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**HOW RELIGIOSITY AFFECTS AN INTENTION TO QUIT**  
**SMOKING AMONG YOUNG ADULTS**

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*Abstract*

There are numerous reasons that motivate adult smokers to quit smokes and among the popular reasons to quit smoking are due to health conscious. However, this study aims to examine the intention to quit smoking among young adult smokers in the university with focusing more on the component factor of religiosity. A total of 150 respondents were participated in this study. The data was analysed using partial least squares-structural equation modeling (SmartPLS) 3.0 tool. The results show that the components of religiosity such as religious belief, Islamic leadership and Islamic rulings have positively influences the university students to quit smokes. In contrast, religious practice has been unable to support the intention to quit smoking among young adult smokers in the university. The findings in general have highlighted the important role of religiosity particularly Islamic religion in assisting young adult smokers to quit smokes. The results of this study will contribute to insightful ideas and may attract researchers, practitioners and policymakers to look into this context seriously.

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**Keywords:** Religious belief, religious practice, Islamic leadership, Islamic ruling, intention to quit smoking. '

## 1. Introduction

The use of religion and the enlisting of religious authorities in public health campaigns for tobacco control is a relatively novel (Amoateng, Setlalentoa, & Udomboso, 2017; Garrusi & Nakhaee, 2012; Hussain Walker, & Moon, 2017; Yong, Hamann, Borland, Fong, & Omar, 2009). Religion can be defined as the ideas for life, which are reflected in the values and attitudes of societies and individuals (Fam. Waller & Erdogan, 2004). Religiosity is known as one of the most important cultural forces and a key influence on behavior (Essoo & Dibb, 2004). Few past studies revealed the positive outcomes of reducing smoking habit derived from religiosity factor. For instances, a study conducted by Wallace and Forman (1998) indicated that higher levels of religiosity have been associated with lower levels of cigarette use, and the others by Choi, Ahluwalia, Harri and Okuyemi (2002) and van den Bree, Whitmer and Pickworth (2004) mentioned about lower probability of progressing to established smoking from experimental smoking. In addition, the religiosity also could help the cessation of smoking (van den Bree et al., 2004).

Historically, smoking has been unnoticed by most of religions because it was not clearly written in scriptures. However, religion likes Islam and Buddhism, have religious values that prohibit or dishearten the use of addictive materials. In Malaysia, Islam was the most widely professed religion in 2010 with the proportion of 61.3 percent (Department of Statistics Malaysia, 2011). The mix of religious belief and the spiritual needs in country like Malaysia with the environment will develop and instil a sense of psychology and sociology to give meaning and value in life and to develop an individual's behavior (Hamzah et al., 2014). With regard to tobacco use, the national Fatwa Committee for Islamic Affairs in Malaysia reigned that smoking was strictly forbidden in the year 1995. Based on the edict, religious rulers in Selangor, Kedah and Perlis have acknowledged that smoking is forbidden while some states declared as 'makruh' (advised against) (South China Morning Post, 1995). Due to this, the Federal Government of Malaysia failed to enforce this edict. Later, in 2004, Ministry of Health has promoted an antismoking campaign during Ramadhan as to encourage Muslims to quit smoking (Yong et al., 2009).

Past scholars measure the role of religiosity from two to seven dimensions. For an example, Farahani and Musa (2012) proposed Islamic religiosity as Islamic belief, Islamic practice and Islamic piety. However, many previous scholars (Batson, Schoenrade, & Ventis, 1993; Duriez, Fontaine, & Hutsebaut, 2000; Farahani & Musa, 2012; Marddent, 2009; Tan, 2006) only concentrated with two main dimensions namely religious belief and the practice. According to Marks and Dollahite (2001), religious belief includes personal, internal beliefs, framings, meanings, and perspectives of religion. On the other hand, religious practice is outward, observable expressions of faith such as scripture study, prayer, traditions and rituals. The past studies conducted by Yong et al. (2013), Brown et al., (2014), Bailey, Slopen, Albert, & Williams, (2015) and Elkami, Alkoudmani, Elsayed, Ahmad and Khan (2016) empirically investigated the role of religious belief and practice towards the intention to quit smoking among adult smokers.

