

THE EFFECTIVENESS OF ANTI SMOKING CAMPAIGN BASED ON CUSTOMERS PERCEPTION TOWARD SMOKING AND ANTI SMOKING CAMPAIGN

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Abstract - Smoking prevalence in Indonesia has been major problem for many decades. Eventhough anti smoking campaign has been implemented, yet the effectiveness is still in question. This study will explore how customers perception toward smoking and anti smoking campaign may exhibit different impact on effectiveness of anti smoking campaign. Anti smoking campaign or also called demarketing of smoking, is conducted in three fronts. Which are, mass media communication, regulatory meassures, and public opinion. Mass media communication via message framing is use to stir customer perception. Regulatory meassures serve as limitation to smoking activity. Public opinion create unfavorable atmosphere to smoking. The main purpose of this study is to examine how the three fronts of demarketing may influence customer perception and intention to avoid smoking. The final project is limited in the scope of data. The data were gathered in Bandung, Indonesia. A survey with judgment sampling was conducted to 178 respondents, the respodents also limited to 89 smokers and 89 non smokers. In addition, some interview also being made to provide additional explanation of each data analysis. Descriptive analysis, Independent Sample analysis, and Regresion analysis were used to evaluate data and make data analysis. Furthermore, an analysis of current condition of anti smoking campaign in Indonesia were also provided. The result reveal that perception toward smoking from smoker group is more supportive to smoking rather non smoker group; both groups perception toward anti smoking campaing are same, which are its weak; anti smoking advertisement with positive framing have better impact rather than negative ones; and also regulatory meassures need improvement in terms of implementation to reduce smoking prevalence in Indonesia. Research implications and future research directions conclude the study report.

Keywords: Smoking prevalence, Anti smoking campaign, Perception, Message framing

Introduction

Smoking epidemic has been a major problem around the globe with 5.4 million deaths every year (WHO, 2008). Smoking epidemic refer to the condition of high prevalence of smoking among people. Indonesia as developing country is also falling under the smoking epidemic; in fact, it is already happening from many decades. According World Health Organization (2011) Indonesia is in the third ranking of most people smoke within a country, just below China and India. Indonesia is also one of the 12 countries that contribute to the 40 percent of world total number of smokers (Journal of the American Medical Association [JAMA], 2014). From 1.3 billion of smokers in the world, 4.8 percent are Indonesian (Adang, 2012). Women smokers are less in number than their gender counterpart. The rate of women smoker has increased greatly, from 0.3 percent in 1995 to 1.6 percent in 2007 (Adang, 2012) and to 4.5 percent in 2013 (Global Tobacco Free Kids [GTFK] 2014).

While smoking Epidemic in Indonesia problematic in prevalence of active smokers, another problem arises which is a high percentage of people who does not smoke, but exposed to the harmful cigarette smoke. These people often called passive smoker. Study from Global Youth Tobacco

Survey (2006) found that around 81 percent of children in Indonesia are exposed to the threat of being passive smoker. Compared to the world average, which is only 56 percent, this percentage, are quite high. Indonesia's social-economy survey (2004) found more than 87 percent of smokers are smoking inside their house with their family members, this survey also found 71 percent of family have household expenditures of cigarettes

Another major problem of the smoking epidemic in Indonesia is underage smokers. Data from Global Youth Tobacco control (2014) stated that in 2013 40.8% teens, with age ranging from 11 – 17 years old, are smoke tobacco related product. The average of starting age to smoke also has fallen from 19 in a decade ago to just seven today (Hodal, 2012). Parents who smoke, cheap price of tobacco product, and weak government control often to be blame as cause underage smokers. There is almost no age restriction in buying cigarettes. Teens and children can buy cigarette in street vendor and traditional market

Anti-smoking campaign has arisen in Indonesia for several decades. The government, health organization, and social community hold the campaigns. Even though the campaign takes the form in almost possible types such as limiting smoking place, increase tax price, raise people awareness of harmful effect on smoking, yet evident result still being absence. According to a WHO report (2008), Strong motives to smoke, lack of tobacco control enforcement, and insufficient capacity to deliver effective intervention are the main reason of the smoking epidemic remains. Indonesia also failed to sign and ratified the WHO FCTC (World Health Organization Framework Convention on Tobacco Control). Although there is a significant increase in anti-smoking campaign activity on mass media such as television, social media, Printing ads, and billboard in the recent years. However, the effectiveness of these anti-smoking campaigns is still not produce evident result because the prevalence of smoker especially in underage smoker is increased. No evidence shows that anti-smoking campaigns have a significant impact to prevent child to start smoking or to stop the adults who already did. Moreover, some top Cigarettes maker claims that their revenue still go up 30% in 2014 despite the increasing activity of the anti-smoking campaign.

