

ORIGINAL ARTICLE

Effect of Cigarette Smoking on the Academic Achievement Among Management and Science University Students

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ABSTRACT

Introduction: Cigarette smoking is showing an increasing prevalence among university students nowadays. Smoking includes the act of smoking cigarette containing tobacco and/or other ingredients or just inhaling the cigarette smoke. Smoking has many known physical side effects that include psychological or cognitive effects. Therefore, the aim of this research is to identify the effect of cigarette smoking on the academic achievement among university students. **Methods:** A cross-sectional study was conducted among 136 students including 113 male and 23 female aged 18 to 29 years from Management and Science University with 30 non smoker students. The questionnaire included items about the social demographic characteristics, smoking status, the study styles and the academic achievement of the participants. A frequency statistics, descriptive statistics and chi square test were used to analyze the collected data using SPSS version 25. **Results:** Among the smoker students, 51.5% came to class early, 80.8% attend classes regularly, 49.3% studied on weekends and 39.7% planned sufficient time to study for exam. Mean CGPA for smoker students is 2.6. **Conclusion:** Smoking is proven to be associated with low academic performance among university student.

Keywords: Cigarette smoking, Academic performance, Study habits, University students.

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INTRODUCTION

A cigarette is a well-known narrow cylinder containing psychoactive material such as tobacco, rolled into thin layer of paper for smoking. Cigarette smoke is very virulent, addictive and it contains around 4000 chemicals that are poisonous, a lot of carcinogenic chemicals, and oxidants such as oxygen free radical which is assumed to be the major causes of molecular damage caused by the cigarette smoke (1).

It is assumed that more than 8 million populations' deaths in 2030 may be due smoking related diseases (2). It is reported that smoking related diseases caused more than 7 million deaths at 2017 (3). Statistics show males to smoke more than females. 20% of men aged 16 and above smokes compared with 17% of women (4).

Second hand smoke is the smoke that being exhaled by smokers and smokes that are originally from the burning

or tobacco product. Inhaling those smokes are known as passive smoking. Second hand smoke also called as environmental tobacco smoke (ETS). People that do not smoke and regularly being exposed to second hand smoke also can be affected by the toxic chemical contained in the smoke. In 2015, 80% of youth ages 12-19 years at Canada were suffering exposure to second hand smoke (5) A study conducted by Finnish statistics shows that the smoking prevalence among 14 years old, 8% who smokes daily and there are about 36% tried to smoke. Meanwhile for 16 years old, there are about 20% smokes daily and 55% had tried to smoke (6).

Education is the action of learning, or gaining information, aptitudes, qualities, convictions and propensities. Academic achievement is representing as the cumulative grade point average (GPA) or completion of educational benchmarks such as bachelor's degree. There are several factors that influencing the academic achievement including attitude of the students, school resources, leadership aspects, classroom environment, role of parents, psychological and health related factors, development of study skill and time management (7). There is still a debate about the effect of cigarette smoking on the academic achievement. Therefore, the aim of this

research is to explore the effects of cigarette smoking on the academic achievement among university students.

MATERIALS AND METHODS

A total of 136 smoker students including 113 male and 23 female students from Management and Science University with 30 non smokers as control group are included in this research study. The total study participants are chosen by simple random sampling which including all educational level from foundation, diploma, bachelor degree and master at the age between 18 to 29 years old. All participants answered a questionnaire including their demographic data, study lifestyle and smoking behaviour (8). Analysis of the data was done by the Statistical Package for Social Science (SPSS) version 23. A table of frequency and percentage was used to analyse the descriptive statistics. Statistical analysis is done by Chi-square test. All statistical were considered to be statistically significant at $P < 0.05$.

RESULTS

A total of 136 smoker students from Management and Science University were participated in this study. The study participants' demographic data are summarized in Table I. Majority of the students are Malay ethnic aged from 21 to 23 years old and most of them came from non-medical faculty. Next, the effects of smoking on academic achievement are summarized in Table II that summarized the mean CGPA of the respondents

(2.6 ± 0.78) compared to CGPA 3.4 ± 0.77 in the control non smokers. The study styles among smoker students are summarized in Table III. There were a statistically significant association found on the usage of daily "to-do list" and the usage of study schedule with $p < 0.05$. In Table IV summarized the association between academic achievement and smoking behavior among university students. Low academic achievement was noticed in participants started smoking at age 16-20 years, consuming 1-10 cigarettes per day, for 1-5 years, although having a good Knowledge about smoking and have tried to quit before.

