

Smoking Behavior of the Pulmonary Clinic Patients

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ABSTRACTS

Background: The severity of the lung cancer disease is not only due to late diagnosis but also because patients do not stop smoking.

Aim: To determine the characteristics of pulmonary clinic pts, their smoking behavior and the correlation of both.

Methods: This study is descriptive study. The respondents were the patients of the pulmonary clinic who still smoked. The number of respondents is 55 patients, come from 3 hospitals in Yogyakarta Indonesia and Islamabad hospital in Pakistan. It is taken by incidental sampling. Data are analyzed by Spearman Correlation and the level of significant is 0.05.

Results: The result shows the average age is 47.8, the level education is senior high school or below (lower educated), the most job is retired man, and the most of them reported there is "no" family member smoking at home. The smoking behavior such as the knowledge about cigarettes and its danger haven't enough fully, the number of cigarettes smoked per-day is 12.04 or 1 pack, the type of cigarettes is filter, and the length of smoking is 26.22 years at the past. There is significant correlation between the age and length of smoking ($r=0.749$, p value 0.000), the job and the knowledge about cigarettes and its dangerous ($r=0.342$, p value 0.011).

Conclusion: Not all of the characteristics of the pulmonary patients has correlation with the smoking behavior. It is expected to trigger the efforts of interested parties to focus more on pulmonary clinic patients who smoke and ultimately can prevent the lung cancer diseases.

Keywords: Characteristic, smoking behaviour, patient

INTRODUCTION

Increase in the number of patients visiting pulmonology department with indication of lung cancer is thought to be due to initiation of smoking at an early age¹. Due to this disease worldwide a huge number of population got affected including the masses living in Indonesia and Pakistan². Thus it shows a close relationship between lung cancer and smoking behaviour. Patient usually do not visit hospitals and pulmonary clinics when initial signs and symptoms develop, they mostly acquire the attention of hospitals when initial stage has elapsed and cancer has advanced to more severe stage. Hence, usually they come to the clinic with an advanced stage diagnosis. However, the severity of the disease is not only due to late diagnosis but also because patients who have been diagnosed with pulmonary cancer do not abstain from smoking. A study showed that, even after getting diagnosed with lung cancer, 51% still continued smoking and only 48.6% refrained from smoking².

The Government of Indonesia through the Ministry of Health made various efforts to reduce the risk of lung cancer. A strategy was developed by *Germas*. It stand for community movement with healthy living behaviour. The effort was actually related to primary prevention of smoking. The policy of *Germas* was to designate schools, government facilities / offices, airports, hospitals and many others as smoking free zones. However, the prevalence of smoking was still quite high including the pulmonary patients themselves. The prevalence of smoking in populations aged 18 years and over has increased from past many years³. A prevalence study conducted in 2013

showed an increase in smoking habits from 7.2% to 8.8% in 2016 and in 2018 to 9.1%. This increase in smoking prevalence has already exceeded the target set by National Medium Term Development Plan which was only 5.4%³.

Other efforts have also been made by the Ministry of Health – Government of Indonesian Republic, which provided pulmonary polyclinics in various public sector and private hospitals. This effort was categorized as secondary prevention. A lot of other efforts have also been made by the Ministry of Health – Government of Indonesian Republic, those who came to the clinics were having a huge figure of complaints pertaining to the pulmonary system and were also having signs and symptoms of pulmonary cancer. The earlier a person is diagnosed with the devastating disease of lung cancer, the sooner and with increased in the chances of survival he/she will be cured. According to a research study, smokers and even the ones diagnosed with lung cancer are not interested in the intervention programs offered^{4,5}. Based on the description above, we assumed that if we know the smoking behaviour of the patients who are visiting pulmonary clinic at an early stage, we can prevent them from developing pulmonary cancers. This study aims to determine the smoking habits and characteristics of the patients visiting pulmonary clinics and their relation to one another. By knowing the results of this study, efforts can be incorporated by focusing on the patients visiting pulmonary clinics and guiding them towards the smoking free life and thus preventing the development of lung cancers.