Other than that, the roles of Islamic leadership and Islamic rulings have produced positive effects on the intentions to quit smoking among adults. According to reference group theory, the degree to which a group serves as an influential reference point for an individual is a function of few factors namely similarity in status to the group, sharing the values and beliefs of the group, having clarity about the group's values and beliefs, having sustained interaction with the group, and whether an individual defines other group members as significant. This theory is readily applicable to understanding religious influences on

smoking behaviour. Adult smokers who identify with a particular religion may look to their religion as their reference group or leader rather than society at large, making religious leaders potentially powerful figures in the success of smoke-free laws (Bock, Beeghley, & Mixon, 1983; Yong et al., 2009; Bailey et al., 2015).

More importantly, Muslims in Malaysia should be fully aware that smoking is forbidden based on fatwa (edict) which was issued by the Muzakarah Committee of the National Fatwa Council for Islamic Religious Affairs in 1995. Even though only few states (Selangor, Kedah and Perlis) have declared the fatwas, the Muslim should understand the announcement made by Muzakarah Committee is applied to all Muslim in Malaysia. The main reasons for Islam to prohibit smoking habits because of creates a number of health problem, affected family's health, addictive, noxious smell and waste of money (Yong et al., 2009). In brief, this study was designed to examine the components of Islamic religion towards quitting smoking among young adults. This study is organized into six sections. The next section of this study will discuss the problem statement. Section 3 and 4 will explains the research question and the purpose of study. The following sections present the research methodology and findings, before finalizing with the conclusion.

## **2. Problem Statement**

According to Global Adult Tobacco Survey (2011) there are 4.7 million Malaysian adults with 43.9 percent of men and 1.0 percent of women are currently smoked tobacco. In addition, 4.3 million adults currently smoked tobacco on daily basis and spent an average of RM 178.80 per month to buy cigarettes. In 2013, a 14 percent increase in excise duty will directly increase money allocation for heavy smokers in Malaysia but the statistic of adult smokers is still increased. As reported by Institute for Public Health (2015) approximately 4.99 million of adult smokers in 2015, with 4.85 million were men and 0.14 million (1.4 percent) were women. Furthermore, 60 percent of current smokers smoked 15 sticks of cigarettes and above on daily basis. Also, majority of the adult smokers were from rural areas as compared to urban areas (Hum, Mei Hsien, & Nantha, 2016).

The tobacco industry in Malaysia is estimated to be worth more than USD 2 billion a year (Euromonitor International, 2015). As exposed by The International Tobacco Control (ITC) Malaysia National Report, (2012), a part of legal tobacco trade, illicit cigarette trade has also proliferated, accounting for approximately one fifth of the tobacco market in Malaysia. This has encouraged the smokers to easily found and bought the cigarettes from the sellers. To reduce the consumption of tobacco product among Malaysians, the government has instituted many anti-smoking measures such as tobacco control regulations in 1993, prohibition of advertisement on tobacco products and event sponsorship from tobacco companies, control on the sales of tobacco products to minors, designation of smoke-free areas in 2004, restructuring of tobacco taxes to increase the cost of cigarettes in 2007, anti-smoking campaigns "Say No" to cigarette from 2004 to 2011, IMFree campaign and provision of smoking cessation services at government health clinics have been instituted. Even the policy makers have imposed many ways to reduce the smoking habit but the quitting figures are still low (Hum et al., 2016). ITC Malaysia National Report (2012) estimated that 10,000 Malaysian are death due to smoking-related diseases. In order to save their lives, Malaysian government has spent RM 2.92 billion to treat chronic obstructive pulmonary disease, ischemic heart disease and lung cancer (Mohd Zain, 2010).