The purposes of this study are to know what factors are mostly influenced Indonesian people to smoke and their perceptions towards smoking and anti-smoking campaign, both in term of delivery method and message contents. Furthermore, this study will explore how to create effective anti-smoking campaigns that can decrease smoker prevalence in Indonesia and even shifting the smoking trends. The main problems which are tried to be answered in this research are:

1. What are thoughts, opinions, and perceptions toward cigarettes and smoking for smokers and non smokers?
2. What are thoughts, opinions, and perceptions toward anti-smoking campaign for smokers and non smokers?
3. How much does the anti-smoking advertising affect the smoker's intention to quit smoking?
4. What kind of anti-smoking campaign is the most effective to serve as curative and preventive instrument of smokers?

Furthermore, this final project is limited in the scope of data. The data, which are analyzed, were gained in Bandung, Indonesia area only that in the case which is discussed. The respondents also limited to smokers and non smokers. The location of this research was conducted in Bandung area, and the time occurs of this research and survey was during the month of September up until November.

This research article is structured as follows. First, literature and theoretical framework in the areas of Demarketing of smoking, Demand Management, Perception, and Intention are reviewed. Then a small interview is conducted to gather data to design the questionnaires. Next, the survey conducted to two groups which are, smokers and non smokers to try to answer the research questions. Subsequently, data are analyzed and discussed. Finally, research implications are provided and avenues for future research are suggested.

Literature Reviews

Demarketing

Demarketing is a part in marketing field of study which focusing on how to discourage either general or certain class customer in particular on either a temporary or permanent basis (Kotler & Levy, 1971, p.75). The purpose of demarketing as stated by Andreasen (1994), social marketing campaigns typically attempt to discourage harmful behavior or encourage positive behavior. Another understanding of demarketing as explained by Shiu (2009) is that demarketing refers to a deliberate attempt to induce consumers to buy less in product classes where environmental impacts are evident to disrupt

In this context, demarketing of smoking are deals how to influence people to reduce their consumption of tobacco related product. The goals of demarketing of smoking is to significantly bring down the smoking prevalence numbers, which based on belief that smoking is posing high health risk which lead to many fatal diseases and reduce the average life expectancy. The use of demarketing actions, such as antismoking advertising or campaign, has contributed to the decrease of the proportion of smokers in the general population. The consequences of demarketing of smoking are unavoidable which in this case is the development of negative stereotypes of smokers (Moore, 2005). The primary effect of the ongoing demarketing campaign has been the development of social and cultural norms maintaining the view that smoking is an unacceptable behavior in public and private places (Kim & Shanahan, 2003). The demarketing campaign has resulted in increased negatives attitudes toward smoking and a stigma toward individuals who smoke (Kim & Shanahan; Pechmann & Ratneshwar, 1994).

Although nowadays the demarketing of smoking has taken various form, but it has primarily conducted on three fronts (Moore, 2005). The three fronts, which are each, have distinct characteristic as follow:

1. Mass media communication: antismoking advertisements, which also include warning in packaging and labeling.
2. Regulatory measures: tobacco excise tax and smoking bans.
3. Public opinion: perception toward smokers and normative behavior.

Mass Media Communication

Mass media are effective tools to spread the message to the customers. over the past decades, best practices mass media tobacco control campaign have been found to successful in changing the public's knowledge and attitudes, as well as reducing negative health behaviors in western countries (Wakefield, Loken, and Hornik, 2010). Overall, the goal of mass media antismoking campaign can be dividing into 3, which are reduce tobacco usage among smokers, prevent smoking behavior (Logan & Longo, 1999), and most importantly prevent adolescents to start smoke cigarettes (Bauman, LaPrelle, Brown, Koch, & Padgett, 1991; Flynn et al., 1992). While the mass media can be effective to reduce the smoking prevalence, there is no exact solution on what type of media campaign is the most effective.

