Conference Paper

Habit of Smoking Family Members at Home to Successful Smoking Cessation in Indonesia

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Abstract

Introduction The percentage of smoking cessation in Indonesia was decreased from 5.4% (2010) to 4% (2013). This study aims to know the habit of smoking family members at home to smoking cessation in Indonesia. Methods Using a cross sectional design, doing secondary data analysis of the Global Adult Tobacco Survey (GATS) Indonesia in 2011. The chi-square test and logistic regression analysis were used to identify the smoking family members to smoking cessation. Results The proportion of smoking cessation in Indonesia 2011 is about 15.7 percent. No family members who are smoking at home is associated with successful smoking cessation in Indonesia (OR: 204, 95% CI: 117 – 356). Conclusion Being informed to smoking family members were important factors in successful smoking cessation. Implementation of smoking ban regulationat home and provide support to family members who are smoking to quit smoking.

Keywords: family member, smoking cessation; GATS; Indonesia

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1. INTRODUCTION

One of the risk factors for six out of eight major causes of death is smoking [26]. Proportion of death causes by smoking in Indonesia (21%) is higher than the proportion of death causes by smoking in the world and in the Southeast Asian region [27, 28]. Prevalence of current smokers globally decrease from 23 percent (2007) to 21 percent (2013), while the prevalence of smokers in Indonesia has increased annually at 34.2 percent (2007) to 36.3 percent (2013). The percentage of quitting smoking in Indonesia was decreased from 5.4% (2010) to 4% (2013). Even though based on the regulation of health ministry affairs Number 40 of 2013, the target of Indonesia in 2015 – 2019 is a decrease in smoking prevalence by 1% per year and a reduction in novice smokers by 1% per year [5, 28] (Kemenkes 2013).

The effectiveness of smoking cessation is a combination of behavior modification (counseling, self-help, brief advice, behavior therapy, and additional therapy) and drug therapy (Nicotine Replacement (NRT), bupropion, and varenicline). Behavior modification and therapy are very important in many ways for communication and support from the environment [3, 22, 25]. The government implements the policy of smoking control with preventive and curative [18]. The effort to quit smoking is smoking cessation clinics. Implementation of smoking cessation clinics is not optimal and the visit rate is still low [14, 24].

Based on the theory of Cancer Council (2012), factors to quit smoking were influenced by internal factors, external factors, and the environment. Based on The Theory of Planned Behavior, adolescent's smoking behavior was influenced by parental smoking behavior (Harrakeh et al, 2004). According to the results of the Lembaga Menanggulangi Masalah Merokok (LM3), 66.2 percent of 375 respondents tried to quit and failed. Failure in the desire to quit for 42.9 percent of smokers are due to not know how to quit smoking [6]. Intention to quit smoking encourage smokers to quit smoking. Smokers who has strong intention to quit smoking are 14 times successful in smoking cessation [2, 20]. In addition, knowledge about the harms of smoking increases awareness for smoking cessation [30].

History of smoking parents can increase the risk of smoking initiation of children and parents who are quitting smoking can reduce the initiation of children to smoke [9, 12]. Children can be protected from smoking initiation and smoking exposure if their parents quit smoking [19]. This study aims to determine smoking family members at home to successful smoking cessation in Indonesia.

2. METHODS

This cross-sectional study used secondary data from the Global Adult Tobacco Survey (GATS), 2011. Data GATS 2011 was carried out in 19 provinces with 77 districts / cities. The dependent variable is smoking cessation while the independent variable is smoking family members at home, sex, age, age of smoking initiation, knowledge on harms of smoking, education, economic status and smoking coworkers. The confounder variable are ban to smoking at home, ban to smoking in the workplace, see health warning on cigarette packs, ever visited the no smoking area, exposed to the media on harms of smoking, and unexposed to cigarette advertisement. The knowledge on harms of smoking is measured by knowledge about what smoke can cause and the increase risk of stroke, heart attack, lung cancer, chronic obstructive pulmonary disease, bladder

cancer, stomach cancer, and premature births. The number of questions about knowledge is nine questions. The population in this study is the population aged 15 years old or more. The analysis used were univariable, bivariable, and logistic regression.

