

Factors Influencing Behavior Intention on Air Pollution Prevention Management of the Students in a Thai Private Higher Education Institution

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ABSTRACT

This research aimed to study the influencing factors on air pollution prevention management of the students in a Thai Private Higher Education Institution. Five independent variables of the influencing factors consisted of air pollution attitude, awareness, knowledge, health consciousness, and health knowledge. Dependent variable was intention on air pollution prevention management. The questionnaires were created with Google forms and distributed to collect the data from 482 students by using convenience sampling. Descriptive analysis, and multiple linear regression were utilized by statistics package program for data analysis. It was found that all factors influenced intention on air pollution prevention management at 47.70 percent ($R^2 = 0.477$). It was recommended that Thai Private Higher Education Institution should create campaign or cooperate with the government sector to make students more aware of air pollution problems, and make them realize how to protect themselves by air pollution prevention management.

KEYWORDS: Behavior intention, Air pollution prevention management, Thai Private Higher Education Institution

Introduction

Global warming significantly impacts on the environment and it also refers to climate change that rise average temperature to world. Higher temperatures caused by fossil fuel industrial agricultural processes that increase greenhouse gas emissions (carbon dioxide methane nitrous oxide), due to the burning of fossil fuel, wood waste and etc. Global warming occurs when carbon dioxide and other greenhouse gases and air pollution that is stored in the atmosphere to absorb sunlight and radiation from the sun. The problem of global warming should be taken seriously and reduce its impact on the environment.

Based on the rules and regulations in the planning and implementation of policy aim to continue and the possibility of living a healthy life. Also, having the simple life to keep the atmosphere up to standard so that ecosystem without incurring any negative impact and also encourages and promotes behavior in the surrounding area to get fresh air and still decrease the amount of pollution. Recently, the PM2.5 has become a very serious topic in Thailand, especially in Bangkok. The whole city seems to covered with the thick fog. Actually, this fog is a very tiny and dangerous particle that can enter to human's body and harm human's health. According to Thailand's

dry season, lacking of rain increases chance of the particles to flow in the air instead of staying on the ground and being washed by rain. Lacking of wind in the dry season tends to make air stay still and not flow off from the city. The Bangkok PM2.5 situations in 2022 is still in the serious condition, measured by air quality monitoring app Air Visual showed that the daily average level exceeded the limit for more than half of a month. The highest level recorded during the period was on Jan 20, 2022 with 79 micrograms per cubic meter.

The main intent of this research is to examine factors influencing the behavior Intention on air pollution prevention management of the students in a Thai Private Higher Education Institution.

Research Objectives

1.To study the behavior intention on air pollution prevention management of the students in a Thai Private Higher Education Institution.

2.To study factors influencing the behavior intention on air pollution prevention management of the students in a Thai Private Higher Education Institution.

Scope of Research

In this study, the target respondents were the students in a Thai Private Higher Education Institution in Bangkok only. The questionnaire was distributed by Google Form sending out to the sample group by using the convenience and snowball sampling. In the questionnaire, the researcher used the Five Point Likert Scale which is one of quantitative analysis method.

Literature Review

Behavior Intention

Ajzen and Fishbein (2000) described that “the degree to which an individual plan to perform or not to perform some specific behavior in the near future can be termed as behavioral

intentions”. For Ali et al. (2013) implied that “the favorable behavioral intentions refer to the positive word-of mouth, more spending with the service provider, paying a price premium and remaining loyal while the unfavorable behavioral intentions refer to leaving these vice providers, less spending with the company, along with negative word-of-mouth”. Jani and Han (2011) studied that “behavioral intentions as revisit and word-of-mouth intentions”. According to Downhan (2013), behavior describes to “the processes that people go through, and reactions they have towards something”. Szwacka-Mokrzycka (2015) also stated that “behavior is to do with something, and the processes consumers go through their action”. Firstly, the people recognize their needs, and then go through a process to satisfy these needs. For example, the consumer behavior is the process they go through as customers, including types of products they buy, amount of money they spent, frequency of purchasing they made, and what factor influences them to make them buy or not buy.