Regulatory Measures

Governments have instituted regulatory measures, such as tobacco excise tax and smoking restrictions, because of the conflict from the interaction between smokers and nonsmokers in public place (Gybson, 1977). Regulatory measure that based on government law has advantage of being forceful in nature. Once a regulation is imposed, every subject in tobacco industry is bound to obey. For instance, increasing the excise tax on cigarettes reduces both of the initiation of new smokers and the amount of cigarettes purchases by key consumers group (Hyland et al, 2005). Levered et al. noted that a 10% increase in the price of a pack of cigarettes effectively decreases smoking in the young adult market by 4% and smoking among children and adolescents by 6%-7%. The data shown that excise tax increase is effective in preventing smoking prevalence. However, in Indonesia, because of the hesitation of its government to increase their tobacco tax and low punishment for breaking tobacco regulation, the regulatory measures are cannot be applied effectively yet.

Public Opinion

Public opinion also can be curative instrument to reduce smoking prevalence. Public opinion play important role in how smokers are portrayed and associated. Bad public opinion about smokers will create stigma that discredits smokers (Goffman, 1963). To escape that negative stigma, smokers are given option to hide the fact that they are smokers, which are common in teenagers and female groups, or to purposely quit smoking.

Demand Management

Demand management is planning methodology used to manage and forecast the demand of product and services. In some circumstance, demand management also being used to stimulate a significant change of a product or service demand to gain desired characteristic of other variable such as supply and price. In this research, demand management will try to further explain the regulatory measures in tobacco demarketing.

Although adult smokers and most adolescent smokers are fully aware that smoking pose a high threat to their long term health, but eventually the demand for tobacco are unlikely to decline. Tobacco use's management system has emerged from the government's attempt to control the tobacco marketing and use, to give information about tobacco's negative effect, and discourage its use (Borland et al, 2010).

Message Framing

Message framing, a strategy of advertising message construction, is widely adopted in various forms of brand advertising campaigns. Basic ideas of the advertisement are composed of two which on how to gain something (positive framing) or to avoid something (negative framing), there are many theories that further explain message framing such as: The hedonic principles of approach (happiness) and avoidance (pain), well established in motivation psychology, lay down the theoretical foundation upon which core concept of message framing is developed (Wedell 1997). Meyerowitz & Chaiken (1987) argue that message framing are centered around either on positive product attributes and benefits gained by using the product or negative product attributes and benefits lost by not using the product. Even though both a benefit-positive frame and a cost-negative frame depict the presence of behavior outcome, a benefit-positive frame emphasizes the attainment of benefits because of compliance with the message advocacy while the cost-negative frame stresses the incurrance of cost because of non-compliance.

The concept of positive and negative message framing can be applied to messages intended to promote health concern (Rothman & Salovey, 1997). The example of message framing application for smoking cessation according to Toll et al, (2009) "You will save money if you quit smoking" is a positive-framed message, and "You will lose money if you continue smoking" is a negative-framed message. In his theory, Higgin (1997) argues that each individuals show quite different sensitivity to information about benefits and information about its costs. In other word, some individuals are very reactive to information about attaining benefits, while others are mostly responsive to information about incurring cost.

Perception

Perception is defined as the process by which individuals select, organize, and interpret the input from their senses to give meaning and order to the world around them (George, 2011). The goal of the company is creating positive perception about their products and services thus create repeat order and gain profits. The term, perception, are used in many theories and field of study. Recklies (2006), stated that perception is about the customer's feeling and view about the brand or product. Perception also refers to how customers view a certain product based on their own conclusions. These conclusions are derived from a number of factors, such as price and overall experience.

As it is very sensitive and distinct among its subjects, perception is crucial aspect to create brand image. In the journal of Management Perceptions of the Importance of the Brand Awareness (2003), the process about how perception affect a company business cycle are goes like this: A consumer

may rationalize that if they have heard of a brand, the company must be spending a fair sum on advertising. If it is spending a lot on advertising, then the company must be reasonably profitable which means that other consumers must be buying the product and they must be satisfied enough with its performance; therefore, the product must be of reasonable quality. Sometimes managing perception can simply just mean giving consumers a perception. How good a product or a service is are not in the top of the list, instead how good is customer perception about a product or a service.

