TOBACCO USE AND ITS EFFECT ON MENTAL HEALTH AMONG ADOLESCENCE

Roslee Ahmad[i], Mohd Khairul Anuar Rahimi[ii], Sapora Sipon[iii], Mohamad Isa Amat[iv], Hizral Tazzif Hisham[v] & Mohamad Shafiq Abu Bakar[vi]

[i] (*Corresponding author*). Senior Lecturer. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. roslee@usim.edu.my

[ii] Senior Lecturer. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. khai@usim.edu.my

[iii] Professor. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. sapora@usim.edu.my

[iv] Senior Lecturer. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. isaamat@usim.edu.my

[v] Senior Lecturer. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. hizral@usim.edu.my

[vi] Former Student. Faculty of Leadership and Management, Universiti Sains Islam Malaysia. syafiq@gmail.com

Abstract

The aims of this study was to identify the use of tobacco and its impact on mental health among adolescents. This study was a case study using quantitative method involved 100 students from Faculty of Leadership and Management, Universiti Sains Islam Malaysia who had a smoking habit. The technique of volunteer was used to gain participate from the samples. This study used descriptive and inferential of analysed using the Statistical Package for Social Science (SPSS) version 22.0 to gain descriptive statistics, t-test and Pearson Corelation. Research findings showed that there was no significant difference in the score between tobacco use and tobacco type= t (3.98) = p = 0.28. The results showed that the used of tobacco difference in the type of tobacco. Although, there was a significant difference in the score between mental health and tobacco type = t (2.38) p = 0.009. Further recommendation to improve this study by using multiracial, interfaculty students and ages between 21 to 25.

Keywords: *Tobacco use, Smoke, Adolescents, Mental health*

INTRODUCTION

Everyone is aware of the devastating physical effects of tobacco use. However, what folks don't give some thought to is that the psychological effects. These embody mood and behavior changes and mental state. Once someone inhales the smoke from a fag, it hits the lungs among ten seconds. The plant toxin from the fag begins to cause a series of reactions. It will increase the degree of chemicals known as

Dopastat and endocrine. The primary few times someone smokes a fag, he or she experiences a "smoker's high". This can be short buzz with lightheadedness, an elevated mood, and a general feeling of enjoyment. According for the Centers for Disease Control, 31% of all smokers are adults with a mental illness (Gfroerer et al., 2013). People become captivated with cigarettes as a result of they assume they'll get the identical buzz whenever they smoke one. What they don't notice is that due to nicotine's mental effects, they'll ne'er get the identical rush as their 1st cigarettes. This can be as a result of that 1st roll of tobacco raised the brain's expectations of what pleasure ought to be. Someone then makes an attempt to achieve this same level of delight by smoking another roll of tobacco and another. Then, they'll smoke some additional. However, that person's "pleasure threshold" has already been raised. As a result, that very same unharness of Dopastat not brings him or her the maximum amount pleasure because it did. this can be only one of the psychological effects of alkaloid.

National Youth Tobacco Survey (NYTS) found that 20.8 percent of current adolescent tobacco users reported wanting to use tobacco within 30 minutes of waking-a classic symptom of nicotine dependence. This study also found that 41.9 percent reported strong cravings for tobacco (Apelberg et al., 2014). According to the 2017 Monitoring the Future Survey, 9.7 percent of 12th graders, 5.0 percent of 10th graders, and 1.9 percent of 8th graders used cigarettes in the past month (Miech et al., 2017). Other research has found that light and intermittent smoking among adolescents is associated with the same level of difficulty quitting as daily smoking. (Rubinstein, Rait, Sen, & Shiffman., 2014).

The reason why early adolescence taking the tobacco because they feel stress, depress, worried and anxious, but the tobacco just reduces it for a moment. Based on previous research, by taking tobacco there has a short and long-term effect. As a result, for the long-term effect, when they failed to take tobacco the early problem that they had faced have become worse. People with mental health conditions smoke at rates that are at least two times higher than the general population (Gfroerer et al., 2013).

