

Gender Differences of Smoking Perception among Adolescents in Terengganu, Malaysia

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ABSTRACT--- Majority of smokers who begin smoking as adolescents are at risk for developing smoking patterns. Misperception has contributed that smokers underestimate the risks related with smoking. The aim of this study was to identify the gender differences in adolescents' perception about smokers based on four factors. A total of 863 respondents consist of 302 male (age 21.2 ± 0.56 year) and 562 female (age 20.9 ± 0.66 year) were participated in this study. They were asked to complete a Short-Form Smoking Consequences Questionnaire (S-SCQ) in this study. The result showed female adolescence reported significantly higher discontentment rate (negative perception) for smoking compared to male. There are all four factors were affected on smoking perception relative gender included negative consequence ($z=-6.321$, $p<0.0001$), positive reinforcement ($z=-8.110$, $p<0.0001$), negative reinforcement ($z=-7.584$, $p<0.0001$) and appetite-weight control factor ($z=-6.142$, $p<0.0001$). Female tend to have negative perception on smoking behavior compared to male that encourage the higher number of male smoker than female adolescents. In conclusion, misconceptions about the consequence and reinforcement regarding smoking are widespread among adolescent under this study. Hence, significant public anti-smoking is vital to redress these misperceptions.

Index Terms: Adolescents, cigarette, gender difference, smoking perception factors.

I. INTRODUCTION

Smoking is a habit that is familiar to our people. Today, this smoking habit has become an issue and problem among our teenagers. This is a very worrying concern for all. This smoking behavior does not only involve adult men but also teenagers. And even now these smoking symptoms have spread to female teenagers in this country. The derived from Russell's writings stated that most likely addicted people to

smoking cigarettes are caused by addiction and dependence on cigarettes [1], [2]. WHO data also emphasize that the number of smokers in the world is 30% comprising adolescents [3]. The number of smokers is increasing day by day and this situation is very worrying for all parties, especially parents who have teenagers that are easily affected by these negative symptoms.

The main and most luminous explanation in modern history of smoking effects on health took place in 1950 with the publication of four retrospective studies on smoking habits of lung cancer patients [4]. Teenagers who come from a good family are hard-pressed to get involved with cigarettes or medicines compared with pessimistic families [5]. The most powerful influence is when parents are smoking in front of their family especially children. It caused their children will start to do the same behavior. Smoking behavior is more common among those who live with a single parent [6]. Besides, environmental factors are influenced by social conditions that influence individual attitudes, beliefs, and attention to individuals who smoke. Youth will start smoking when they are influenced by the social environment. Typically cultures, social classes, levels of education, income, and type of work will influence smoking behavior in individuals [7].

Among smokers, 87% have at least one or more smoking partners as well as non-smokers [8]. Mostly, individuals will smoke because they have a certain perception of cigarettes. Smoking behavior is a complex behavior because it is the result of cognitive interaction, social environment, psychology and physiology [9]. The psychological factor (internal factor) that causes a person to smoke is a daily routine, positive emotional reactions, emotional and addictive reactions [10]. The self-factor is the most important factor in the behavior of smoking. According to Erikson, youths starting to smoke are related to the psychosocial aspect of the crisis experienced during their development, when they are looking for their identity [11]. Considering factors that contributes into different perception on smoking, this study aims to compare perception between male and female among adolescent in Terengganu, Malaysia.

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II. MATERIAL AND METHOD

A. Participants

The respondents in this study are randomly selected among adolescent in Terengganu, Malaysia with mean and standard deviation age (21.2 ± 0.56). A total of 863 respondents was volunteered to participate in this study, male (N=302), and female (N=561). A Short-Form Smoking Consequences Questionnaire (S-SCQ) developed by Myers including of 21-items that has been modified by 50-item Smoking Consequences Questionnaire based on Brandon & Baker was used in this study [12-13]. Four smoking perception factors includes in S-SCQ are negative consequence (4-items), positive reinforcement (5-items), negative reinforcement (7-items) and appetite-weight control (5-items). The S-SCQ was purposely used for perception assessment; to measure smoking outcome expectancies, however, the questionnaire underwent modification by the researcher by translating into Malay version.