Air Pollution Attitude

According to Wood (2000), attitude is “a justification of an attitude object, possibly to range from extremely pole to another extremely pole, negative to positive”. Some perspectives on attitudes explain that people could be conflicted or complicated on an object by having both negative and positive attitudes on the same object. This explanation has point to the discussion about could it possibly that the individual can have different attitudes on the same object. Eagly and Chaiken (1998) explain the attitude as “a psychological state that is expressed by justifying a particular object with some degree of like or dislike”. In the other hand, some researcher commonly defines it as “an affect toward the object, affect is normally interpreted as an evaluative process used to form attitude object”, (Ajzen, 2001). Vogel, Bohner, and Wanke (2014)

explained that “attitude might influence the attention to attitude objects, the use of categories for understanding information and the interpretation, evaluation and recall of relevant information”. The influences of attitude are more effect for strong attitudes which are accessible and based on related supportive knowledge structure. The durability and impact of influence depend upon the strength formed from consistency of heuristics. Attitudes can guide encoding information, attention and behaviors, even if the individual is pursuing unrelated goals.

Air Pollution Awareness

According to Locke (2002), awareness is “an analogous to sensing something, a process distinguished from observing and perceiving, which involves a basic process of acquainting with the items we perceive”. Awareness is a relative concept. “It may be focused on an internal state, such as a visceral feeling, or on external events by way of sensory perception” (Hussain et al., 2009). Woodside and Wilson (1985) explained that “consumer awareness refers to the awareness of the consumption of goods formed by consumers in the long-term shopping environment and purchasing activities”. The change in life concept is the most important factor of the change in consumer awareness. Because people's living standards and incomes increase continually, people's life concepts are significantly changed. Differences in consumers' personality are also the important factor for changing of consumer awareness.

Air Pollution Knowledge

According to Zhao et al (2019), “information on the effects of haze on health and corresponding knowledge, attitudes, and practices (KAP) will improve self-care ability against the ill effects of haze pollution and make environmental health policies more targeted and effective”. Moreover, the

awareness rates are affected by the differences of the levels of knowledge of haze. According to Ngo, Kokoyo, and Klopp, (2018), they found that “participation in conducting and interpreting air quality studies helped residents improve their understanding of air pollution and also helped them develop responses to it”. Basically, people related air pollution with a dirty, discomfort or bad smelling rather than harm to their health, but when the people can connect air pollution to their health condition, they become interested in searching more for information about air quality data and its effects on human health. Some people came up with plans for managing their environment and how to reduce risks from air pollution.

Health Consciousness

Becker et al. (1977) defined that “health consciousness is an assessment of the level of readiness to have health actions”. Jayanti and Burns (1998) explained health consciousness as “the integrating of health concerns into an individual's life activities”. Iversen and Kraft (2006) also defined that health consciousness refers to “how individuals pay attention to one's health”. In order to understand and conclude its definitions, Hong (2011) combined the meaning from the previous researches together and explained the definition of health consciousness, based on a personal health perception dimension, as “individual's attentiveness, responsibilities, and motives to be healthy”. Thus, the health conscious consumers are the people who tend to do something to make their health in a good condition together with actions that healthy (Ling-Yu and Shang-Hui, 2013), such as buying and using healthy foods (Mai and Hoffmann, 2012).

Health Knowledge

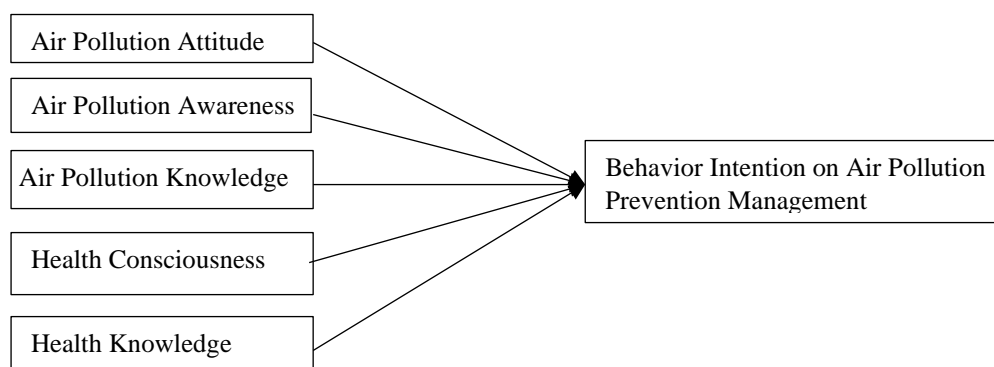
Health knowledge is explained as “an individual's stored information regarding health” (Jayanti & Burn, 1998).