There are numerous reasons motivated adult smokers to quit smokes. Reasons like health conscious (Buczowski, Marcinowicz, Czachowski, & Piszczek 2014; Driezen et al., 2016; Ghouri, Atcha, & Sheikh, 2006; Goren, Annunziata, Schnoll, & Suaya, 2014; Pokhrel & Herzog, 2016; Stockings et al., 2013; Villanti et al., 2016), family disapproval of smoking, religion discourages smoking, and desire to set an example for children are the most common reasons that adult smokers gave for wanting to quit smokes (ITC Malaysia National Report, 2012; Ismail et al., 2016). This study is concentrated on the religious as the effect on quitting smoking because this factor is relatively a recent phenomenon (Saeed et al., 1996; Yong et al., 2013). Studies from Swaddiwudhipong et al., (1993), Saeed, Khoja and Khan (1996) and Ugen (2003) mentioned that religion has occasionally influence adult smokers to quit smokes except for followers of religions with very strong sanctions against tobacco use. As reported by Institute for Public Health (2015), 15.2 percent of tertiary current smokers of any smoked tobacco product. Also, 32.2 percent of them smoked more than 25 sticks per day. The figures have stimulated the researchers to test the roles of religiosity as a factor to quit smoking among young adults.

### **3. Research Questions**

The proposed research question for this study is as follows;

Does the components of religiosity influences the intentions to quit smoking among young adults?

### **4. Purpose of the Study**

This study targets to examine the roles of religiosity (Islamic religion) as a driver that will influence the young adults to quit smoking. This study will benefit the policymakers to create awareness and educate the adult smokers to stop smoking by leveraging the factor of religiosity.

### **5. Research Methods**

The unit of analysis in this study is the existing students who were studying at National Energy University (Sultan Haji Ahmad Shah campus) and Politeknik Muadzam Shah. Two hundred questionnaires were distributed by using snowballing sampling method. The data collection was carried out over a period of three weeks. A total of 150 completed questionnaires (75 percent of responses rate) were received and used for further analysis. The questionnaire used in this study contains of two parts. The first part comprises of independent and dependent factors and the second part is referring to the characteristic of respondents. In general, a total of twenty one items were used to measure the religious belief, religious practice, Islamic leadership, Islamic ruling and smoking habits. The details of items used per variables are: religious belief (5 items); religious practice (5 items); Islamic leadership (4 items); Islamic ruling (4 items) and intention to quit smoking (3 items). All items for religious belief and practice were adapted from Farahani and Musa (2012), while, eleven items for Islamic leadership, Islamic ruling and smoking habits were adapted from Yong et al. (2009). The first part of survey question has used a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

In addition, three questions were used to explain the characteristic of respondents. Among the questions are like gender, age and level of study. Besides, two additional questions were asked to determine how many cigarettes that the respondents smoke every day and their intentions to quit smoking. To test the

face validity, the completed instrument was pre-tested by 15 respondents in Uniten. Based on the feedback obtained from respondents, the questionnaire was subsequently upgraded. The data obtained was analyzed using the partial least square (SmartPLS) 3.0 (Ringle et al., 2015). Three types of analysis namely descriptive analysis, test of measurement model and test of structural model were carried out for this study.

## 6. Findings

Table 01 displays the details characteristics of respondents. All respondents were from National Energy University and Politeknik Muadzam Shah. The respondents in this study are difference in the form of gender, age group and educational level. Based on Table 01, 66.7 percent of respondents were male and 33.3 percent were female. With regard to age group, the majority of respondents were age between 21 to 23 years old with 51.3 percent. Then, it was followed by 18 to 20 years old with 25.3 percent. Moreover, only 2.0 percent of them were 27 to 29 years old. In relation to educational level, most of the respondents were from degree programs with 53.3 percent. Then, it was followed by diploma and foundation students with 31.3 and 15.3 percent respectively. The respondents also were asked about how many cigarettes that they smoked per day. The result indicates that 6.7 percent of respondents were considered as heavy smokers because they smoked more than 15 cigarettes per day. The majority (44.6 percent) of them smoked 6 to 10 cigarettes per day and 33.3 percent smoked less than 5 cigarettes per day. Finally, 22.7 percent of respondents revealed that they had no intention to quit smoking. Very few of them (14 percent) planned to quit smoking with less than 1 month.