B. Instrument

By using S-SCQ, there are three factors that have high value of Cronbach alpha; positive reinforcement ($\alpha = 0.90$), negative reinforcement ($\alpha = 0.94$) and appetite - weight control ($\alpha = 0.87$). Meanwhile, the negative consequence factor ($\alpha = 0.55$), have low Cronbach's alpha. The reported Cronbach's alpha estimates for these factors ranged between 0.55 and 0.94. The alpha value equal or greater than 0.70 has considered as reliable for research purposes and this is normally a criterion for publishing the outcome measure [11]. Therefore, the positive reinforcement, negative reinforcement and appetite-weight control factors are considered reliable in this study. The factor of negative consequence (4 items) have lower alpha < 0.60 probably because of the small number of items in subtest. Cronbach's alpha estimation of reliability will be increases if the scale length (number of items in the scale) increases. In this study,

researcher consider that the effect on alpha is low because of the items in a scale is fewer than 7 items [12].

C. Statistical Analysis

Preprocessing data: A matrix set of youth contains 3452 matrices data (4 variables \times 863 youth) were computed in this study. For matrices that have very small amounts of data lost ($\sim 3\%$) than the overall data recorded, the nearest neighboring method can be used [13], [14]. This method examines the distance between each point and its nearest point [15]-[17]. The nearest neighboring method is the simplest method, where the endpoint of the gap is used as an estimate of all missing values [18]-[20].

Z-Test: The two-sample z-test was conducted in this study for the major test to achieve the objectives. A two-sample z-test can be used to test the difference between two population mean μ_1 and μ_2 when a large sample (at least 30) is randomly selected from each population and the sample are independent [21]. The test statistic as $\bar{x}_1 - \bar{x}_2$, and the standardized test statistic is

$$z = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sigma_{x_1 - x_2}} \quad (1)$$

where

$$\sigma_{x_1 - x_2} = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}} \quad (2)$$

III. RESULTS AND DISCUSSION

Table 1 shows the descriptive statistic of perception score for the male and female respondent involved in this study. Overall, the highest mean of score among the group under study was dominated by male.

Table 1: The descriptive statistic score in smoking perception by gender

Factors	Gender	N	Minimum	Maximum	Mean	Std. Deviation
Negative consequence	Female	561	4	14	6.07	2.71
	Male	302	4	14	7.42	3.15
Positive Reinforcement	Female	561	5	17	7.44	3.48
	Male	302	5	17	9.77	4.3
Negative Reinforcement	Female	561	7	24	10.8	5.04
	Male	302	7	24	13.78	5.77
Appetite-Weight Control	Female	561	5	18	8.22	3.8
	Male	3	5	21	9.00	4.15

Table 2 shows the result of z-test of four evaluated smoking perception factors relative gender. There are four significant perception factors showed significant differences between male and female. Result found the significant differences of smoking perception in negative consequence factor between these genders ($z = -6.321$, $p < 0.0001$) with a mean score of 6.07 for female and 7.42 for male. For positive reinforcement factor of perception towards smoking behavior, result showed significant difference between genders ($z = -8.110$, $p < 0.0001$) with a mean score 7.44 for

female and 9.77 for male. Female perception on smoking disagree cigarette taste good and pleasant. While, male have positive perception that they will enjoy the cigarette flavor while smoking and they enjoy feeling a cigarette on their tongue and lips. They also enjoy the taste sensations while smoking. The third factor of smoking perception, negative

reinforcement, shows significant differences between genders ($z = -7.584, p < 0.0001$) with a mean score of 10.8 for female and 13.78 for male. The last factor is appetite-weight control also shows that there are significant differences of smoking perception between genders ($z = -$

6.142, $p < 0.0001$) with a mean score 8.22 for female and 9.98 for male. The comparison of perception score of smoking factors relative gender were shown graphically in Fig. 1.

