-15 years (88.7%) and the average amount of pocket money of respondents is Rp.103.000 up to Rp.121.000 per month.

The number of teenagers among junior high school at Bantul District who had tried smoking by 39.5%, currents smoker was 58.9%, susceptibility to smoke is 11.6%. The proportion of teenage boys who had tried smoking was higher (63.5%) than girls (8.6%). The higher proportion of boys’ smokers than girls smokers can be associated with a culture of less accepting if women smoke (17). In addition, smoking is generally regarded as the cultural unity of men, such as cigarettes distributed on social occasions such as weddings, funerals, religious ceremonies and community’s meeting. In addition, smoking is also a normative to the men and considered a symbol of masculinity(6)

Table 1. Factors of sosiodemografi, social enviromental, level of knowledge and smoking behavior among teenagers at junior high school in Bantul districts.

Variables	Smoking behavior				χ^2	p value
	Never smoking		Ever tried smoking			
	N	%	N	%		
Sociodemografi factors						
Sex						
Boy	38	36,5	66	63,5	55,01	0,00
Girl	74	91,4	7	8,6		
Value of the report						

Variables	Smoking behavior				χ^2	p value
	Never		Ever tried			
	smoking		smoking			
(6,00 - 7,50)	41	49,4	42	50,6	9,23	0,01
(7,51 - 8,00)	60	67,4	29	32,6		
(8,01 - 9,50)	11	84,6	2	15,4		
Pocket money per month						
(> Rp.172.622,01)	6	60,0	4	40,0	8,82	0,01
(Rp.50.166,81 - Rp172.622,01)	82	55,8	65	44,2		
(<Rp.50.166,81)	24	85,7	4	14,3		
Residence						
With parents	89	63,6	51	36,4	1,72	0,18
Without parents	23	51,1	22	48,9		
Parents work						
PNS, ABRI & POLRI	12	54,5	10	45,5	3,01	0,69
Businessmen	38	63,3	22	36,7		
Farmer	15	55,6	12	44,4		
Private employee	13	56,5	10	43,5		
Professional (judge, practice doctor,dll)	0	0,0	1	100,0		
Labors & pedicap drivers	34	65,4	18	34,6		
Characteristic of parents						
Knowing the exsintence of teenagers	13	31,7	28	68,3	16,81	0,00
Not knowing the existense of teenagers	99	68,8	45	31,3		
Characteristic of parents						
Not familiar with school friends	73	56,2	57	43,8	2,93	0,09
Familiar with school friends	39	70,9	16	29,1		
Age						
(< 13 tahun)	0	0,0	1	100,0	1,17	0,13
(13 -15 tahun)	103	62,8	61	37,2		
(> 15 tahun)	9	45,0	11	55,0		
Sosial enviroment						
Father						
Never smoke	50	58,1	36	41,9	0,22	0,64
Smoke	62	62,6	37	37,4		
Older brother						
Never smoke	95	63,8	54	36,2	2,66	0,10
Smoke	17	47,2	19	52,8		
Grandfather					0,61	

Variables	Smoking behavior				χ^2	p value
	Never		Ever tried			
	smoking		smoking			
Never smoke	102	61,8	63	38,2	3,37	0,44
Smoke	10	50,0	10	50,0		
Sibling						
Never smoke	101	63,5	58	36,5	3,37	0,07
Smoke	11	42,3	15	57,7		
Others (ie. the boarders)						
Never smoke	110	60,4	72	39,6	-	1,00
smoke	2	66,7	1	33,3		
Closed friends						
There is smoke	51	92,7	4	7,3	32,05	0,00
There is no smoke	61	46,9	69	53,1		
Level of knowledge						
Good	54	69,2	24	30,8	3,66	0,06
Poorly	58	54,2	49	45,8		

EXPOSURE CIGARETTE ADVERTISING AND SMOKING BEHAVIOR AMONG TEENAGERS AT JUNIOR HIGH SCHOOL

The analysis showed that there was a significant relationship between cigarette advertising exposure and smoking behavior among teenagers at junior high school in Bantul district. As described in Table 2 below.