DISCUSSION

Most of smokers in this study were males aged from 21 – 23 years old. Most of them are single and lived in urban area. These findings are quiet similar to a previous study conducted by (9). In that study, mean age of the smoking respondents are 24.3 ± 1.6 while the study conducted by (10) Özge et al., in 2006 found that 332 male are smoking compared to 82 females that are smoking.

The study styles among smoker students showed them to have study schedule to study for each subject (86.6%) and use their free time to relax and do some recreation activity (82.7%). Furthermore, there are 78.1% smoking students who have semester calendar and marked it with due dates for exam, projects and assignments. Those having a good knowledge about smoking (48)

Table I : Socio-demographic data of the study participants.

Demographic data	Smoking					χ^2	p
	Yes "smokers"		No "control"				
	n	%	n	%			
Gender	Male	113	68.1	5	3.0	52.755	0.000
	Female	23	13.9	25	15.0		
Age	18 – 20	29	17.5	8	4.8	4.958	0.175
	21 – 23	73	44.0	20	12.0		
	24 – 26	30	18.1	2	1.2		
	27 – 29	4	2.4	0	0		
Race	Malay	116	69.9	14	8.4	23.072	0.000
	Chinese	5	3.0	2	1.2		
	Indian	15	9.0	14	8.4		
Marital status	Single	127	76.5	30	18.1	2.099	0.147
	Married	9	5.4	0	0		
Education level	Foundation	8	4.8	0	0	3.956	0.266
	Diploma	38	22.9	6	3.6		
	Degree	87	52.4	24	14.5		
	Master	3	1.8	0	0		
Faculty	Medical	43	25.9	13	7.8	1.509	0.219
	Non-medical	93	56.0	17	10.2		
Place of residence	Rural	43	25.9	11	6.6	0.285	0.593
	Urban	93	56.0	19	11.4		

Table II : The CGPA of the study participants

Demographic data	Smoking				x ²	p	
	Yes "smokers"		No "control"				
	N	%	n	%			
Current CGPA	2.1 – 2.5	9	5.4	11	6.6	31.269	0.000
	2.6 – 3.0	47	28.3	2	1.2		
	3.1 – 3.5	63	38.0	10	6.0		
	3.6 – 4.0	17	10.2	17	10.2		
Mean CGPA ± SD	2.6 ± 0.78		3.4 ± 0.77				

Table III : The effect of smoking on the Academic lifestyle of the study participants

Academic lifestyle	Smoking				x ²	p	
	Yes "smokers"		No "control"				
	N	%	n	%			
I have a study schedule with time set aside to study each subject	Yes	97	86.6	15	13.4	5.09	0.024
	No	39	72.2	15	27.8		
I use my free time between classes for	Reading, reviewing, studying	40	85.1	7	14.9	2.72	0.256
	Recreation and relaxation	86	82.7	19	17.3		
I have a calendar of the semester and it is marked with exam dates, project due dates and assignments	Others	10	66.7	4	33.3	3.66	0.056
	Yes	89	78.1	25	21.9		
I keep a weekly schedule of my classes and activities	No	47	90.4	5	9.6	1.59	0.207
	Yes	93	79.5	24	20.5		
I use daily "to do" lists	No	43	87.8	6	12.2	7.79	0.005
	Yes	57	73.1	21	26.9		
I study on the weekends	No	67	80.7	16	19.3	0.16	0.687
	Yes	69	83.1	14	16.9		
I attend class regularly	No	110	80.9	26	19.1	0.56	0.456
	Yes	26	86.7	4	13.3		
I get to class early or on time	Yes	70	76.9	21	23.1	3.41	0.065
	No	66	88.0	9	12.0		
I come to class prepared, having completed the reading	Yes	69	82.1	15	17.9	0.01	0.942
	No	67	81.7	15	18.3		
I plan sufficient time for assignments and exam	Yes	54	87.1	8	12.9	1.79	0.181
	No	82	78.8	22	21.2		

had tried to quit smoking (50). The most crucial points of justification for a need to stop smoking are having knowledge about the health hazards of cigarette smoking (27.8%) and the desire to save health (11%) (11)

The result from this research revealed that students who smoked tend to get lower average result compared to students who are non smoker that give evidence that smoking has an effect on the academic achievement. The mean CGPA for non smoker students shows a higher score (3.4) compared to smoker students (2.6). Some studies showed, smoking adult men obtained lower grades compared to non-smokers but there is no association between smoking and poor scholarship.

