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PENGANTAR REDAKSI

Pembaca yang terhormat,

Sampai dengan edisi ini terbit, jika pembaca menelusuri deretan jurnal-jurnal yang terdaftar di Sinta dengan kata kunci penelusuran “kuantitatif”, maka yang akan muncul adalah Jurnal Ekonomi Kuantitatif (JEKT). Dengan menjadi satu-satunya jurnal dengan fokus kuantitatif, maka JEKT dituntut untuk menampilkan terbitan dengan menggunakan pendekatan kuantitatif. Kalangan peneliti ekonomi, pembangunan dan ilmu sosial lainnya di Indonesia tentunya sudah tidak asing lagi dengan penerapan metode kuantitatif dalam melakukan analisis, khususnya analisis empiris. Terlepas dari semua itu, diatas segala kemutakhiran metode kuantitatif yang digunakan, “ceritera” yang mampu menarik pembaca dan tentunya para pembuat kebijakan untuk berpartisipasi aktif dalam membaca dan menulis di JEKT adalah yang utama. Rangkaian “ceritera” yang baik dan metode kuantitatif yang sesuai tidak akan bermakna jika data yang digunakan tidak transparan dan tidak valid.

Slogan menarik mengenai data digunakan oleh BPS, “Data Mencerdaskan Bangsa”, JEKT berkomitmen untuk berperan aktif dalam mewujudkan slogan tersebut menjadi kenyataan. Meskipun tidak selalu data yang digunakan artikel yang dipublikasi oleh JEKT menggunakan data BPS sebagai “menu” utama dalam analisisnya, data BPS pasti hampir selalu menjadi rujukan dalam setiap artikel dalam terbitan JEKT. Pentingnya satu pemahaman dan satu sumber dalam data memegang peran penting dalam analisis dan diskusi yang akan melahirkan implikasi kebijakan yang lebih tepat sasaran. Dalam edisi kali ini, JEKT kembali menerbitkan 10 artikel dengan sumber dan jenis data serta metodologi yang beragam.

Sumber data yang digunakan oleh penulis dalam edisi ini cukup bervariasi mulai sumber data sekunder sampai data primer. Artikel dengan sumber data sekunder sendiri juga memiliki variasi jenis data yang beragam mulai dari data mikro antara lain dari sumber BPS.

Akhir kata, redaksi menyimpulkan bahwa artikel-artikel yang diterbitkan oleh JEKT mulai mengalami pergeseran sejak kemunculannya pertama kali lebih dari 10 tahun silam, utamanya dari sisi data yang digunakan. Semakin banyak artikel-artikel yang menampilkan analisis dengan menggunakan data mikro baik dari sumber sekunder maupun primer. Meskipun demikian JEKT tetap membuka diri untuk artikel-artikel dengan penggunaan data agregate. Kembali ke Alenia pembuka di atas, yang terpenting bagi JEKT dalam terbitannya adalah “ceritera” yang menarik, metode kuantitatif yang sesuai dan data yang valid.

Mother's Status and the Prevalence of Smoking Habits among Adolescents: A Survey in Pontianak City, Indonesia

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ABSTRACT

The smoking rate of adolescent continues to increase in Indonesia. It is necessary to involve all parties in the anti-smoking campaign, including mothers. This research aims to find out about the influences of mother's status on the prevalence of smoking habits among adolescent. Mother's status in this research referred to education level and occupation status. This research data was obtained from a survey questionnaire with 998 adolescent respondents in Pontianak City, Indonesia. The research findings showed that only mother's occupation status significantly influences the probability for mothers to give some suggestions to their children about the danger of smoking. However, mother's suggestion variable did not significantly influence their children's decision to smoke. But the significant variables to influence adolescents' decision to smoke were smoking parents and father's suggestions about the danger of smoking. This is due to the culture of Indonesian society, children tend to more obey their fathers' advice than their mothers' ones.

Keywords: Adolescent; Smoking Habit; Mother's status, Education level, Occupation status.