Mental health, beliefs about smoking, a perception of schoolmates' smoking, and other substance use are additional factors that can influence an adolescent's risk for smoking and nicotine dependence (Kandel, Griesler, & Hu, 2015). World Health Organization (WHO) has stated tobacco use remains one in every of the leading preventable causes of death within the world killing up to half its users. The tobacco epidemic is one in every of the largest public health threats, killing around six million individuals a year. over 5 million of these deaths are the results of direct tobacco use whereas over 600,000 are the results of non-smokers being exposed to second-hand smoke (Lien, 2016). Person with depression are a lot of probably to smoke cigarettes and have a greater problem quitting smoking. Community-based and public health

approaches may have to begin considering the links between depression and smoking so as to best target this smoker within the population and develop more practical tobacco management campaigns. (Andrea et al., 2016). Based on the previous research (J. H. Bjorngaard et al., 2012), it is indicated that cigarette smoking is powerfully related to psychological state however the causative direction of the association is unsure. Any exposure to nicotine among youth is a concern. The adolescent brain is still developing, and nicotine has effects on the brain's reward system and brain regions involved in emotional and cognitive functions (Smith, McDonald, Bergstrom, Ehlinger, & Brielmaier, 2015).

RESEARCH QUESTION

i. What is the level of tobacco used among adolescents?
ii. What is the level of mental health among adolescents?
iii. What is the differences between tobacco use based on type of tobacco among adolescents?
iv. What is the relationship between tobacco use and mental health among adolescents?

LITERATURE REVIEW

i. TOBACCO USE AMONG ADOLESCENTS

According to the Lipari and Horn (2017) indicated that around 54.8 million adults aged 18 or older (23.0 percent) smoked cigarettes. Hence, American Psychiatric Association stated that any psychological state among adults aged 18 or older is outlined as having had an identifiable mental, behavioral, or major affective disorder (excluding biological process and substance use disorders) of ample length to satisfy diagnostic criteria per the fourth edition of the Diagnostic and applied mathematics Manual of Mental Disorders throughout the year before the survey interview. The association between past month cigarette use and mental illness was found for males and females. A male with any mental illness for past year were more likely to have smoked in the past month than adult males with no mental illness (37.4 vs. 23.9 percent). A woman with any mental illness for past year were also more likely to have smoked in the past month than adult females with no mental illness (30.9 vs. 17.5 percent). Among people who have been daily smokers, people with any mental illness were less likely to have quit smoking than people with no mental illness.

ii. MENTAL HEALTH AMONG ADOLESCENTS

According to World Health Organization (WHO) mental health issues are common

w ithin the general population and embrace depressive and anxiety disorders, eating and somatization disorders, and psychotic disorders (schizophrenia, major affective disorder and related disorders like schizoaffective psychosis).

Depression and anxiety are common mental disorders, with a lifespan prevalence of a minimum of 25. Depression, defined as a disorder if symptoms have been present for a minimum of 2 weeks, is that the most common; symptoms include feeling unhappy or irritable most of the time, loss of enjoyment or interest in things that wont to be enjoyed, important loss or gain of weight that's unrelated to physical health problem or maternity, problem sleeping or over-sleeping, feeling restless or caught up, fatigue, feelings of worthlessness or excessive guilt, and difficulties concentrating, memory or creating choices. There is also thoughts of self-harm or suicide. Depressive disorders may also be related to outstanding symptoms of anxiety. Risk factors for depression include younger age, feminine gender, low academic action, a previous history of depression, a family history of depression, childhood ill-usage and adulthood violence. Less normally, severe depression happens with psychotic symptoms associated is then classified as an emotive (mood-related) psychotic disorder.

METHOD

Method of this study used quantitative a pproach. According to Majid (1998), design of the study is a specific technique and method for solving problems and also to obtain the necessary information. The design of the study is like a detailed map for the method of a study or research that being conducted. It is also reacting as a blueprint on matters relating to sampling, measurement and data analysis (Sabitha Marican, 2005). This study carried in form of non-experimental or basic descriptive and inferential of study.