Table 2. Cigarette advertising exposure and smoking behavior among teenagers at junior high school in Bantul district

Cigarette advertising exposure	Smoking behavior				p	χ^2	OR (95%CI)
	Never		Ever tried				
	smoking		smoking				
	N	%	N	%			
High	7	29,2	17	70,8	0,000	13,93	7,83 (2,46-24,84)
Moderate	76	61,8	47	38,2	0,104		1,99 (0,87- 4.57)
Low	29	76,3	9	23,7			Ref
Total	112	60,5	73	39,5			

These results were supported by research of Botvin et al(10); Prabandari, et al(15); Hanewinkel et al(8, 23); Azwar 2007(25); and Lopez et al (26). The results also showed that the higher level of cigarette advertising exposure, the more likely teenagers to involve in smoking behavior. High cigarette advertising exposure has a chance of 7.83 times in influencing teenagers to try smoking as compared with low exposure cigarette advertising. This was similar with the

research of Hanewinkel(23) who reported that the incidence of teenagers smoking are associated with increased cigarette advertising exposure while other products exposure did not cause the initiation of smoking in teenagers.

The percentage of male respondents who was often exposed to cigarette advertising was higher than girls. This condition was due to the acceptance of male adolescents to cigarette advertising was higher than female adolescents (2). Cigarette advertising of Sampoerna mild was the most identified correctly by the female respondents (92.6%) than male respondents (88.5). Cigarette advertising images were more attractive to female respondents because the pictures look funny, using model of male teenagers, and contained the phrase “ put on your tight jeans first and never worry about how to take it off.” from the sentence may represent the value of togetherness and friendship.

Pictures of cigarette advertising that respondents often seen was Djarum Super (76.2%) and it is the most popular cigarette brand among teenagers (97.3%). The most pictures of Cigarette advertising that makes respondents were impressed and attracted were LA light (10.7%) and classmild (10.3%). The display picture of cigarette advertising was attractive so the viewer impressed after looking it. This was appropriate to Suparno(27) who argued that advertising must contain five elements included attractive, building interest in people who look, create a need, and develop a sense of trust and stimulate people to do after seeing the ads displayed. Most advertising of famous cigarette firms include these five elements, so it will be more likely stimulate the viewer to smoke.

Meanwhile, in guiding from Federal Trade Commission (FTC), one of the supervisory boards of advertising in the United States, the form of display advertising may also mislead the consumer or the viewer. These guidelines can be explained that an advertisement contains misrepresentation (false statements or misleading advertising) if the explicit or implicit contrast to the facts or if the information is important to prevent the occurrence of mislead in a practice, claim, representation or a reasonable belief not presented, so rational consumers obtain a false or misleading conclusions. In addition, the important fact is to be “material” as used guide for consumers to decide to buy or use the advertised product (28). In this regard, the ads was generally made by cigarette companies to highlight the temporary pleasures of smoking without thinking about the negative effects of smoking so many teenagers are interested to try smoking. This is understandable because the purpose of advertising of tobacco companies was to increase the sales of cigarettes so the cigarette advertising was trying to provoke the target (30).

The rise of misleading ads is due to the increasing competition among business actors in order to attract consumers' attention and deceive consumers. There are several criteria that can be used as a standard determination of advertising information that categorized as misleading information, the material facts, rational consumers, and the justification for advertising claims. Overall criteria can help governments and associated institutions with the advertising world to oversee a variety of ad impressions that are in print and electronic media, so that the potential losses by consumers can be avoided (29). One example of misleading advertising was the cigarettes advertising that taking children to smoke, either directly or indirectly (30).

These results indicated that respondents who impressed and interested when they see the cigarette advertisement, they had a higher tendency to try smoking than teenagers who were not impressed and not interested in seeing tobacco advertising images. This is due to cigarette advertising images in this study was very interesting from the aspect of coloring, the theme was funny and using creative images, using teen model, and they were displayed at strategic location and were easily viewed by teenagers such as near the schools, so they gave a great impression

on the teens. Then the advertising was also displayed frequently through a variety of media such as billboards, billboards, banners, television magazines, and newspapers. The message in the advertising also used simple sentences and the language of teenagers who seem "in style". For example, "my life is better than yours", "rich taste", "today's spirit, talk less do more, and never get lost just go ahead".