Status Ibu dan Prevalensi Kebiasaan Merokok Remaja : Sebuah Survey di Kota Pontianak

ABSTRAK

Tingkat remaja merokok terus meningkat di Indonesia. Hal ini memerlukan keterlibatan seluruh pihak dalam kampanye anti merokok, termasuk Ibu. Penelitian ini bertujuan untuk mengetahui bagaimana pengaruh status ibu terhadap kebiasaan merokok bagi remaja. Status ibu dibedakan berdasarkan tingkat pendidikan dan status pekerjaan. Data penelitian ini berasal dari questioner survey dengan responden sebanyak 998 remaja di Kota Pontianak. Temuan dari penelitian ini adalah hanya variabel status pekerjaan ibu yang signifikan mempengaruhi probabilitas ibu untuk memberikan nasihat kepada anaknya tentang bahaya merokok. Tetapi variabel nasihat ibu ini tidak signifikan mempengaruhi keputusan remaja untuk merokok. Variabel yang signifikan adalah keberadaan orang tua yang merokok dan nasihat dari ayah tentang bahaya merokok yang signifikan mempengaruhi keputusan remaja merokok.

Kata kunci: Remaja; Kebiasaan Merokok; Status Ibu; Tingkat Pendidikan; Status pekerjaan

Introduction

Smoking habit has been deeply rooted in people's lives around the world, including Indonesia. Even though it has been known that smoking can cause many kinds of disease, particularly cancer and cardiovascular; however, many smokers do not give up their habit. Moreover, there are even more new smokers which are usually coming from adolescent groups. There has been a significant increase in the number of young smokers in Indonesia. In the last two decades, the number of young smokers, ranging from 10 to 14 years old, has increased two-folds. It has even increased three-folds for young smokers between 5 and 9 years old. There were 41% adolescents between 13 and 15 years old who smoke; and additionally, almost 20% adolescents tried smoking at the first time before they turned 10 years old. Until now, approximately 67.4% of Indonesian men are smokers (The Jakarta Post, July 11th, 2018 edition). It is supported by Jamaliah and Massardi's (2017) findings that male adolescents started smoking at earlier age than female adolescents.

Increasing prevalence of adolescent smokers in Indonesia can reduce quality of future generations and reduce the potential of demography bonus. However, smoking is the most preventable cause of illness and death, thus contributing to fewer hospital admissions and death compared to a combination of drug and alcohol use (Australian Institute of Health and Welfare, 2012). Therefore, one of Indonesian government policies to anticipate it is by implementing Government Regulation No. 109/2012. The regulation stated that kids' playgrounds and studying areas should

be free of smoke. Unfortunately, in reality, there are always new smokers among adolescents. Adolescent or youth smoking habits might be influenced by exposure toward cigarette consumption through their parents, peers, films, advertisement, video games, and celebrities (see Hamzah et.al. 2019). According to a study's findings, in Indonesia, peers are the dominant mediators in initiating and maintaining smoking behaviour (Samet et.al., 1997). Even though schools are smoke-free areas, if the adolescents have parents who smoke at home, it might trigger them to be smokers as well.

Based on study findings from Suwanteerangkul (2000), a tendency to smoke was found among adolescents with family issues, family's economic pressure, and lack of communication with and/or supervision from their parents. It shows that family circumstance is the main deciding factor for adolescents' personalities and habits. A mother is one of the most important actors to determine quality of family and children's characters, because providing education to develop children's characters and personalities is a mother's duty. General quality of a mother determines family quality, and further determines the quality of adolescents' personalities. Age group between 12 and 17 years old is the period of shaping prominent self-concept; thus, certain behaviours also reflect adolescents' self-identity which are shaped by their surroundings (Hertel and Mermelstein, 2012). The relationship between mothers with smoking habits and adolescents' habits was also examined by Lieb, Pfister, and Wittchen (2003).

A mother's quality can be measured from some categories, namely

education and time allocation for her family. A well-educated mother should have possessed good level of knowledge about health, including about the danger of smoking. Having good education, a mother should have the capability to understand the importance of avoiding unhealthy behaviors and to communicate with health practitioners. Hence, a well-educated mother is very likely to forbid her children to even try smoking. Among families which strictly forbid their kids to smoke, there are no reasons for them to start smoking. A strong family support in establishing non-smoking rules plays as a protective shield for adolescents and deter them from any willingness to even try smoking (Mahabee-Gittens, Xiao, Gordon, and Khaoury, 2012). Adolescent and young people are crucial targets for anti-smoking messages. They are the parties most likely to experiment and become smokers: the most likely to influence their peers to smoke (Australian Institute of Health and Welfare, 2012); most likely to stop because they are least addicted (Jenks, 1994; Breslau and Peterson, 1996; Messer et al., 2008) and stopping at a young age reduces the risk of suffering from illness and death (Husten, 2007; Australian Institute of Health and Welfare, 2010).