In term to reduce smoking prevalence, perception play an important role as there are perception toward smoker. In the early 19th century, activists, such as the National Anti-Smoking League, depicted those individuals who smoked as if they are committing socially unacceptable activity (Kim & Shanahan, 2003). However, as the times change, by the mid-1940s, smoking was not only acceptable but also a behavior that society viewed as desirable (Goldstein, 1991) and portrayed as luxury in the movie. In Indonesia, there also similar perception about smokers especially in low to middle economy class that portray smoking is a luxury. On adolescent group the perception toward smoker is supportive, smoking often associated with sign of masculinity and adulthood. The teenagers depict that smoking are acceptable and does not violate any rule or social belief.

Nowadays there are some negative perceptions toward smoking. The root of this perception appears because of the categorization between two groups: smokers and nonsmokers (Lejuez et al., 2003). In his book, Viscusi (1992) stated that smokers being perceived to inflict harm to not only self but others people in their surrounding environment. Many ads depict smoker are killing their self slowly while simultaneously put the people around them in same or even greater health risk. People are continuously exposed to that paradigm, creating a negative stigma toward smokers. In this research, perception also being breakdown into smaller variable in order to measure smokers assessment about antismoking advertisement

Public Opinion

Cognition is derived from term in 15th century that means thinking and awareness. Nowadays the term cognition is used in many field of study, especially in psychology, with various definitions. To avoid ambiguity, cognition in this research will refers to a process of knowing and recognizing some aspect in particular. Cognition also used as variable to measure how good smokers in receiving the information are contained in antismoking advertisement.

Memory

Memory refers to the process of storing information in the brain that will be recalled later. Good advertisements are having good memory score that means the ads are easy to remember. Thus, the messages on the advertisements are attached to subconscious thinking. To make the ads easy to be memorized, advertiser often uses attractive color, unusual shape, and strong but catchy tag line.

Behavior

Behavior in general is the manner of behaving or acting. In this research, the term behavior used is according to business dictionary, which described as a response of an individual or group to an action, environment, person, or stimulus. Every individual possess distinct behavior for every different stimulation they received. The research will try to know how the smokers react after presented with two types antismoking campaign advertisements.

Intention

Intention is referred as the connections between mental states (which include desires and belief) and actions carried out by individual in order to reach a goal (Astington, 1993). In this research, intention is interpret as the intention to quit smoking (for smoker) and intention to avoid smoking (for nonsmoker). Intention, also act as final measured variable in this research.

Methodology

A survey research was conducted to explore and answering the research question, also to examine the relationships among independent variables (Perceptions) and dependent ones (Intention). After

the reliabilities of the measures being used were ascertained, a series of regression analyses were conducted to answering the research question

Qualitative data and quantitative data were used in this research, the grouping of type of data were based on the nature of the data. Qualitative data is the data, in the form of words, sentences, schematic, and image Sugiyono (2008). Qualitative data in this study is about the thought, perception, and argument from the comparative literature and interview. While quantitative data is in the form of numeric, data or qualitative data numbered. Quantitative data processed and analyzed with statistical formulas such as regression analysis and hypothesis testing.

In this study, data collection techniques used, including:

1) Literature Study

The literature study aims to get secondary data. Literature study done by reference through journals, books, previous researches and other literature that serve as the theoretical basis.

2) Interview

The interview serves as pilot study and aims to determine the questions and answer choices that will be used in the questionnaire. Other than, to explore the possible problem and solution regarding the topic, the purpose of the interview is in order to make the questionnaire design is valid. The interview are conducted to 12 people (7 smokers and 5 nonsmokers) in researcher social circle whose believed to possess a significant grasp of current antismoking campaign in Indonesia. The interview use series of open-ended question, which probe the respondent to say their thought about smoking and antismoking campaign.

3) Survey

This method is use for data collection by providing questions to the respondents. Questionnaires were randomly distributed amongst two categories of respondents, smokers and non-smokers in Bandung. The aims of questionnaire method are to explore the perceptions toward smoking and anti-smoking campaign, also to assess message effectiveness between positive and negative framed message in term of perceived message and intention to quit smoking.

Questionnaires were distributed to the smokers and non-smokers in Bandung area, West Java, Indonesia. The questionnaire used consisted 46 items.