Teenagers among junior high school at Bantul districts were exposed to cigarette advertising on television, magazines, and newspapers, and also outdoor ads which were located along the roadside. These results indicate that most respondents were exposed to cigarette advertising in the street. There was a tendency of the higher frequency of reading magazines, newspapers, watching television, roadside advertising exposure, the higher the smoking behavior of teenagers but bi variable test results showed no significant association of these variables. This is consistent with the results of Prabandari, et al.(15) which states that there is no relationship between frequency of reading magazines, newspapers, listen to the radio, watching television with smoking behavior. This was due to make a teenager interested in cigarette advertising included jingle of song, theme, story, and the star, not a cigarette (15). Smoking behavior at teenagers are associated specifically with content of cigarette advertising(8). Meanwhile, the magazine that showed cigarettes advertisements was males magazine, while the magazine was widely read by teenagers were teens magazines and children's magazine like Girls and Bobo, Aneka, Keren Beken, Gaul, etc.

Based on Government Regulation No. 19 Years 2003 on Protection of Health from smoking, cigarette advertising and promotion can be done in electronic media in the period 21:30 to 05:00 local time. Based on this information, there is a high chance that teenagers were exposed to cigarette advertising on television when watching television at 9 pm. The television channels that teens are most frequently watched were Global TV, TV Trans and Trans7. According to observation of researcher, most of event at the station were appropriate with the world many teens like such as movies, sports, songs, etc.. While according to teens, television shows that broadcasted most cigarette advertising was sport events (44.3%), news, movies, reality shows, and comedy. Furthermore, Hanewinkel et al.(23) in a longitudinal study of exposure to tobacco advertising and teens smoking initiation in Germany also stated that there was no association between frequency of television viewing with the initiation of teens smoking.

The Main Factors Associated with Teenagers Smoking Behavior among Junior High School

Multivariable analysis was used to determine the main factors associated with adolescent smoking behavior. These variables included gender, because it has the most value of the coefficient (β). Boys among junior high school was more likely to smoke 17.00 times than girls. This is consistent with some previous research that states that the male gender more likely to smoke (6,15, 17-21). Furthermore Nitchter et al stated that smoking is generally regarded as the cultural unity of men, such as cigarettes distributed on social occasions such as weddings, funerals, religious ceremonies and meeting people. In addition smoking is also a normative to the men and considered a symbol of masculinity. This assumption also applies to the boys (6). Teens that have smoker as their close friends are 6.33 times more likely to behave to smoke. This suggests that the existence of such a huge influence of peer groups or social pressure from friends at school and outside school. Further high-level exposure to cigarette advertising also has a 5.95 times greater relationship with teenagers smoking behavior compared to low-level exposure to cigarette advertising. Criteria for cigarette advertising exposure was the message conveyed through the media frequently(31).

Teens that have older brothers who smoke are 4.26 times have greater chance to smoking behavior. In the family, older brother figure was used as a nearest role model for teenagers beside the father. The role of older brother is greater in influencing teens to smoke than the father. The results of this study are presented in accordance with Botvin et al that smoking status of the older brother cause teen smoking(10). It is possible because the existence of an older brother is closer to teenagers. This is reinforced by research of Tyas & Pederson(9) that the lack of father and children relationship is only associated with adolescent smoking behavior of women.

While teenagers whose parents do not care where his son about, has a chance to smoke 3.13 times greater than compared to teens whose parents know the existence of these teenagers. This is one form of social support from parents who could prevent teenagers to try smoking(24).

CONCLUSION

Cigarette advertising exposure has a considerable influence on teenagers smoking behavior at junior high school of Bantul District. The effective of health promotion programs need to be done to overcome the influence of cigarette advertising exposure and appropriate policies needed to restrict cigarette advertising in the vicinity of school areas. Based on those result we suggest some approaches to prevent smoking behavior among teenagers at junior high school. They are divided among group target, 1) for school : provide insight to the parents that cigarette advertising is the cause of teenagers smoking behavior and tobacco contain substances that cause addiction when the report were distributed; change a positive impression of smoking on male teenagers by providing an understanding that cigarettes content are addictive substances and is causing smoking behavior and prevention of smoking behavior in students through peer education; 2) for The Bantul District Education Department is expected to include health promotion programs into school curriculum, particularly in relation to the prevention of smoking behavior in school, 3) for the Government of Bantul district, re-structuring tobacco advertising regulation in Bantul district especially near the school.

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