There are findings about positive relationship between adolescents' smoking habits and the amount of allowance they receive (Abdalla et.al, 2009). A well-educated mother has better opportunity to find a high-income job. If a mother decides to work, her time allocation to supervise children's development will automatically decrease, though it is compensated by an increase in family welfare through an increase in household income. Adolescents coming from high-income

family usually receive higher allowance than those coming from least-privileged family. This certainly will affect the prevalence of adolescents to smoke.

Children with less or lack of supervision from their parents, particularly mothers, are highly likely to make wrong decisions, such as decision to smoke. Although based on the findings of research conducted by Boujikian (2015) that adolescents who smoke are not influenced by the presence or absence of supervision by parents after school. This means that adolescents with working mothers do not always have a higher smoking prevalence than adolescents with non-working mothers. Therefore, it is interesting to find out about the influences of mother's status (in this case, her education level and occupation status) on adolescents' smoking habit.

Literature Review

Decision to smoke is indeed human right; however, people needs to realize that it is not merely detrimental to smokers' health, but also dangerous for smokers' surroundings (passive smoker). It is also important to highlight children rights in relation to tobacco control. Children who regularly become second-hand smokers are frequently viewed as 'substitute smokers' by tobacco industry. Self-esteem obtained from smoking is one of the most-created contents by tobacco companies to acquire new smokers (Wild et al., 2004; Pederson et al., 1998; Glendinning, 2002). Therefore, children protection is highly essential to reduce damaging impacts from tobacco usage and exposure. So protecting children is very important if we want to reduce the damaging effects of tobacco use and exposure. Because in early childhood, family influence is

generally more important than peers, although this role decreases with age (John, 1999).

For the last few years, there have been increasing number of attempts to reduce the prevalence rate of tobacco usage and exposure to environment polluted by cigarette smoke in the United States and Canada. Such attempts appear to be efficacious, because smoking prevalence rate among general public has decreased by 15% in the last 25 years (Milliar, 1987; Pederson, 1993; Statistic Canada, 1994; Statistic Canada, 1995). Declining rate is apparent among adults, but it is not the case among adolescents, particularly the female ones (Greaves, 1987; Decima Research, 1991).

Preventive attempts to reduce adolescent smokers are absolutely necessary to avoid further increase in the number of smokes. Besides school, family is an important environment to shape children's characters, including decision to smoke. Furthermore, mother's education level will determine level of participation in a household in order to improve children health (Caldwell, 1989). It implies that a well-educated mother is more likely to forbid her children to smoke. The form of anti-smoking messages can be conveyed through fear appeals messages, because fear appeals in advertising get more attention that can activate recipient fears so that they change their attitude or behaviour (Witte, 1992).

According to Nixon (2006) and Barsky (1997), the impact of increasing income on health status is initially positive, until it reaches a certain level of income which influences individual's life pattern. Then, the impact is reversed to negative and even increases the upward curve in a U-shaped curve. In the case of

adolescent smoking habit, the findings illustrated the impact on the increase of their allowance when household income increases. Increase in allowance also increases budget availability for them to buy cigarette. It is especially easy in Indonesia, because cigarette is sold in a single stick and highly affordable for young people. There are no regulations regarding age restrictions for cigarette buyers, therefore a raise in allowance can also increase their cigarette consumption. Until now, some countries are still applying ceiling custom in order to control cigarette consumption (The Jakarta Post, 11 July 2018).

Materials and Method

The data used to estimate the number of smokers among adolescents was primary data from survey questionnaire. This questionnaire was distributed in all junior and senior high school/vocational school, both public and private, in all over Pontianak city (www.schoolmap.dindikptk.net). Total number of students from all of the schools were 998 male students. We considered choosing male respondents only, because male usually had smoking habits in Indonesia.