METHODS

This research was a foreign cooperation scheme between Yogyakarta Indonesia and Islamabad Pakistan. This type of research was descriptive, cross-sectional approach, using pulmonary clinic patients as respondents. The population was 500 patients per year. A sample of 10% of the population⁶ plus 10% in anticipation of the incomplete data of respondents. With these calculations obtained a sample of 55 respondents. Samples were taken by incidental sampling at the site for 3 months (end of July-early October 2019), by applying inclusion criteria. The inclusion criteria in question were male patients, still smoking, and agree as research respondents. Samples were taken from the pulmonary clinic of "B" hospital in Indonesia. It was 13 respondents, "P" hospital in Indonesia. It was 7 respondents, "R" hospital in Indonesia. It was 10 respondents, and "I" hospital in Pakistan. It was 25 respondents.

The variables studied were: 1) the characteristics of the respondents. It consisted of the age, level of education, employment, presence of family member smoke at home, 2) smoking behavior. It consisted of knowledge about cigarettes and its dangerous, length of smoking by year, average number of cigarettes smoked per day, and types of cigarettes smoked. The characteristics of respondents was measured by questionnaire (self-reported), and knowledge was measured by a test. It was consisted of 17 question items, which was the result of a trial conducted at "P" hospital on May 26, 2019, using 15 pulmonary patients. At that time, they treated at the pulmonary clinic. Test reliability was 0.84. Knowledge of respondents expressed with a score between 0-17. The study conducted in July-October 2019. Data analyzed using Spearman Rank correlation test with level of significant of 0.05. This research has an Ethical Approval from Ethic Commission on Health, Yogyakarta Health Polytechnic of Ministry of health Yogyakarta Indonesia, Number e-KEPK/POLKESYO/0082/v/2019, on May 28, 2019.

RESULTS

The average age of respondents was 47.8. The most level of education was Senior High School. It was 22(40%)

respondents. The number of Pakistani senior high school was higher than the Indonesian one. The most job of respondents was retired man. It was 15 (27.3%) respondents. The number of Pakistani retired man was higher than the Indonesian one. Table 1 provides the data in detail.

Smoking behavior of the respondents was described in some sub-variables, namely knowledge about cigarettes and its dangerous, length of smoking by year, number of cigarettes smoked/ day, the type of cigarettes smoked, and presence of family member smoke at home.

The maximum score of knowledge was 17. The mean score of respondents was 10.15 or 61,76% of the maximum score. The score of Indonesian respondents was slightly higher than Pakistani one. Commonly, the average number of cigarettes smoked per day was 12.4 cigarettes. The Pakistani number of cigarettes smoked per-day higher than the Indonesian one. It was 13.76 cigarettes and 10.6 cigarettes consecutively. In the other side, the mean length of smoking was 26.22 years. The length of smoking of Indonesian respondents was higher than Pakistani one. It was 28.30 years and 23.72 years consecutively. Commonly, the most type of cigarettes smoked by respondents was filter. It was 50 respondents (90.9%). On the other side, the most respondents who reported that "no" family member smoking at home was 36(65.5%) respondents. Table 2 provides detail information.

There were correlations between some characteristic of respondents and the smoking behavior. Some characteristics of respondent consisted of the age and the job while the smoking behavior consisted of the length of smoking and knowledge. There was significant correlation between the age and the length of smoking ($r=0.749$ and p value 0.000). It means that the more their live the longer they smoke. The next, there was significant correlation between the job and the score of knowledge about cigarettes and its danger ($r=0.342$ and p value 0.011). It means that different in job will have differences in knowledge. The other finding was a significant correlation between the length of smoking by year and the number of cigarettes smoked per-day ($r=0.313$ and p value 0.020). It means that the longer they smoke the much number of cigarettes they smoked per-day (Table 3).