Health knowledge is believed to be the most important factor toward health consciousness, if one doesn't have health knowledge, individuals cannot access to related information, he or she only has the consciousness or concerns toward health issues or health related behavior. In the other hand, health knowledge and health motivation are significant factors in persuading health promoting behaviors and to interesting in searching health information (Moorman & Matulich, 1993).

Research Framework

The conceptual model (Figure1) was adapted from the previous studies relevant to the Student's Behavior Intention on Air Pollution Prevention Management. There were five independent variables that were chosen to study in this research which were Air Pollution Attitude, Air Pollution Awareness, Air Pollution Knowledge, Health Consciousness, Health Knowledge.

Figure 1: Conceptual framework



Research Hypothesis

According to conceptual model, five hypotheses were formulated as follows;

H1: Air pollution attitude influencing Thai Private Higher Education Institution student's behavior intention on air pollution prevention management.

H2: Air pollution awareness influencing Thai Private Higher Education Institution student's behavior intention on air pollution prevention management.

H3: Air pollution knowledge influencing Thai Private Higher Education Institution student's behavior intention on air pollution prevention management.

H4: Health consciousness influencing Thai Private Higher Education Institution student's behavior intention on air pollution prevention management.

H5: Health knowledge influencing Thai Private Higher Education Institution student's behavior intention on air pollution prevention management.

Research Methodology

This study examined the influencing factors of the behavior intention on air pollution prevention management of the students in a Thai Private Higher Education Institution in Bangkok, Thailand. In the proposed conceptual model, five factors were chosen to focus on. They were air pollution attitude, awareness, knowledge, health consciousness and health knowledge that influenced student's behavior intention on air pollution prevention management. The researcher set the target respondents to be a Thai

Private Higher Education Institution students in Bangkok. The sample size was 482 respondents. After that, the questionnaires were created via Google form and send the link to the respondents by applying convenience and snowball sampling as the researcher has limited time for the research. The questionnaire comprised of three parts which were Screening, Demographic information, For the last part, it was separated into six parts. The questions in each part referred to each

variable of air pollution attitude, awareness, knowledge, health consciousness, health knowledge, and behavior intention on air pollution prevention management. Thus, the total questions in this questionnaire (is) were 30 questions. The researcher collected the data by distributing the questionnaire to 35 respondents in order to find out the reliabilities by Cronbach's Alpha Coefficient Analysis. The reliabilities were shown in Table 1

Table 1: The values of reliability analysis (n = 35)

Variables	Number of Items	Cronbach's Alpha	Reliability
Air pollution attitude	5	0.851	Good
Air pollution awareness	5	0.868	Good
Air pollution knowledge	5	0.819	Good
Health consciousness	5	0.743	Acceptable
Health knowledge	5	0.797	Acceptable
Behavior intention	5	0.831	Good

Results of the Study

It was shown from the demography that the percentage of female were 48.00% and male 52.00. The 3rd years was the

highest as 38.25 %, followed by the 4th years as 33.45%, the 2nd years as 16.60%, and the 1st year as 11.70%, respectively.

Table 2: Summary of mean and standard deviation of all variables

Variables	n	mean	Std. dev.	interpretation
Air pollution attitude	482	4.27	0.542	Highest
Air pollution awareness	482	4.71	0.384	Highest
Air pollution knowledge	482	4.33	0.546	Highest
Health consciousness	482	4.39	0.487	Highest
Health knowledge	482	4.43	0.463	Highest
Behavior intention	482	4.46	0.496	Highest

According to Kim (2019), the mean score of all variables results were interpreted as highest because the mean score of all variables were in the range 4.27 – 4.71. The mean values were 4.27,

4.71, 4.33, 4.39, 4.43, and 4.46, respectively. For the standard deviation, the values of all variables (was) were 0.542, 0.384, 0.546, 0.487, 0.463, and 0.496, respectively.

Hypothesis Testing

Table 3: Model Summary from Multiple Regression Analysis

Model	R	R Square	Adjusted R Square	Std .Error of the Estimate
1	.691 ^a	.477	.469	.75307
a .Dependent Variable :Behavior intention b. Predictors : (Constant) air pollution attitude, air pollution awareness, air pollution knowledge, health consciousness, health knowledge.				

According to table 3, adjusted R square equals to 0.469 or 46.9 %. which indicated that the Thai Private Higher Education Institution student's behavior intention on air pollution prevention management could be described by the

five independents variables in this study which were air pollution attitude, air pollution awareness, air pollution knowledge, health consciousness and health knowledge.