SAMPLE AND INSTRUMENTATION

Population is a group of potential participants to whom you want to generalize the result of the study (Salkind, 2009). The population of this study were 140 smokers among the students in Faculty of Leadership and Management, USIM. A rough survey has been done to identify which student that have been use tobacco in their daily life. Sampling may be a method choosing range of individual for a study in such the simplest way that they represent the big cluster from that they were elect (Gay & Airasian, 2000). The sample of this study is being the students of Faculty of Leadership and Management who are a smoker. According to Krejcie and Morgan (1970) the table for determining sample size; if the Population 140, so the

sample size is 100. This study used 2 set of questinaires were The Wisconsin Inventory of Smoking Dependence Motives (WISDM-68) and Mental Health Inventory (MHI-18).

RESULTS

Table 1 : Level of tobacco use among adolescent among FKP students

	N	Minimum	Maximum	Mean	Std. Deviation
Cognitive enhancement	100	1	7	4.28	1.32
Craving	100	1	7	5.97	.45
Loss of control	100	1	7	3.90	1.25
Tolerance	100	1	7	3.96	1.24
Behavioral choice	100	1	7	4.59	.72

Table 1 showed the dependency of tobacco use among students. It consists on cognitive enhancement, craving, loss of control, tolerance and behavioral choice. The highest result is cognitive enhancement which is *M*= 4.28 (SD= 1.32), followed by craving with *M*=5.97 (SD= .45) behavioral choice *M*=4.59 (SD= .72), tolerance *M*=3.96 (SD= 1.24) and the lowest rank of mean was received from loss of control with *M*= 3.96 (SD= 1.24). It can be considered the dependency of tobacco use among FKP students mostly cognitive enhancement.

Table 2 : Level of mental health use among adolescent among FKP students

	Level of tobacco	Score mean	Std. Deviation
Anxiety	Poor	44.76	9.23
Depression	Better	65.55	13.46
Behavioral	Better	63.90	17.74
Positive Affect	Better	64.65	14.039

Table 2 showed the level for the anxiety among students were 44.76 (SD= 9.23) that indicated the respondents were in poor mental health. Majority of the respondents were in the middle stage of mental health. The score of depression 65.55 (better), behavioral (63.90) and positive affect 64.65 (better). Based on the result, the tobacco use can affect the person mental health that derived them to have a poor mental health and make people requiring immediate counseling and assistance by psychiatrist for care and support.

Table 3 : The differences tobacco use and mental health among adolescents

Type of tobacco		**Mean**	**Standard deviation**	**df**	**t**	**P**
Tobacco use	Cigarettes	22.67	3.33	0.000	3.98	0.28
Pipes		24.07	.15			
Mental health	Cigarettes	13.25	2.06	0.23	2.38	.009
Pipes		12.72	.19			

Significant at the level $p < 0.05$

Based on table 3 showed an independent sample t- test has been run between tobacco use and mental health in type of tobacco among adolescent. If the p value is less than or p < the significance level ($\alpha = 0.05$) then the result is significance. While if the p value is more than or p > the significance level (α=0.05), then the result is no significance (John, 2010). An independent-sample t-test was conducted to compare the tobacco use and mental health between type of tobacco. The table 4.4 have showed that tobacco use was no significant between cigarettes (M=22.67, SD=3.33), t (3.98) = 0.28, p=0.28. The result suggested that the tobacco use was differ on type of tobacco. While, mental health was significant between cigarettes (M=13.28, SD=2.06), t (2.38) = 0.009, p=0.009.

Table 4 : **The relationship between tobacco use and mental health among adolescents**

		Tobacco use	Mental health
Tobacco use	Pearson Correlation	1	-.079
	Sig. (2-tailed)		.434
	N	100	100
Mental health	Pearson Correlation	-.079	1
	Sig. (2-tailed)	.434	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed)

Table 4 showed the result of correlation between tobacco use and mental health with r= -0.79 and the significant value obtained was p= 0.43. So, the result was explained that there is no significant relationship between tobacco use and mental health. It means when a variable increase in value, the second variable decreases in value.