Table 2: Result of Fisher's test analysis

Factors	Difference	z (Observed Value)	z (Critical Value)	p-Value (Two-Tailed)
Negative consequence	-1.356	-6.321	1.96	< 0.0001
Positive reinforcement	-2.333	-8.11	1.96	< 0.0001
Negative reinforcement	-2.99	-7.584	1.96	< 0.0001
Appetite-weight control	-1.768	-6.142	1.96	< 0.0001

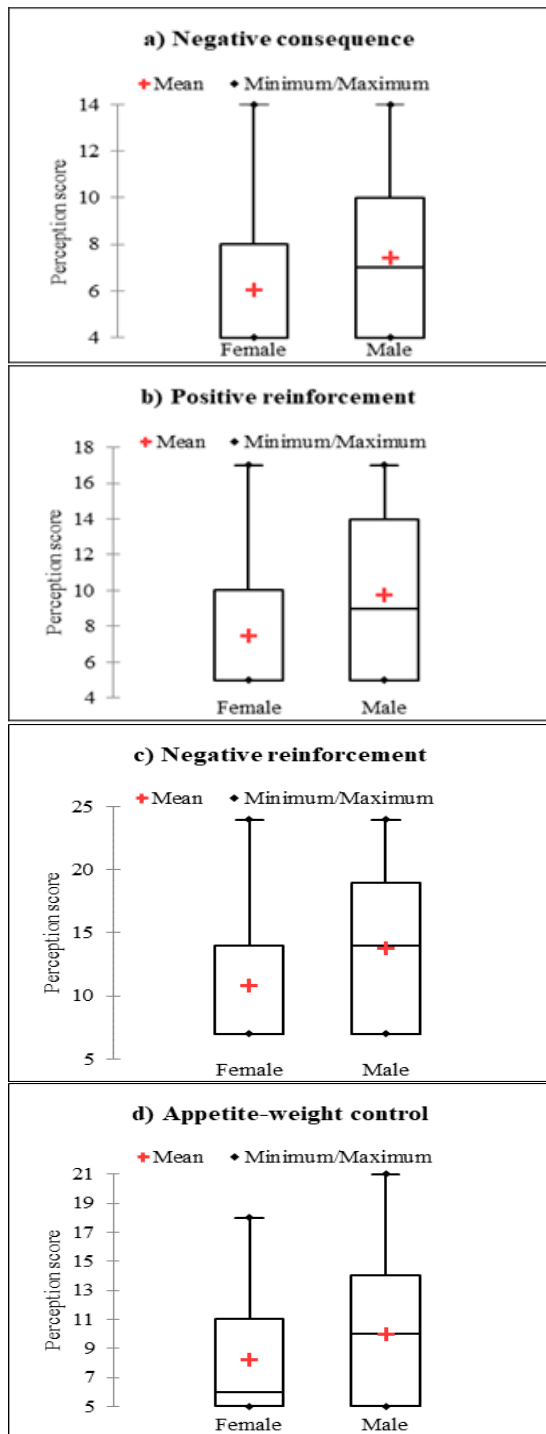


Fig. 1: Boxplots of perception score for smoking factors relative gender

The positive and negative impact are different dimensions that associated with different neural underpinnings while state that they have distinct psychological correlates [22], [23]. Based on observations made on gender differences, higher knowledge or concerns have been shown regularly by men than women. Other types of evidence also indicate that gender differences in health problems do not contribute significantly to higher rates of smoking among men. Factors that encourage them to take cigarettes and other habits and daily activities with which smoking has been associated with personality, social influence, and other psychosocial dimensions. Smoking as a stimulant, to experience the positive affect of great enthusiasm, and smoking as a relaxant, to experience the positive affect of enjoyment [24]. The latter occurs in those individuals who characteristically smoke under pleasant circumstances which are relaxing such as at the end of a meal, or in the midst of a pleasant conversation [25]. The stimulant type of smoking occurs whenever smoking is used to give the person a rise from the positive affect of great enthusiasm as when an adolescent smokes to establish his manhood or his coming of age, or to against his parents, or when an adult smokes for the great enthusiasm of something to do. Stressors have been shown to increase tobacco consumption among established smokers promote adolescent cigarette use [24]. Most teens have been taking cigarettes to relieve the stress experienced in them. For them, by smoking they can be calm and free from any problems. Pleasant conditioning after smoking, so one wants to repeat the behavior and physiology because of evidence that smoking can cause the body to rely on nicotine [26].