Table 4: ANOVA from Multiple Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	195.394	5	32.566	57.423	.000 ^b
	Residual	214.372	478	.567		
	Total	409.766	482			
a .Dependent Variable: Behavior intention b. Predictors : (Constant) air pollution attitude, air pollution awareness, air pollution knowledge, health consciousness, health knowledge.						

It can be seen from the ANOVA table that the values of the behavior intention of the students on air pollution

protection management were statistically significant.

Table 5: Model Summary from Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std .Error	Beta			Tolerance	VIF
(Constant)	.170	.205		-.829	.408		
Air pollution attitude	.175	.034	.196	5.082	.000	.927	1.078
Air pollution awareness	.169	0.34	.192	4.962	.000	.925	1.081
Air pollution knowledge	.112	.036	.124	3.129	.002	.884	1.131
Health consciousness	.252	.035	.281	7.252	.000	.920	1.087
Health knowledge.	.240	.035	.272	6.930	.000	.899	1.112
a .Dependent Variable :Behavior intention							

According to Table 5, the significant values of the five variables which are air pollution attitude, air pollution awareness, air pollution knowledge, health consciousness, health knowledge were less than 0.05, indicating that all variables were statistically

significant. Besides, the beta of standardized coefficient or (β) of five independent variables. Firstly, 1 addition unit Air pollution attitude showed that the influence toward student's behavior intention would increase by 19.6% at $\beta = 0.196$. Secondly, 1 addition unit is Air

pollution awareness shows the influence toward student's behavior intention will increase by 19.2% at $\beta=0.192$. Thirdly, 1 addition unit is Air pollution knowledge shows the influence toward Second, 1 addition unit is Air pollution awareness shows the influence toward student's behavior intention will increase by 12.4% at $\beta=0.124$. Fourthly, 1 addition unit is Health consciousness shows the influence toward student's behavior intention will increase by 28.1% at $\beta=0.281$. Lastly, 1 addition unit is Health knowledge. Shows the influence student's behavior intention will increase by 27.2% at $\beta=0.272$.

Variance Inflation Factors or "VIF" was the statistical method that was

applied to detect the multicollinearity. According to Kim (2019), the problem of multicollinearity occurred if the VIF value was greater than 5. Based on the table 5 it indicated the variance inflation factors of all independent variables which were air pollution attitude, air pollution awareness, air pollution knowledge, health consciousness, and health knowledge. The VIF of all variables were 1.078, 1.081, 1.131, 1.087, and 1.112 respectively, which all less than 5. It means that all independent variables are not correlated to each other in a sense, and there is no multicollinearity problem.

Table 6: The summary results from hypothesis testing

Hypothesis	Significant	Standardized Coefficient Beta	Results
H1: Air pollution attitude influencing student's behavior intention on air pollution protection management	.000	.196	Supported
H2: Air pollution awareness influencing student's behavior intention on air pollution protection management	.000	.192	Supported
H3: Air pollution knowledge influencing student's behavior intention on air pollution protection management	.002	.124	Supported
H4: Health consciousness influencing student's behavior intention on air pollution protection management	.000	.281	Supported
H5: Health knowledge influencing student's behavior intention on air pollution protection management	.000	.272	Supported

Recommendations

According to the result of hypothesis testing, Health consciousness and Health knowledge are the two strongest factors toward influencing student's behavior intention on air pollution prevention management. The researcher would like to recommend the Thai Private Higher Education Institution to focus on providing the information on air pollution crisis situation and educate the students about how it is harmful to their health, wellness, and quality of life,

not only to the individual but also how it will influence their family and surrounding people. The Thai Private Higher Education Institution should create campaign for this issue, or may cooperate with the government sector to create campaign to make students more aware of air pollution problem and educate them how to protect themselves carefully from air pollution. This implementation should be done together with providing Health consciousness and Health knowledge and air pollution prevention management to the

students because the more Health consciousness and Health knowledge, the higher air pollution prevention management. On the other hand, the Thai Private Higher Education Institution should keep on focusing on air pollution attitude, air pollution awareness, air pollution knowledge which are significant in hypothesis testing. These factors still

influence air pollution prevention management in the long-term. The Thai Private Higher Education Institution should not ignore the importance of them, but should make deeper understanding about changing of air pollution prevention management by students toward these factors when crisis has occurred.

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