The sampling step use in this research is consisting of three steps, which are:

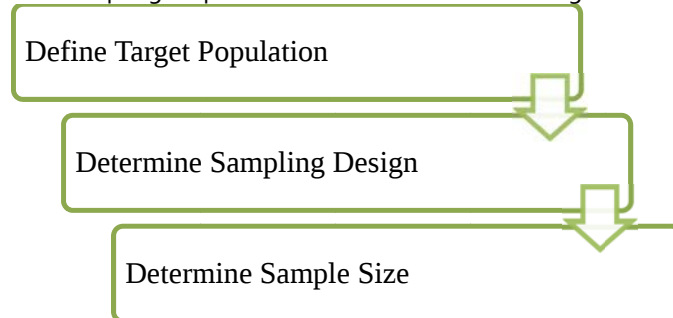


Figure 1 Sampling Step

Step 1: Define Target Population

Population for this research is the people who live in Bandung area which half of them are smoker and the others are not. Here is the figure that derived from *BPS (Badan Pusat Statistik) Kota Bandung, Bandung Dalam Angka 2013*, which shows the amount of people in Bandung grouped by the age range:

Table 1 Bandung Population Table

City	Male	Female	Male + Female
Bandung	1,260,565	1,223,412	2,483,977

Source: (Badan Pusat Statistik Kota Bandung, 2013)

From the Based on the table above, the total target population is 2,483,977 peoples.

Step 2: Determine Sampling Design

Sampling is the process to gather information based on the certain variables to the certain population. Sampling must represent the target research that researcher choose (Sekaran, 2006). The sampling design that will be used in this research is non-probability sampling designs. The non-probability sampling designs means that every element in the population does not have any probabilities attached to them, for being chosen as the sample subjects.

The judgment sampling will be used as the category of non-probability sampling designs in this research. Judgment sampling was based on the assessment of researcher that the selected sampling was the best party to serve as the research sample. Judgment sampling generally choose someone or something to be sample because they had "information rich" (Mustafa, 2000).

Spreading questionnaire to the respondents will be method of data collection of this research. The distribution of questionnaire of this research will conducted in Bandung area

Step 3: Determine Sample Size

The sampling size is determined by using the following Slovin's (1960) formula:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n : number of sample

N : Number of population

e : level of sampling error, this set to 7.5%

Know:

$$N = 2,483,977$$

$$n = \frac{2,483,977}{1 + (2,483,977(7.5\%^2))}$$

$$n = 177,7651$$

$$n \approx 178 \text{ people}$$

Therefore, based on the calculation above, the sampling size that will be used in this research is 178 peoples. Also because in this research aims to identified if there are any distinct result between smokers and nonsmokers, the sampling size will be further breakdown into two categories with same numbers which are 89 smokers and 89 nonsmokers

Data Analysis

Independent Sample T-test

In this study independent sample T-test is conducted to see if there is any significant difference on perception toward smoking, perception toward anti-smoking campaign, and demarketing and demand management between smoking group and non-smoking group.

Normality Test

Table 2 Normality Test Kolmogorov-Smirnov

Tests of Normality

		Kolmogorov-Smirnov ^a		
		Statistic	df	Sig.
Perception toward smoking	Tidak Merokok	.317	89	.000
	Merokok	.152	89	.000
Perception toward antismoking campaign	Tidak Merokok	.115	89	.005
	Merokok	.178	89	.000
Demarketing and Demand management	Tidak Merokok	.124	89	.002
	Merokok	.179	89	.000

a. Lilliefors Significance Correction

According to table above Sig value of all variables < 0.05, hence it can concluded that the data are not normaly distributed. Then, the independent sample T-test will use Mann Whitney method.

Differences on Perception Toward Smoking, Perception Toward Anti-smoking Campaign, and Demarketing And Demand Management Between Smoking Group and Non-smoking Group

This test conducted to see if there is any significant difference on perception toward smoking, perception toward anti-smoking campaign, and demarketing and demand management between smoking group and non-smoking group.

Table 3 Mann-Whitney Test

Variabel	Group	Mean	Us	Z Mann Whitney	P-value	Keterangan	Conclusion
Perception toward smoking	Non-smoking	3,60	2680,00	-3,797	0,000	Ho rejected	There is Difference
	Smoking	3,47					
Perception toward anti-smoking campaign	Non-smoking	2,76	3741,50	-0,642	0,521	Ho accepted	No Difference
	Smoking	2,78					
Demarketing and Demand management	Non-smoking	3,01	3870,50	-0,264	0,792	Ho accepted	No Difference
	Smoking	3,02					

The result of indenpence sample T-test in descriptive can be seen below

1. Average perception toward smoking in non-smoking group is 3.60 , while the average perception toward smoking in smoking group is 3.47. This conclude that **perception toward smoking in non-smoking group is higher than smoking group.**
2. Average perception toward smoking in non-smoking group is 2.76 , while the average perception toward smoking in smoking group is 2.78 . This conclude that **Perception Toward Anti-smokingC campaign in non-smoking group is same with the smoking group.**
3. Average Demarketing and Demand Management in non-smoking group is 3.01 , while the average Demarketing and Demand Management in smoking group is 3.02 . This conclude that **Demarketing and Demand Managemet in non-smoking group is same with the smoking group.**

Regresion Analysis.