Investigators have evaluated a variety of potential stressors, including anxiety-inducing tasks, family turmoil, job factors, and major life events such as unemployment and divorce. Many youths take the easy way of smoking, they can forget about the stress and anxiety they face for example if they have problems with the family. One study of smoking youth is young people who come from unhappy families, where parents do not care about their children and give a hard sentence, it is easier to become smokers than young people who come from happy family [27].

Given the role of smoking as a psychological coping behavior, we hypothesized that persons reporting numerous hassles would be more likely to smoke than those experiencing fewer stressors [28], [29]. Many youths are



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taking cigarettes because their emotions are unstable and want to find peace. Tranquility is something you are looking for when smoking is strangely. Cigarettes become good friends according to smokers to overcome a variety of negative emotions. Many smokers believe that smoking helps them cope with stress. They may feel calmer and less stressed while smoking, their bodies are experiencing just the opposite reactions. The smoking affects the performance in dealing with stress or psychological stress [30], [31].

In the previous study showed symptoms of depression and cigarettes had a strong relationship. The findings show that boys are more likely to be involved in smoking than women. Cigarettes can cause direct and indirect effects towards depression that may be experienced by smokers. Mostly of the smoking men showed higher scores in depressive symptoms than non-smokers [32], [33].

IV. RECOMMENDATIONS

Tobacco-smoking campaigns should be enforced by the Enforcement of the Ministry of Health to all groups especially to the youth. This is because previous campaigns are seen as a failure in preventing a person from engaging in smoking. Therefore, awareness campaigns should not only be given to the elderly or the young but must be conducted and given early exposure to adolescents and children so that the problem of cigarette can be resolved immediately.

In addition, the authorities in collaboration with the Ministry of Health and the relevant departments should ban all forms of cigarette brand advertising whether directly or indirectly in the print or electronic media. The Government of Malaysia must also enforce the ban of event sponsors or advertisements by tobacco companies. The proposal was emphasized by a resolution resulting from the national workshop on "Tobacco and Islam" which took place on May 20, 2000. The workshop was conducted to urge the authorities to gazette and implement the fatwa systematically and effectively.

Furthermore, the government should increase the price of cigarettes each year through the Presentation of State Budget to a certain level. With the increase in the price of cigarettes, perhaps a little bit can help reduce the behavior of smoking. It can even contain the social threats that have been threatening lately. This is because the government has to deal with various kinds of illegal smuggling and can damage and burden the national security institutions and even the country's income is also affected.

Lastly, Terengganu state government with the collaboration of state government agencies to enforce the law in reducing and eliminating the use of cigarettes among the Muslim community. For example, the Municipal Council or District Council and Local Authorities charge high taxes or penalties on individuals who smoke and remove cigarette butts everywhere. This also helps to beautify areas around Terengganu from all impurities. This can also make the State of Terengganu a clean state in the eyes of the people in other states. This action can be carried out in collaboration with District Council, Rukun Tetangga, Department of Information, Rela, Penghulu, Session, Village Committee and Security (JKKK) and others.

V. CONCLUSION

The findings of this study showed that male adolescent tends to have positive perception on smoking behavior compared to female. In conclusion, the less awareness of negative consequence and misconception of positive reinforcement, negative reinforcement and appetite-weight control regarding smoking are widespread among adolescent under this study. Hence, significant public anti-smoking is vital to redress these misperceptions.

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