All respondents filled in questionnaires' questions related to demography characters and smoking habits. Confidentiality was guaranteed, and consent was obtained from the participants in writing. Out of all respondents, there were 352 (35.27%) middle school students and 646 (64.73%) high school students. Overall, there were 343 respondents (34.37%) who smoked. From all respondents who were middle school students, 113 (11.32% from total respondents or 32.10% from the total respondents of middle school) of them smoke and the rest of them or 239

students (23.94% from total respondents or 67.90% from the total respondents of middle school students) did not. Meanwhile, among high school students, there were 230 students (23.05% from total respondents or 35.60% from the total respondents of high school students) who smoke and the rest of them or 417 students (41.78% from total respondents or 64.55% from the total respondents of high school students) did not.

Based on parents' smoking habit, there were 557 students (55.81%) with parents who smoke. Out of those 557 students, 226 of them (22.65% from total respondents) also developed smoking habits. Furthermore, based on siblings' smoking habits, there were 90 students (9.02% from total respondents) with smoking siblings and 32 students (among those 90, or 3.21% from total respondents) also develop smoking habit. These facts supported the findings from Heskett, Qu, and Tomkins (2001), and Loureiro, Sanz-de-Galdeano, and Vuri (2006). Daily parental and sibling smoking behavior that is commonly seen by adolescents will encourage them to imitate and to start the behaviour.

Meanwhile, based on mother's education level, there were 194 students (19.44%) having mothers graduated from elementary school; 187 students (18.74%) having mothers graduated from middle school; 394 students (39.48%) having mothers graduated from high school; and the rest of the students (87 students or 8.72%) having mothers graduated from bachelor degree and higher. However, there were 69 students (6.91%) having mothers who did not even finish primary education. Among students with mothers graduated from primary school, there were 69 students (6.91%)

with smoking habit and they averagely started smoking at 16.1 years old. For respondents with mothers graduated from middle school, 71 students (7.11%) developed smoking habit and averagely started smoking at 16.0 years old. Moreover, among respondents having mothers graduated from high school, 12 students (12.12%) developed smoking habits with average initiating age at 15.78 years old. Lastly, among respondents having mothers with bachelor degree, 30 of them (30%) developed smoking habit and averagely initiated smoking at 15.77 years old.

Out of 998 respondents, 371 of them (37.17%) had working mom. In this research, 'working' refers to mothers who own a company and work for a company/institution and they also receive wage. Among respondents with working mothers, 125 (1.53%) of them were smokers. Moreover, among the working mothers, 71 mothers (7.11%) graduated from elementary school; 62 mothers (6.21%) graduated from middle school; 132 mothers (13.23%) graduated from high school; 56 mothers (5.61%) graduated from bachelors' degree; 74 mothers (7.41%) obtained a bachelor; and 32 mothers (3.21%) did not graduate from primary school.

Based on whether or not the respondents received some suggestions from their parents about the danger of smoking, there were 157 students (15.73%) receiving suggestions from their mothers; 272 students (27.25%) receiving advices from their fathers; 7 students (0.70%) receiving suggestions from both parents; 27 students (2.71%) receiving advices from male/female siblings; 7 students (0.70%) receiving suggestions from grandmothers/grandfathers or

uncles/aunties; and 514 students (51.50%) did not receive any advices about the danger of smoking from either parent. Based on the findings, it is apparent that more than half of the respondents did not receive any information about the danger of smoking from their families or relatives; hence, it might increase the prevalence rate of adolescents to develop smoking habits.

Among all respondents, the average of daily allowance for each person was IDR 12,900.00, with average of daily allowance at IDR 10,600.00 for junior high school students and at IDR 14,200.00 for senior high school students. Meanwhile, among junior high school students with smoking habits, their average daily allowance was IDR 10,700.00; while the average allowance for senior high school students with smoking habits was IDR 13,600.00. Furthermore, based on mothers' occupation status, junior high students with working mothers averagely have higher daily allowance (IDR 10,800.00) than students whose mothers do not work (IDR 10,500.00). Similar findings were discovered among senior high school students. Students with working mothers had higher daily allowance (IDR 14,800.00) than students without working mothers (IDR 13,900.00). Based on the explanation above, it is concluded that there is an increase in students' daily allowances if they have working

mother. Hence, it will increase the probability for them to start or continue smoking.