DISCUSSION

The level of tobacco use and mental health among adolescents

According to the National Health and Morbidity Survey 2015 by 2020 mental illness is expected to be the second biggest health problem affecting Malaysian after heart disease. Statistics have showed that every three in 10 adults, aged from 16 years and above Malaysia will suffer from some form of mental health issues (Tahir Aris et al., 2015). Health of Minister, Dr Dzulkefly Ahmad indicated that the percentage were referring to the suffering of mental health problem and not mental illlness (Carvalho, Sivanandam & Shagar, 2018). Tan Sri Lee Lam Thye, the Patron of the Malaysian Psychiatric Association (MPA) believe "There are higher chances of people keeping their thoughts and emotions to themselves

when they do not find a way to vent out their frustrations" (Bernama, 2018). According to the Anjum, Reddy, Monica, Rao and Sheetal (2016) stated the factor that drive the adolescent take tobacco bacause of stress, attention disorder, psychological pressures, and conflicts from parents that play an important role in impacting the individual personality. In this study, the descriptive statistic showed, the highest level of tobacco use among adolescent is craving. The researcher has used five dependences motives to support the reason of dependency. According to Piperm, Piasecki, Federman and Bolt (2004) the WISDM-68 based on the dependence related to the smoking motives. There is cognitive enhancement, craving, loss of control, tolerance and behavioral choice. The cognitive enhancement characterized by smoking to improves cognitive functioning (e.g. attention). While, behavioral choice by smoking despite constructs on smoking or negative consequences and the lack of other option or reinforce. Craving in smoking is a response to experiencing intense and frequent urge to smoke.

The differences between tobacco use and mental health based on type of tobacco among adolescence

An independent sample t- test has been run between tobacco use and mental health based on the type of tobacco among adolescent. The result finding has stated that, there is no significant difference between tobacco use on type of tobacco. Meanwhile, there is significant between mental health on type of tobacco.

Based on the finding, the result can be stated that the mental health has correlation with type of tobacco (e.g. cigarettes and pipes). It means a person who taken tobacco were exposed to have mental health. According to Amedeo, Francesco and Wanda (2013) smokers are easier than non-smokers to diagnostic criteria for mental health conditions, such as mood disorders, anxiety disorders and psychosis. Moreover, a research was conducted by Rachel, Justine and Tony (2014) that involved 54 respondents that include male (n=47) and female (n=7) from outpatients between the ages of 18 and 54. The participants need to participate in diagnostic criterion for either schizophrenia or schizoaffective disorder based on the Structural Clinical Interview of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). The result indicated that there were significant differences in cigarettes per day (CPD), current dependent patients smoked less CPD, than the patients with former dependence and those with no history of dependence. Furthermore, according Lien (2016) reported tobacco use is still one of the leading preventable causes of death in the world killing up to half of its users. Based on the research conducted by Jorgensen, Skjaervo, Johnsen, Haukvik, Lange, Melle, Andreassen and Agartz (2015) indicated that cigarette smoking may contribute to brain structure changes. Their research studies has involved 506 patients (49%

smokers) and 237 controls (20% smokers) were age 18–65 years. The result of the study reported that there were significant between type of tobacco with in mental disorder. Based on the empirical research, the reseacher are able to stated that, the tobbaco use were exposed to have mental health disorder if the smokers are really dependence on the tobacco.

The relationship between tobacco use and mental health among adolescents

Based on the findings of this study, there is no significant relationship between tobacco use and mental health. The correlation coefficient in this study has found there is no positive relationship between tobacco use and mental health. According to the research conducted by Alsehaibani (2018) that involved 2664 participants were between the ages of 11-16, with age 14 as the average. The students were equally distributed among grades 8, 9, and 10 with about one-third in each of the three grade levels.The aim of the studies was to found the relationship between tobacco use and mental health. Moreover the research conduct by Horn, Kalsekar, Massey, Tennant, & McGloin (2004) involved the participants 113 male and 145 female adolescents ages 14–19 from rural area of West Virginia and North Carolina. Participants were enrolled in the American Lung Association's 10-week Not On Tobacco (N-O-T) program or a 15-min single-dose brief intervention. The aim of this study was to exploring the relationship between mental health and smoking cessation. The result has reported that the findings suggest that rural youth who smoke may faced a risk for pathological depression and anxiety. Based on the empirical research, eventhought the result on this study has reported that there were no significant between tobacco use and mental health. But, most of the previous studies has proven most of research has found the positive relationship between both of the varible.