Table 1: Characteristic of Respondents

Variable	Yogyakarta (n=30)		Pakistan (n=25)		Total (n=55)	
	Mean± SD	Min-Max	Mean± SD	Min-Max	Mean± SD	Min-Max
Age (year)	48,97±12.07	24-70	46.40±15.90	24-72	47.80±13.87	24-72
	Frequency	%	Frequency	%	Frequency	%
Level of Education:						
Elementary	2	6.7	9	36.0	11	20.0
Junior HS	5	16.7	7	28.0	12	21.8
Senior HS	15	50.0	7	28.0	22	40.0
Bachelor	4	13.3	1	4.0	5	9.1
Post graduate	3	10.0	0	0	3	5.5
Doctorate	1	3.3	1	4.0	2	3.6
Job						
Civil Servant	1	3.3	2	8.0	3	5.5
Armed Force	0	0	1	4.0	1	1.8
Private employee	11	36.7	1	4.0	12	21.8
Entrepreneur	8	26.7	2	8.0	10	18.2
Retired	3	10.0	12	48.0	15	27.3
Laborers	2	6.7	7	28.0	9	16.4
Others	5	16.7	0	0	5	9.1

Table 2: Smoking behavior and it's related

Variables		Indonesia (n=30)	Pakistan (n=25)	Total (n=55)	
Knowledge:	Mean	10.43	9.80	10.15	
	Standard Deviation	2.14	2.39	2.26	
	Min-Max	7-15	4-14	4-15	
Number of Cigarettes Smoke/ day:	Mean	10.60	13.76	12.04	
	Standard Deviation	5.70	6.84	6.42	
	Min-Max	3-24	1-22	1-24	
Length of smoking in year:	Mean	28.30	23.72	26.22	
	Standard Deviation	10.6	14.38	12.5	
	Min-Max	10-59	3-50	3-59	
Type of cigarettes:	Filter	Frequency	25	25	50
		%	83.3	100	90.5
	Kretek/ Others	Frequency	5	0	5
		%	16.7	0	9.1
Family member smoking at home:	Yes	Frequency	6	13	19
		%	20	52	34.5
	No	Frequency	24	12	36
		%	80	48	65.5

Table 3. Correlations between characteristics and smoking behavior

Characteristics Variable		Length of smoking	Number of cigarettes smoked per day	Knowledge
Age (Year)	Pearson Correlation	0.749	0.194	-
	Sig (2 tailed)	0.000 [*]	0.156	-
Educational level	Pearson Correlation	0.090	0.095	0.042
	Sig (2 tailed)	0.513	0.489	0.761
Job	Pearson Correlation	-0.083	-0.249	0.342
	Sig (2 tailed)	0.546	0.067	0.011 [*]
Other family smoking at home	Pearson Correlation	0.021	-0.022	-
	Sig (2 tailed)	0.881	0.874	-
Length of smoking	Pearson Correlation	-	0.313	-
	Sig (2 tailed)	-	0.020 [*]	-

DISCUSSION

Commonly, this study indicated that the level education of respondent was senior high school or below. The percentage number of it was 81.8%. It was higher than the recently study done by Yulia et al 'sin 2018 (57.1%). Their respondent was adults daily smokers who responded to the 2010-2011 Tobacco Used Supplement to the Current Population Survey ⁷. This condition had happened because of using the different respondent. Although the percentage number of level education was higher than the recently study, it still in the position of lower educated group. This study also indicated the knowledge of respondents hadn't enough fully. The other side, the length of smoking was 26.22 years, and the number of cigarettes smoked per-day was 12.04 or 1 pack. We were able to assume that there was correlation between the level of education and the three variables such as the knowledge, the length of smoking, and the number of cigarettes smoke per day. In fact, there wasn't correlation between level of education and those three variables.

Especially the non-correlation between level education and the length of smoking, this finding wasn't in line with the result of Bruno⁸. Bruno discussed about educational level and smoking ban on female smoker. There was a relation between educational level and smoking behaviour. They stated that among low-educated females, the ban was followed by a 1.6% decrease in smoking prevalence and a 4.5% increase in quit ratios. Among highly educated females, trends in smoking prevalence and cessation were not altered by the ban.