But there is contradiction in previous research (12). In those studies, the result shows that there were negative association between cigarette smoking and school achievement among high schools students. This can be explained as this research is so old and may be the prevalence and heaviness of smoking were lesser than nowadays.

It is understood that in order to improve quality of education, study habits and study attitudes must be improved as well (13). The present research tried to find the relationship that may be between study styles and smoking behavior. The smokers' lifestyle showed statistically significant association with the usage of

Table IV : The association between academic achievement and smoking behaviour among university students.

Smoking behaviour	2.1 – 2.5 (n)	CGPA				x ²	p-Value
		2.6 – 3.0 (n)	3.1 – 3.5 (n)	3.6 – 4.0 (n)			
Age start smoking	10 – 15	1	8	14	7	7.92	0.244
	16 – 20	7	26	39	8		
	>21	1	13	10	2		
Number of cigarettes used daily	1 – 10	7	33	55	11	6.58	0.087
	>11	2	14	8	6		
Duration of smoking (years)	1 – 5	4	29	34	9	13.58	0.138
	5 – 10	3	8	19	6		
	11 – 15	1	10	8	0		
Types of cigarette	Cigarette	6	41	57	14	4.22	0.239
	E-cigarette	3	6	6	3		
Knowledge about smoking	Good	6	37	43	11	4.73	0.579
	Moderate	3	10	16	5		
	Poor	0	0	4	1		
Prediction to stop smoking	Yes	8	36	50	14	0.81	0.846
	No	1	11	13	3		
Quit at any time	Yes	5	42	55	15	10.41	0.109
	No	4	5	8	2		
Usage of drugs with smoking	Cannabis	2	15	17	2	3.87	0.305
	Tramadol	0	1	1	1		
	None	7	31	45	14		

daily “to do list” and to have a study schedule (p<0.05).

The result from this research revealed that students who smoked tend to get lower average result compared to students who are non smoker that proofs the association between the habit of smoking and the students’ academic performance. The mean CGPA for non smoker students shows a higher score (3.4) compared to smoker students (2.6). The similar result was detected in previous research (14) that found that generally, smoking adult men obtained lower grades compared to non smoker but there is no association between smoking and poor scholarship.

The study of the association between smoking behaviour and academic achievement among smoker students showed the following results. Students who are smoking mostly started to smoke at age 16 to 20 years (26 students). The daily cigarette intake are 1 – 10 cigarettes (14 students) and the duration of smoking typically 5 to 10 years (8 students). Students who are smoking mostly started to smoke at age 16 to 20 years (26 students). From previous study, the onset of smoking among these students were during high schools (66.2%) and the length of smoking period is between 1 to 5 years (9) . There are 56% of young adults have the vision to stop smoking in 6 months while 31% of them have the vision to quit smoking within 30 days (15) .

CONCLUSION

In summary, majority of the study participants are male, Malay aged between 21 – 23 years old. Most of them are single and from degree program. Furthermore, most of them are from non-medical faculty and lived in urban area with current CGPA of 3.1 to 3.5. Most of the smoking students have their study schedule for each subject and they use their free time between classes to relax and do recreation. Most of the smoker students also have calendar of the semester that marked with dates of exams, projects and assignment due dates. They also kept weekly schedule for classes and activity. But most of them didn’t use daily “to-do list” and they usually didn’t study on weekends. The smoker students tend to attend class regularly and on time. Moreover, they came to class prepared but they didn’t plan sufficient time for assignments and exams. The mean CGPA for non smoker are higher compared to smoker student. Regarding the smoking behaviour and academic achievement of the smoker students, most of them start to smoke at age 16 to 20 and the number of cigarette daily is 1 to 10. Besides that, their knowledge about smoking is good and they have vision to stop smoking. Most of them can quit smoking at any time and they usually use cannabis with the cigarette.

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