3. RESULTS

Smokers who had stopped smoking in Indonesia are 15.7 percent. The proportion of smokers living in the urban area are almost the same to living in the rural. Most smokers are male sex (94 percent), elementary school education or less (55 percent), adults aged 35 – 44 years old (47 percent), started smoking in their teens 15-24 years (73 percent), have less knowledge about the harms of smoking (70 percent), and most have smoking family members (88 percent). Most do not have a ban to smoking at home (94 percent), do not know whether there is a ban on smoking in the workplace (75 percent), read the health warnings on cigarette packs (68 percent), never visited regions without cigarettes (73 percent), exposure to media about harms of smoking (53 percent), and exposed to 5 types of cigarette advertisement or more (83 percent).

Table 1: Distribution of 15 Years Old Population Based on Smoking Cessation, External Factors, and Internal Factors in Indonesia in 2011

Variable	n	%	Variable	n	%
Smoking Cessation			Smoking Family Members		
No	2855	84,3	Yes	2953	88,3
Yes	555	15,7	No	457	11,7
Residence			Smoking Coworkers		
Rural	1792	47,8	Yes	523	15,8
Urban	1618	52,2	No	322	9,6
Sex			Don't know	2565	74,6
Male	3175	94,3	Ban on smoking at home		
Female	235	5,7	Not Applied	3217	94,4
Education			Applied	193	5,6
Low (≤ SD)	1885	55,2	Ban on smoking at workplace		
Middle (SMP – SMA)	1309	41,4	Not Applied	553	16,8
High (> SMA)	216	6,4	Applied	292	8,6
Age			Don't know	2565	74,6
Adolescent (15 – 24 years old)	407	17,4	See the health warning on cigarette packs (for the last one month)		
Adult (25 – 44 years old)	1624	47,3	No	1151	31,3
Pre elderly (45 – 59 years old)	873	23,7	Yes	2259	68,7
Elderly (46+ years old)	506	11,	Ever visited the no smoking area (for the last one month)		
Age of smoking initiation			Never	2226	66,8
Adolescent (15 – 24 years old)	2463	73)	Ever	1184	33,2

Variable	n	%	Variable	n	%
Adult (25+ year old)	369	9,8	Exposed to the media on harms of smoking (for the last one month)		
Don't know	568	17,2	No	1621	45,5
Knowledge on harms of smoking			Yes	1789	54,5
Less (0 – 59)	2412	69,6	Unexposed to cigarette advertisement (for the last one month)		
Enough (60 – 74)	391	12,3	Exposed to more than 4 advertisement	1358	42,1
Good (75 – 90)	459	13,4	Exposed to 1 – 4 advertisement	1532	44,9
Very Good (91 – 100)	148	4,7	Not exposed	520	13
Economic Status					
≤ Quintiles 2	1631	44,6			
Quintiles 3	476	14,4			
Quintiles 4	621	19,5			
Quintiles 5	682	21,5			

Table 2: Relationship of Smoking Family Members and Smoking Cessation in Indonesia in 2011.

Variable	Smoking Cessation		Crude OR (95% CI)	*Adjusted OR (95% CI)
	No n (%)	Yes n (%)		
Sex				
Male	2720 (86)	455 (14)	1,0	1,0
Female	135 (56,4)	100 (43,6)	4,7 (3,4 – 6,5)	5,4 (2,2 – 12,9)
Education				
Low (≤ SD)	1612 (85,7)	273 (14,3)	1,0	1,0
Middle (SMP – SMA)	1093 (84,5)	216 (15,5)	1,1 (0,9 – 1,4)	0,9 (0,5 – 1,8)
High (> SMA)	150 (71,8)	66 (28,2)	2,4 (1,6 – 3,6)	0,6 (0,2 – 1,8)
Age				
Adolescent (15 – 24 years old)	355 (87,6)	52 (12,4)	1,0	1,0
Adult (25 – 44 years old)	1399 (86,9)	225 (13,1)	1,1 (0,7 – 1,6)	2,5 (0,6 – 10,5)
Pre Elderly (45 – 59 years old)	731 (82,9)	142 (17,2)	1,5 (0,96 – 2,2)	3,2 (0,8 – 12,7)
Elderly (60+ years old)	370 (71,7)	136 (28,3)	2,8 (1,9 – 4,03)	8,4 (1,7 – 42,9)
Age of smoking initiation				
Adolescent (15 – 24 years old)	2233 (91)	230 (9)	1,0	1,0
Adult (25+ years old)	328 (87,6)	51 (12,4)	1,4 (0,97 – 2,1)	1,1 (0,6 – 1,9)
Knowledge on harms of smoking				
Less (0 – 59)	2078 (87)	334 (13,1)	1,0	1,0
Enough (60 – 74)	319 (80,3)	72 (19,7)	1,6 (1,2 – 2,3)	2,3 (1,1 – 4,7)
Good (75 – 90)	351 (77,6)	108 (22,4)	1,9 (1,4 – 2,7)	2,5 (1,3 – 4,9)
Very Good (91 – 100)	107 (74,2)	41 (15,7)	2,3 (1,4 – 4)	1,1 (0,2 – 5,3)
Economic Status				
≤ Quintiles 2	1422 (88,5)	209 (11,5)	1,0	1,0