CONCLUSION

For the future research, this study can be discussed deeper and widely. It is because the topic is very important and significant to acknowledge the awareness about effect of tobacco use among university student. The future researcher is also suggested to enlarge the number of sample because it is better to have more sample or subject in order to get the valid result of the research. Besides that, the researcher also is recommended to observe the sample answering the questionnaire during process of collecting data. It is important because sometimes the sample did not understand the question in the survey and they tend to ignore it or leave it blanks.

REFERENCES

Anjum, M. S., Srikanth, M. K., Reddy, P. P., Monica, M., Rao, K. Y. & Sheetal, A. (2016). Reasons for smoking among the teenagers of age 14–17 years in Vikarabad town: A cross- sectional study. *J Indian Assoc Public Health Dent 2016*, 80-83.

Alsehaibani, N. (2018). Relationship Between Tobacco Use and Mental Health Among Adolescents in Kuwait. *Public health: Health & Human Performance* , 1-50.

Amedeo, M., Francesco, S. B., & Wanda, K. C. (2013). Smoking Behaviour and Mental Health Disorders—Mutual Influences and Implications for Therapy . *Int. J. Environ. Res. Public Health*, 4790-4811.

Andrea H. Weinberger, Rachel S. Kashan, Danielle M. Shpigel, Hannah Esan, Farah Taha, Christine J. Lee, Allison P. Funk & Renee D. Goodwin. (2016). Depression and Cigarette Smoking Behavior: A critical review of population-based study. *THE AMERICAN JOURNAL OF DRUG AND ALCOHOL ABUSE*, 1.

Association, A. P. (1994). *Diagnostic and statistical manual of mental disorders.* Washington: DC Author.

Aydin A.,Kahraman N. & Hicdurmaz N. (2007). Determining the Perceived Social Support and Psychological. *Journal of Psychiatric Nursing*, 40-44.

Benjamin J. Apelberg, Catherine G. Corey, Allison C. Hoffman, Megan J. Schroeder, Corinne G. Husten, Ralph S. Caraballo,Cathy L. Backinger. (2012). Symptoms of Tobacco Dependence Among Middle and High School Tobacco User. *2012 National Youth Tobacco Survey*, 4.

Bernama. (2018, August 5). *Star Online* . Retrieved from 29% of Malaysians have mental problems due to stress: https://www.thestar.com.my/news/nation/2018/08/05/lee- lam-thye-more-msians-will-suffer-from-depression-by-2020-due-to-stress/

Carvalho, M., Sivanandam, H., & Shagar, L. K. (2018, July 30). *Star Online*. Retrieved from Health Minister: Some 4.2mil Malaysians living with mental health issues: https://www.thestar.com.my/news/nation/2018/07/30/health-minister-some-42mil- malaysians-living-with-mental-health-issues/

Horn, K., Kalsekar, I., Massey, C. J., Tennant, K. M., & McGloin, T. . (2004). Exploring the Relationship Between Mental Health and Smoking Cessation: A Study of Rural Teens. *Prevention Science*, 113–126.

H. Bjorngaard, D. Gunnell, M. B. Elvestad, G. Davey Smith, F. Skorpen, H. Krokan, L. Vatten & P. Romunstad. (2012). The Causal role of smoking in anxiety and depression : A Mendelian randomization analysis of the Hunt study. *Psychological Medicine*, 1.

Joe Gfroerer, Shanta R. Dube, Brian A. King, Bridgette E. Garrett, Stephen Babb & Timothy McAfee. (2013). *Centers for Disease Control and Prevention.* United States: Department of Health and Human Services.