**Table 01.** Characteristics of profile

Item	Category	Frequency	Percentage (%)
Gender	Female	50	33.3
	Male	100	66.7
Age group	18-20 years old	38	25.3
	21-23 years old	77	51.3
	24-26 years old	32	21.3
	27-29 years old	3	2.0
Education level	Foundation	23	15.3
	Diploma	47	31.3
	Degree	80	53.3
Cigarettes per day	Less than 5	50	33.3
	6 to 10	67	44.7
	11 to 15	23	15.3
	More than 15	10	6.7
Intention to quit smoking	Not planning to quit	34	22.7
	Beyond 6 months	41	27.3
	Within 6 months	54	36.0
	Within 1 month	21	14.0

The next analyses are using SmartPLS 3.0 and the first analysis is called test of measurement model. To complete the analysis of measurement model, two main tests i.e. validity and reliability must be executed. As suggested by Hair, Hult, Ringle and Sarstedt (2017), the used of factor loading, recommended composite reliability (CR) and average variance extracted (AVE) are to test the convergent validity. As

shown in Table 02 below, twenty items of construct loaded is higher than 0.70 and only one item with loading below than 0.70. The study has decided to maintain the item because it is important to see the effect of this item and thus, no single item was deleted. The loadings were ranging from 0.561 to 0.961. Moreover, the CR values are ranged from 0.842 to 0.961 and exceeded the recommended value of 0.70 by Hair et al., (2017). Similarly, the values of AVE were also reported higher than 0.50. The results of AVE are in the range of 0.577 to 0.834. In general, the results show that all the five constructs namely religious belief, religious practice, Islamic leadership, Islamic ruling and intention to quit smoking are all valid measures of their respective constructs. With regard to R<sup>2</sup>, it shows that 56.6 per cent of smoking habits is explained by religious belief, religious practice, Islamic leadership and Islamic ruling. The R<sup>2</sup> value confirms a moderate model according to Chin (1998).

The second test to measure the model is known as reliability test. As displayed in Table 02, three variables i.e. namely religious belief, religious practice and intention to quit smoking have indicated a good internal consistency with a Cronbach Alpha coefficient reported 0.949, 0.900 and 0.852 respectively. These coefficients are considered very good, as suggested by Pavot, Diener, Colvin, & Sandvik (1991) where the scale of very good is 0.85 and above. The values of Cronbach Alpha above than 0.80 are considered preferable as suggested by Pallant (2016) and this can be referred to the variable i.e. Islamic leadership. In addition, values above 0.70 are reflected acceptable and this can be associated with variable namely Islamic rulings (Pallant, 2016).

**Table 02.** Results of measurement model

Construct	Items	Loadings	AVE	CR	R <sup>2</sup>	Cronbach's Alpha
Religious Belief	RB1	0.957	0.834	0.961	0.566	0.949
	RB2	0.945				
	RB3	0.736				
	RB4	0.948				
	RB5	0.961				
Islamic Leadership	RL1	0.856	0.676	0.893	0.566	0.840
	RL2	0.845				
	RL3	0.821				
	RL4	0.763				
Religious Practice	RP1	0.775	0.703	0.921	0.566	0.900
	RP2	0.889				
	RP3	0.905				
	RP4	0.870				
	RP5	0.739				
Islamic Rulings	RR1	0.830	0.577	0.842	0.566	0.746
	RR2	0.815				
	RR3	0.799				
	RR4	0.561				
Intention to Quit Smoking	IQS1	0.897	0.772	0.910	0.566	0.852
	IQS2	0.879				
	IQS3	0.860				

Note: AVE (Average Variance Extracted); CR (Composite Reliability)

Further, the discriminant validity of the constructs was examined by following the Fornell and Larcker (1981) criterion. This test is used to compare the correlations between constructs and the square root of the AVE for each construct applied in this study (refer Table 03). The results in Table 03 show that

all the values (diagonals) were higher than the conforming row and column values. Hence, it demonstrates that there is no discriminant validity issue for this study. The values of square root of each AVE are reported from 0.759 (Islamic rulings) to 0.913 (religious belief).