All data collected in this research were estimated in order to discover relationships between variables, including the relationship between respondents' demography characteristics, mothers' status, and adolescents' smoking habits. Hence, the mathematic formula for such estimate is illustrated below:

$$Smok_i = \alpha_0 + \alpha_1 Parent_i + \alpha_2 Peer_i + \alpha_3 Sugg_fa_i + \alpha_4 Sugg_mo_i + \alpha_5 Pock_i + \varepsilon_i \tag{1}$$

$$where Sugg_mo_i = \beta_0 + \beta_1 Edu_i + \beta_2 Empl_i + z_i \tag{2}$$

hence, substitution (2) to (1) becomes:

$$\begin{aligned} Smok_i &= \alpha_0 + \alpha_1 Parent_i + \alpha_2 Peer_i + \alpha_3 Sugg_fa_i + \alpha_4 (\beta_0 + \beta_1 Edu_i + \beta_2 Empl_i + z_i) + \alpha_5 Pock_i + \varepsilon_i \\ &= (\alpha_0 + \alpha_4 \beta_0) + \alpha_1 Parent_i + \alpha_2 Peer_i + \alpha_3 Sugg_fa_i + \alpha_4 \beta_1 Edu_i + \alpha_4 \beta_2 Empl_i + \alpha_5 Pock_i + (\varepsilon + z)_i \\ &= (\alpha_0 + \gamma_0) + \alpha_1 Parent_i + \alpha_2 Peer_i + \alpha_3 Sugg_fa_i + \gamma_1 Edu_i + \gamma_2 Empl_i + \alpha_5 Pock_i + \Omega_i \\ &= \Pi_0 + \alpha_1 Parent_i + \alpha_2 Peer_i + \alpha_3 Sugg_fa_i + \gamma_1 Edu_i + \gamma_2 Empl_i + \alpha_5 Pock_i + \Omega_i \end{aligned}$$

Furthermore, operational definitions of those research variables are displayed in the following Table 1.

Table 1 Operational Definition of Research Variables

Variables	Definitions	Values
Smok	Dummy, referring to adolescents' smoking status	1 if they smoke; 0 if they do not.
Parent	Dummy, referring to parents' smoking status	1 if they smoke; 0 if they do not.
Peer	Dummy, referring to peers' smoking status.	1 if they smoke; 0 if they do not.
Sug_fa	Dummy, referring to the existence of	1 if there is a suggestion; 0 if

	suggestions from father about the danger of smoking	there is not.
Sug_ma	Dummy, referring to the existence of suggestions from mother about the danger of smoking	1 if there is a suggestion; 0 if there is not.
Edu	Dummy, referring to mother's education level	1 if she graduated from middle school or below; 2 if she graduated from high school; 3 if she's a university graduate; 4 if she graduated from masters; 5 if she graduated from doctoral degree.
Empl	Dummy, referring to mother's occupation status	1 if she works; 1 if she does not.
Pock	Average amount of daily allowance	IDR*

*IDR is The Indonesian currency

Estimation Results and Discussion

In this research, before estimating smoking habit (*Smok*) variable, we first estimated mother suggestion (*Sug_mo*) variable. Regression results from *Sugg_mo* variable is displayed in Table 2 below. From Table 2, it is apparent that employment (*Empl*) significantly and positively influences *Sugg* variable; while education (*Edu*) has no influence on suggestion (*Sugg*) variable. It implies that working mothers are more likely to give advices to her children about the danger of smoking. It might be caused by higher level of communication and

information possessed by working mothers, compared to non-working ones. It further affects an increase in knowledge, particularly about the danger of smoking for adolescents. Meanwhile, there is a tendency among non-working mothers or full-time housewives for not having any interests in latest and newest information, including about the danger of smoking. Based on LR-statistics and probability values, it can be concluded that the whole regressor variables significantly influence mother's suggestion variable.