Variable	Smoking Cessation		Crude OR (95% CI)	*Adjusted OR (95% CI)
Quintiles3	403 (85)	73 (15)	1,4 (0,97 – 1,9)	1,5 (0,8 – 2,9)
Quintiles4	522 (83,8)	99 (16,2)	1,5 (1,1 – 2,1)	2,4 (1,3 – 4,5)
Quintiles5	508 (75,6)	174 (24,4)	2,5 (1,9 – 3,3)	1,9 (0,9 – 4,1)
Smoking Family Members				
Yes	2788 (93,2)	165 (6,8)	1,0	1,0
No	67 (16,5)	390 (83,5)	69,6 (46,5 – 104,1)	204 (117 – 356)
Smoking Coworkers				
Yes	438 (85)	85 (15)	1,0	1,0
No	249 (76,9)	73 (23,1)	1,7 (1,1 – 2,7)	2,05 (0,8 – 5,2)

*controlled by sex, education, age, age of smoking initiation, knowledge on harms of smoking, economic status,smoking coworkers, ban on smoking at home, ban on smoking in the workplace, see the health warning on cigarette packs, ever visited the no smoking area (for the last one month), exposed to the media about the dangers of smoking (for the last one month), and exposed to cigarette advertisement

Internal factors relating to smoking cessation are female gender, age 25 years or older, the age of first smoking is 25 years or more, post-secondary education, economic status> quintile 3, have sufficient knowledge or good about the dangers of smoking, no family members smoking, and no friends at work who smoke.

4. DISCUSSION

The proportion of smokers who quit smoking in Indonesia is 15.7 percent. The proportion of quit smoking in Indonesia is lower than other countries, such as in Korea that amounted to 41.2 per cent and 22.4 per cent in South Australia. Results of multivariable analysis showed that internal factors that contribute to the behavior of smoking cessation are female gender, age 25 years old or more, have sufficient knowledge or good about the dangers of smoking, no smoking family members, and no coworkers smoke.

The seriousness of thinking to quit smoking and success to quit smoking was also higher in female than male [4, 23]. Increasing age and age of first smoking have a tendency to stop smoking. 25 years old respondents or more and started smoking at 25 years old or more have higher tendency to stop smoking than those under 25 years old. The health status of former smokers who start smoking under the age of 14 years old is worse than the health status of former smokers who started smoking aged 14 years old or more [10].

Smokers who have a high knowledge about the hazards of smoking-related benefits of smoking cessation and health concerns in the future are likely to be ready and try to quit smoking [7, 8, 30]. Awareness of health from the dangers of smoking are things

that motivate smokers to quit smoking. High economic status tend to be ready and try to quit smoking [8].

The tendency to quit smoking was higher when no family members smoke. Smokers whose partner did not smoke increase the tendency to quit smoking than smokers who are a couple [21]. Exposure of cigarette smoke on women and children are high (Nitcher et al, 2010) [1]. Based on studies of Quit Tobacco Indonesia (QTI) which implement smoke-free home in four villages in Yogyakarta, implementation of smoke-free home can decrease smoking percentage of husband and other family members, decrease percentage of husbands who are smoking at home, and increase the knowledge on harms of smoking [17].

Limitations of this study include using of cross-sectional study so it is difficult to distinguish the variables that cause and variables of effect. So this study is weak to measure causal relationship. There is a possibility of recall bias on the variable of starting age of smoking which caused error estimation.

5. CONCLUSIONS

The proportion of smokers who quit smoking in Indonesia is about 15.7 percent. This number includes the proportion of smoking cessation that are low compared to other countries. No smoking family members at home are associated with successful smoking cessation in Indonesia. No family members smoking at home make the tendency to quit smoking 204 times. To the central and local government, provide media that can increase the knowledge on harms of smoking. To parents and community, apply smoke-free homes with no smoking in the house (both family members and guests), ban smoking in public meetings, apply stickers of smoke-free home at the front door of every house, and ban smoking in front of children and pregnant women (although outside of the home) and provide support for family members who smoke to quit smoking.

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