**Table 03.** Discriminant validity of constructs

Construct	IL	IR	RB	RP	IQS
Islamic Leadership	<b>0.822</b>				
Islamic Rulings	0.720	<b>0.759</b>			
Religious Belief	0.414	0.375	<b>0.913</b>		
Religious Practice	0.327	0.339	0.568	<b>0.838</b>	
Intention to Quit Smoking	0.648	0.705	0.459	0.360	<b>0.879</b>

Note: Values in the diagonal (bolded) signify the square root of the AVE while the off-diagonals signify the correlations; IL (Islamic Leadership); IR (Islamic Rulings); RB (Religious Belief); RP (Religious Practice); IQS (Intention to Quit Smoking).

Once the analysis of measurement model was completed, the next step is to test the four proposed hypotheses through analysis of the path analysis or also known as test of structural model. To begin the analysis, a bootstrap procedure with 5000 times of resampling is applied as recommended by Hair et al., (2017). As illustrated on Table 04, the results indicate that only three hypotheses (H1, H3 and H4) have supported the intention to quit smoking among young adults. It shows that religious belief, Islamic leadership and Islamic rulings have positively influenced the intention to quit smoking. The results (in particular to Islamic rulings) is in line with Byron et al., (2015) but not similar with past studies conducted by Yong et al., (2009), Farahani and Musa (2012) and Chen (2014). However, H2 (religious practice) is found insignificant to influence the intention to quit smoking. The result is in line with previous study by Farahani and Musa (2012).

Moreover, this study applied Cohen (1988) guidelines as a tool to measure the effect size ( $f^2$ ). Cohen (1988) classified the effect size into three groups: 0.02 (small), 0.15 (moderate) and 0.35 (large) effects. Table 04 indicates that all the relationships showed substantive impact with 2 (small effect) and 1 (moderate). In relation to that, this study is applying a blindfolding procedure to examine the predictive relevance of the model. According to Henseler, Ringle and Sinkovics (2009), the blindfolding is a sample reuse technique that omits every data point in the endogenous construct's indicators and estimates the parameters with the remaining data points. Hair et al., (2017) added that this procedure should only be executed for a reflective measurement constructs. In this study, the  $Q^2$  value for intention to quit smoking ( $Q^2 = 0.394$ ) is more than 0. Hence, the model of this study has sufficient or large predictive relevance (Hair et al., 2017).

**Table 04.** Hypothesis testing

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision	$f^2$
H1	RB->IQH	0.172	0.071	2.428	Supported*	0.042
H2	RP-> IQH	0.030	0.074	0.404	Not supported	0.001
H3	IL-> IQH	0.235	0.097	2.441	Supported*	0.058
H4	IR-> IQH	0.461	0.087	5.278	Supported**	0.229

Note: \*\* $p < 0.01$ ; \* $p < 0.05$ ; RB (Religious Belief); RP (Religious Practice); IL (Islamic Leadership); IR (Islamic Rulings); IQS (Intention to Quit Smoking).

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H1: Religious belief among young adult has positively influence the intention to quit smoking.

H2: Religious practice among young adult has positive effect on intention to quit smoking.

H3: Islamic leadership has positive effect on intention to quit smoking among young adult.

H4: Islamic rulings positively influence the intention to quit smoking among young adult.

## 7. Conclusion

In country like Malaysia, the Islamic religion could play a dominant role in the community. Besides, the religion also can be included as part of comprehensive set of activities or policies to control tobacco use among young adults. For instance, religious rulers and supporters of tobacco control could combine their efforts to execute suitable activities like exploit on religious festivals (Ramadan), educate the bad effects of smoking and motivate them to stop smoking with significant information on cessation aids and related services available to assist those who wanted to quit smoking. In addition, the religious leaders also can participate to outspread this effort due to their personality.

Moreover, the religious belief and practice among Muslim should be deeply applied in their daily life. By commencing the Islamic belief and practices, the young adult smokers will be able to quit smoking because Islamic Religiosity had forbidden smoking activity because smoking can caused to negative health. The university may also need to involve in order to educate students to quit smoking by offering related courses and networking with Ministry of Health. The future research may need to focus on multi religious groups because Malaysian populations are diverse with religiosity.

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