Table 2 Estimation Results of Mother's Suggestion Variable (*Sug_mo*)

Variable	Coefficient	Std. Error	z-statistics	Probability
C	-1.243874	0.118579	-10.48979	0.0000
EDU	0.094833	0.070102	1.352780	0.1761
EMPL	0.232683	0.099397	2.340942**	0.0192
McFadden R-Square 0.010072				
LR statistic 8.748933				
Prob (LR statistic) 0.012595				
** denote significantly at $\alpha = 0.05$				

Based on estimation results on Table 2, a working mother is more likely to give advice to her children

about the danger of smoking with probability of 84.38%, *ceteris paribus*. While based on the analysis results of

marginal effects in Table 3, it can be concluded that a working mother improves the probability to give advices to her children about the danger of smoking by 5.5%. This

shows that working mothers have a higher concern for the negative effects of smoking than the non-working ones.

Table 3 Results for Marginal Effects for Mother’s Suggestion Variable (Sug_mo)

Variables	dy/dx	Std. Error	Z-statistics
Edu_mo	.0225882	0.0166763	1.35
Empl_mo	0.055423	0.0235917	2.35**

**Denote significantly at $\alpha = 0.05$

Meanwhile, the estimation results for smoking habit variable within the

previously mentioned model can be seen in Table 4.

Table 4 The Estimation Results for Determinants of Smoking Habits among Adolescents.

Variables	Coefficients	Z-statistics	Probability
Constants	-0.355328	-1.679646***	0.0930
Parent	0.445446	5.124086*	0.0000
Peer	-0.404846	-1.363928	0.1726
Sug_fa	-0.416606	-4.861991*	0.0000
Sug_mo	-0.394526	-0.322213	0.7473
Pock	-2.75E-06	-0.499674	0.6173
McFadden R-Square 0.041539			
LR-statistics 53.35033			
Prob (LR-statistics) 0.000000			
*** denote significantly at $\alpha = 0.05$			
* denote significantly at $\alpha = 0.01$			

Based on the estimation results in Table 4, variables which significantly influence adolescents smoking habit are smoking parents (*Parent*) and father’s suggestion about the danger of smoking (*Sug_fa*). Family members who smoke have extremely strong influences on adolescents in terms of initiating smoking habit at an earlier age. This variable positively and significantly influences the habit for children. It implies that if there is a family member who smokes, it will increase the probability of adolescents to adopt similar smoking habit. This finding is in line with the findings from Loureiro, Galdeano, and Vuri (2006) and Sabrina et al (2012). Those previous studies discovered that for children whose both

or either parent smoke, they will have more probability to be smokers. Moreover, if their older siblings are also smokers, then the risk of them being smokers increases four times. However, in this research, smoking siblings or peers have no significant influence on adolescents’ smoking habit. Hence, it is different from the findings of Samet et al (1997).

Furthermore, based on estimation results in Table 4, even if an adolescent has parents who smoke, but his/her father advices him/her about the danger of smoking for health, they have the probability to develop smoking habit at 37.20% (in other word, they have the probability to not become smokers at 62.80%). On the other hand, if parents of

an adolescent smoke, but his/her father has never advised him/her against smoking, the adolescents have the probability to adopt smoking habit at 53.59% (or probability not to smoke at 46.41%). If both findings are compared, given a situation where both parents adopt smoking habit (and the other conditions are *ceteris paribus*), it implies that father's advice against smoking will reduce the probability of adolescents adopting smoking habits by 16.39% (the probability decreases from 53.59% to 37.20%), or the probability of them not to become smokers is raised to 16.39% (the probability increases from 46.41% to 62.80%).

An adolescent whose parents are not smokers and his/her father advises him/her against smoking has probability to adopt smoking habit at 22.01%, or probability not to smoke at 77.99%. If this analysis is compared to previous findings, given father's suggestions against smoking (and other conditions are *ceteris paribus*), it can be said that parents who are smokers raise the probability of adolescents to become smokers by 15.19% (the probability increases from 22.01% to 37.20%). In other words, the probability of adolescents not

to smoke decreased by 15.19% (the probability decrease from 77.99% to 62.80%).