Jorgensen, K. N., Skjaervo, I., Johnsen, L. V., Haukvik, U. K., Lange, E. H., Melle, I., Andreassen, O. A., & Agartz, I. (2015). Cigarette smoking is associated with thinner cingulate and insular cortices in patients with severe mental illness. *J Psychiatry Neurosci*, 241-249.

Lien, L. (2016). Smoking, Mental Health and Addiction: A Review of the Literature. *Journal of Addiction and Preventive Medicine*, 1.

Lien, L. (2016). Smoking, Mental Health and Addiction: A Review of the Literature. *Journal of Addiction and Preventive Medicine*, 1-4.

Mental, H. F. (2018, 12 10). *Smoking and mental health*. Retrieved from Mental, Health Foundation: https://www.mentalhealth.org.uk/a-to-z/s/smoking-and-mental-health

Mohamed S. Al-Ibrahim and Joyce Y. Gross. (1990). *Clinical Methods: The History, Physical, and Laboratory Examinations.* Boston: Butterworth Publishers.

Muhammad Fadhli Yusoff, Mohd Azahadi Omar, Norayana Hasan,Nizam Baharom, Christopher Eugene, Tee Guat Hiong, Lim Kuang Hock, Abdul Aiman Abd Ghani,Jane Ling Miaw Yn, Gunenthira Rao a/l Subbarao, . (2015). *National Health & Morbidity Survey (Non Communicable Diseases, Risk Factors & Other Health Problems) Volume II.* Kuala Lumpur: Institute for Public Health, Ministry of Health, Malaysia.

Nordqvist, C. (2017, August Thursday). *Medical News Today*. Retrieved from What is mental health?: https://www.medicalnewstoday.com/articles/154543.php

Norman, P. S. (1997). Social Support and Well-Being in Early and Mid-Adolescents: The Mediating Role of Hopefulness. *Graduate Research and Creative Practice*, 5-20.

Piperm M. E., Piasecki, P. M., Federman, E. B., & Bolt, D. M. . (2004). A Multiple Motives Approach to Tobacco Dependence: The Wisconsin Inventory of Smoking Dependence Motives (WISDM-68). *Journal of Consulting and Clinical Psychology*, 139–154.

Qiang Fu, Michael G. Vaughn, Li-Tzy Wu & Andrew C. Heath. (2014). Psychiatric Correlates of Snuff and Chewing Tobacco Use. *PLoS ONE* , 1.

Rachel A. R., Justine L. G., & Tony P. G. (2014). Relationship between Tobacco and Cannabis Use Status in Outpatients with Schizophrenia. *The American Journal on Addictions*, 170-175.

Rachel Lipari and Struther Van Horn. (2017). *Smoking and mental ilnessamong adults in the United States.* Rockville: Substance Abuse and Mental Health Services Administration.

Tahir Aris, Muhammad Fadhli Mohd Yusoff, Abdul Aiman Abd Ghani, Noor Ani Ahmad, Mohd Azahadi Omar, Tee Guat Hiong, Nur Hazwani Mohd Hasri, Nur Fadzilla Mohd Radzi, Nur Syazwani Manan & Nurul Aini Kamaruddin. (2015). *The National Health and Morbidity Survey 2015.* Kuala Lumpur: Ministry of Health.

Tahir Aris, Muhammad Fadhli Mohd Yusoff, Abdul Aiman Abd Ghani, Noor Ani Ahmad, Mohd Azahadi Omar, Tee Guat Hiong, Nur Hazwani Mohd Hasri, Nur Fadzilla Mohd Radzi, NurSyazwani Manan & Nurul Aini Kamaruddin. (2015). *National Health & Morbidity Survey.*
Kuala Lumpur: Institute for Public Health, Ministry of Health, Malaysia.

Trzesniewski K.H & Donnellan M.B. (2009). Are today's young people really different from previous generation? A sprctical perspective on "Generation Me". *A Bimonthly E-Journal*, 1-96.