To determine what is most suitable kind of message framing in anti smoking advertising. Linear regresion analysis performed in two type of anti smoking advertising. In addition it also show which factors in independent variable (perception) have higher impact to dependent variable (intention).

Influence of Cognition (X_1), Memory (X_2) and Behavior (X_3) Toward Intention (Y) (Anti-smoking Advertisement 1: Negative Framing)

Union Corelation Analysis

To know the corelation as union between Cognition (X_1), Memory (X_2) and Behavior (X_3) toward Intention (Y), Multi corelation analysis is used (R).

Table 4 Union Corelation Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.430 ^a	.185	.171	.80720

a. Predictors: (Constant), Behavior (X3), Cognition (X1), Memory (X2)

Based on *SPSS software* output above, the result of corelation coefficient (R) is 0.430 . this shows that there is medium corelation between Cognition (X_1), Memory (X_2) and Behavior (X_3) toward Intention (Y).

Partial Corelation Analysisis

Partial corelation analysis is conducted to know how large is the influence of each independent variable with the dependent variable. Partial corelation analysis based on *SPSS* calculation are :

Table 5 Partial Corelation Analysis

Variable	Standardized Coefficients Beta	Correlations Zero-order	Partial Corelation	Partial Corelation (%)
X_1	0,128	0,316	0,040	4,0%
X_2	0,118	0,322	0,038	3,8%
X_3	0,270	0,395	0,107	10,7%
Total Corelation			0,185	18,5%

Partial influence is get by multiplied *standardized coefficient beta* with *zero-order*. Based on the table above, it can be seen that partial influence of cognition (X_1) toward intention (Y) is 4.0%, partial influence of memory (X_2) toward intention (Y) is 3.8%, and partial influence of behavior (X_3) toward intention (Y) is 10.7%. Thus, the total influence cognition (X_1), memory (X_2) and behavior (X_3) toward Intention (Y) is 18.5%, it also can be seen in its determinant coefficient.

Determinant Coefficient

The influence of cognition (X_1), memory (X_2) and behavior (X_3) toward Intention (Y) can be shown by determinant coefficient with the following formula :

$$\begin{aligned} KD &= R^2 \times 100\% \\ &= (0,430)^2 \times 100\% \\ &= 18,5\% \end{aligned}$$

It means that cognition (X_1), memory (X_2) and behavior (X_3) variables have influence of 18.5% toward intention (Y). While the other 81.5% are depend on others variable beside cognition (X_1), memory (X_2) and behavior (X_3).

Influence of Cognition (X_1), Memory (X_2) and Behavior (X_3) Toward Intention (Y) (Anti-smoking Advertisement 2 : Positive Framing)

Union Correlation Analysis

To know the correlation as union between Cognition (X_1), Memory (X_2) and Behavior (X_3) toward Intention (Y), Multi correlation analysis is used (R).

Table 6 Union Correlation Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720 ^a	.518	.509	.61528

a. Predictors: (Constant), Behavior (X3), Cognition (X1), Memory (X2)

Based on *SPSS software* output above, the result of corelation coefficient (R) is 0.720 . this shows that there is high corelation between Cognition (X_1), Memory (X_2) and Behavior (X_3) toward Intention (Y).

4.7.1.5 Partial Correlation Analysis

Partial correlation analysis is conducted to know how large is the influence of each independent variable with the dependent variable. Partial correlation analysis based on *SPSS* calculation are :

Table 7 Partial Correlation Analysis

Variable	Standardized Coefficients Beta	Correlations Zero-order	Partial Corelation	Partial Correlation (%)
X_1	0,178	0,491	0,087	8,7%
X_2	-0,107	0,445	-0,048	-4,8%
X_3	0,676	0,707	0,478	47,8%
Total Corelation			0,518	51,8%

Partial influence is get by multiplied *standardized coefficient beta* with *zero-order*. Based on the table above, it can be seen that partial influence of cognition (X_1) toward intention (Y) is 8.7%, partial influence of memory (X_2) toward intention (Y) is -4.8%, and partial influence of behavior (X_3) toward

intention (Y) is 47.8%. Thus, the total influence cognition (X_1), memory (X_2) and behavior (X_3) toward Intention (Y) is 51.8%, it also can be seen in its determinant coefficient.