An adolescent, whose parents are not smoking and receives no advice on the danger of smoking from his/her father, has probability to smoke at 36.12%, or the probability not to smoke at 63.88%. Compared to previous findings, given non-existent of parents who smoke (and other conditions are *ceteris paribus*), if an adolescent is given advice about the danger of smoking for health, it will reduce the probability of his/her to smoke by 14.11% (the probability decrease from 36.12% to 22.01%). In other words, it raises the probability of adolescents not to smoke by 14.11% (the probability increase from 63.88% to 77.99%). Meanwhile, given non-existence advice against smoking from fathers (and other conditions are *ceteris paribus*), if fathers smoke, then it will raise the probability of adolescents to smoke by 17.47% (the probability increase from 36.12% to 53.59%). In other words, it will reduce the probability of adolescents not to smoke by 17.47% (the probability decrease from 46.41% to 63.88%).

Table 5 The Results of Marginal Effect for adolescent's smoking habit variable

Variables	Dy/dx	Z-Statistics
Parents	0.1566679	5.33*
Peer	-0.1423884	-1.37
Sug_fa	-0.1465245	-5.04*
Sug-mo	-0.1387589	-0.32
Pock	-9.66e-07	-0.50

*Denote significantly at $\alpha = 0.01$

Meanwhile, mother's suggestion (*sug_mo*) does not significantly influence adolescents' smoking habit. This is in line with the findings from Boujikian's research (2015). This finding indicates that adolescents might heed their fathers' advices more than their mothers'. It might be caused by Indonesian custom in which fathers' power within a family is larger than mother's authority. Based on such finding, it implies that father's willingness to stop smoking is highly necessary in order to elicit more adherence from the children, particularly among adolescents. Such willingness from fathers is also significant in stopping or even not initiating smoking habits among adolescents. Based on LR statistics' values and probability values, it can be concluded that all regress variables are significant to explain variance of adolescents smoking habit.

Based on the calculation results of marginal effects in Table 5, it implies that parents who have smoking habits (all other factors are *ceteris paribus*) will increase the probability of adolescents to adopt smoking habit by 15.67%. On the other hand, father's suggestion (*Sug_fa*) variable suggests that fathers should give advices to adolescents about the danger of smoking (all other factors are *ceteris paribus*) in order to reduce the probability of smoking adolescents by 14.65%. As frequently happens in Indonesia, a father who smokes will forbid his young kid to smoke, but he will give the kid permission once she/he reaches adulthood and earns his/her own income. Therefore, the main reason for them to prohibit smoking is the budget to buy cigarette, not for health-related reasons. It may increase the initial age of adolescent to smoke.

Therefore, adolescents who never receive any advices against smoking from their fathers might start smoking at an earlier age (see Jamaliah and Massardi, 2017).

Limitation

This study is limited by the fact that cross sectional data was used. This study is also limited by the use of a student sample which may not be generalized to other groups of adolescents. Future research should consider more diverse samples so that research results are able to describe better the interrelationship among variables and can be used to generalize facts. It caused by the findings may have an implication for designing intervention programs to improve the effectiveness of the anti-smoking campaign to adolescents.

This research also has a limitation on not doing confirmation to the respondent's parents about whether parents/mothers have given advice about the danger of smoking to adolescents. Future research on adolescents' smoking habits should consider the possibility to involve their parents as research respondents to make a confirmation for the information submitted by adolescent respondents.

Estimation Results and Discussion

This research discovered that father's suggestion about the danger of smoking for health most significantly influences probability of adolescents to adopt smoking habit, besides the factor wherein their parents (or one of the parents) smoke. Father's suggestion can reduce the probability rate of adolescent smoking habit, given the fact that one of the parents (or both) is smoking. On the contrary, although suggestion is given, if

one of the parents (or both) is smoking, then it increases the probability for adolescents to develop smoking habit. Therefore, it can be said that anti-smoking campaign among adolescents will be generally effective if it is conveyed through audio visual media, or by concrete example from people who are considered as role model among adolescents, namely their parents.

In Indonesia, father's power and authority are generally higher than mother's authority. In this research, it is proven that only father's suggestion can significantly influence adolescents' decision to smoke; while mother's suggestion is largely ignored. It is proven in this research that mother's suggestion about the danger of smoking did not influence adolescents' decision to smoke. This research also found that a working mother has higher probability to provide some suggestion about the danger of smoking, compared to a stay-at-home mother. Based on this finding, it can be concluded that mother's attention toward her children is reflected through her advices, not only determined by her time allocation for her children.

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