There were a different behaviour on following smoking ban between educated male smoker and un-educated one.

This study indicated the average age of respondents was 47.8. It was higher than the recently study done by Yulia (2018). The most percentage number of age of Yulia's respondent was 25-44 years. Although, the age of this study was older than the recently study, there wasn't significant correlation between the age and the number of cigarettes smoked per day. This result wasn't in line with the Cohen et al (2012) stated. They stated that there was relation between the age and the risk to be hardcore smoker. In detail, Cohen stated that the age of 40-49 contributed on the risk of hardcore smoker 1.64 times than the young period one. The other side, the age of 50-59 contributed on the risk of hardcore smoker 1.51 times than the young period one⁹.

This study indicated the number of cigarettes smoked per-day was 12.04 or 1 pack. This data had not included in the hardcore smoker term, because they still smoked less than 15 cigarettes per day. Hardcore is a term who the smoker has 3 characteristics. One of them is that they smoked more than 15 cigarettes/ day⁹. This study indicated the number of cigarettes smoked per-day was 12.04 or 1 pack. It was lower than Noha and Seham study's ¹⁰. The most respondent of Noha and Seham (28.8%) was smoking 2-3 packs/ day. This condition can be explained by the different respondent. The respondents of Noha and Seham were students while the respondent of this study were the Pulmonary patients. The average age of this study was 47.8 years old. In this case, we able to assume that the younger smoke much pack of cigarettes than the

older. In fact, this study indicated there wasn't correlation between the age and the number of cigarettes smoke per day.

This study indicated the length of smoking was 26.22 years in average. This number was higher than the recently research done by Noha and Seham 2014. Their study indicated that the most of respondent, the student smoked 2-3 pack per day, had been smoking in 1 year. In this case, we showed the younger just smoked in 1 year long, they smoked cigarettes 2-3 pack per day, but the older had been smoking in 26.22 years long, they smoked just 1 pack. At a glance, we showed there wasn't correlation between the length of smoking and the number of cigarettes smoked. In fact, this study indicated that there was significant correlation between the length of smoking by year and the number of cigarettes smoked per-day. It means that the longer they smoke the much number of cigarettes they smoked per-day.

This study indicated that 65% of respondents reported there was "no" family member smoking at home. This finding wasn't according to the recently research done by Noha and Seham. They found there were only 25% of respondents reported that there wasn't no smoking household member. There wasn't correlation between presence of family member smoking at home and the length of smoking and the number of cigarettes smoked per-day. This data was in line with the research done by Lucky et al on Jayapura teenagers¹¹. Lucky stated there was no significant relationship between teenagers' behaviour and the behaviour of the parents and other family member, even though 87% of teenagers stated that there were family member who smoke at home.

The study indicated the most job of respondents was retired man. It was 15 (27.3%) respondents. The study also indicated the knowledge of respondents hadn't enough fully. There was significant correlation between the job and the score of knowledge about cigarettes and its danger. It means that different in job will have differences in knowledge. This finding inspired the health policy maker to arrange the healthy campaign including the effect of smoking on health to the institution whether the government institution or the private one.

CONCLUSION

The average age was 47.8, the level education was senior high school or below or lower educated, the most job was retired man, and the most of them reported there was "no" family member smoking at home. The smoking behavior such as the knowledge about cigarettes and its danger hadn't enough fully, the number of cigarettes smoked per-day was 12.04 or 1 pack, the type of cigarettes was filter, and the length of smoking was 26.22 years at the past.

There was correlation between characteristics of respondents consisted of the age, and the job and the smoking behavior consisted of the length of smoking, and the knowledge. There was significant correlation between the length of smoking and the number of cigarettes smoked per-day. It means that the longer they smoke the much number of cigarettes they smoked per-day. There was significant correlation between the job and the score of knowledge about cigarettes and its danger. It means that different in job will have differences in knowledge.

This finding inspired the health policy maker to arrange the healthy campaign including the effect of smoking on health to the institutions (the place where the patients work) whether the government institution or the private one.

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