Determinant Coefficient

The influence of cognition (X_1), memory (X_2) and behavior (X_3) toward Intention (Y) can be shown by determinant coefficient with the following formula :

$$\begin{aligned}KD &= R^2 \times 100\% \\ &= (0,720)^2 \times 100\% \\ &= 51.8\%\end{aligned}$$

It means that cognition (X_1), memory (X_2) and behavior (X_3) variables have influence of 51.8% toward intention (Y). While the other 48.2% are depend on others variable beside cognition (X_1), memory (X_2) and behavior (X_3).

Conclusions

Based on the results obtained above, the five research questions are answered and it can be concluded as follows:

1. Perception toward smoking have significant difference between smokers and non smokers. Smoker think that smoking is acceptable as long as they didn't smoke near people which dont smoke. They think the consequences will only happen to them if they smoke too much. They think their daily dosage is acceptable because they do not feel the negative impact of cigarette yet.
2. Perception toward anti-smoking campaign is same for smoker and nonsmoker. Both group think anti-smoking campaign is still being weak both in frequency and in intensity. Smoking regulation as tools to reduce smoking prevalence is only well designed not well executed. Many smokers still disregard the rule of smoke-free place despite they know the rule. Lack of severe penalty imposed is the main reason of this condition happen.
3. Anti-smoking advertising lost in both frequency and intensity compared to tobacco advertising. For the negative framing advertising that emphasize on consequences of being smoker (health problem, harm others), it is have 49.0% in influence score of reducing intention to smoke. While positive framing advertising that promote the benefits if ones does not smoke (perform better, have more money) have higher influence score of reducing intention to smoke which are 53.4%. For the first type of advertising, negative framing, currently did not show any significant impact on reducing intention to smoke. The negative framing advertising which are very common are considered boring and dull. The positive framing advertising while only being slightly higher in rating, have potential as new approach to reduce smoking prevalence. People are more likely to share the positive framing advertisement because they think most of the design are creative and attractive. But they are low in frequency, because to create such advertising, specific aproach is needed and more costly. The positive framing method can be combined in form of event such as fun run or contest to enhance its effect.
4. The anti-smoking campaign cannot act separately. Smoking regulation and anti-smoking advertising must be applied together to act as effective curative and preventive instrument of smokers. Anti-smoking advertisement will try to persuade smoker to quit by providing information regarding disadvantages of being smoker and benefits if they quit smoking. Smoking regulation act as enforcement to control the smoking habit of smoker. Smoking regulation can be very effective if executed well.. Punishments to smoker who break the regulation also need to be applied, such as pay fine if smoking in forbidden place.

Recomendation

Based on the result of this research, some recomendation could be implemented to bring down smoking prevalence in Indonesia.

1. Protect children and teenagers from being exposed to smoking advertisement. Adolescents are very easy to influence, to prevent the cycle of young smoker Government must limit the cigarette advertisement as strict as possible.
2. Make sure all the smoking rules are implemented as good as its designed. Well designed rules are nothing if not well implemented. People should be more brave to scold smoker who smoke in smoke-free place. Government can also implement the smoking fine or penalty to give lesson to disobedient smoker.
3. Increase the intensity of anti smoking campaign. This can be done by making small but frequent campaign or activity that aim to discourage smoking. Activity like fun run, students declaration, art and music shows are the example of possible anti smoking campaign. Positive framed messages are suitable for this kind of campaign. Government can also help by providing the budget for create those campaign..

Study Limitations and Avenues for Future Research

Although the present research provides some insights into the areas of anti-smoking campaign, some limitation of the study should be acknowledged. First, the scope of this study only restricted to Bandung area. Future research should employ more broad coverage to detect possible socio-culture influence to perception toward smoking. Second, the data of this study only drawn from survey and interview, it is possible to conduct additional experiment in future research to make the result and solution of research is well tested.

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