ORIGINAL ARTICLE

FACTORS RELATED INTENTION TO SMOKING CESSATION AMONG THAI PEOPLE WHO JOINED QUIT SMOKING PROJECT FOR THE KING: A CROSS-SECTIONAL STUDY OF NORTHERN THAILAND

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Background: Smoking causes direct and indirect health problems among people. The purpose of this paper is to explore factors influencing intention to cessation smoking among Thai people who joined quit smoking project for the King. **Methods:** This cross-sectional study survey. The samples of 626 participants were recruited to the study. They were randomly selected by using stratified multi-stage cluster sampling from community area of Phayao and Nan Provinces. The data was analysed using Pearson product-moment correlation. Factors influencing intention to quit smoking were analysed using multiple linear regression. **Results:** The results showed that participants' perception towards health consequences of smoking was at low level (35.1%). Participants' communication skills, decision making, and self-management were at fair level (35.5%, 41.8% and 43.0% respectively). There were statistically significant relationships between personal factors and intention to cessation smoking among participants in the quit smoking project (p=.007). It was found that factors including intention to cessation smoking, joining the program, receive invitation to join the program, and participants' willingness to participate in the program had statistically significant relationships with quit smoking (p<.001), (p<.001), (p<.001) and (p<0.009). There were statistically significant relationships of knowledge and communication skills on intention to cessation smoking (p=.030) and (p=.039) respectively. **Conclusion:** Furthermore, they are willing to cooperate with public health personnel regarding to prevention and control of smoking. Therefore, quit smoking campaign by using health communication will help approaching people in the public and enhance knowledge and understanding among people in term of health effects and consequences of smoking.

Keywords: Smoking cessation; Quit smoking for king; Northern Thailand

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INTRODUCTION

The World Health Organization has expected the number of annual deaths attributable to tobacco smoking to 8 million people by the year 2030.[1] It is one of major causes of morbidity and mortality, and it is responsible for one-tenth of all adult deaths worldwide.[1] Tobacco smoking can cause chronic diseases such as cardiovascular disease, coronary artery disease, cancer, and chronic obstructive pulmonary disease.[2] According to the data, on the average there is a death of a person in every six seconds; and there are 6 million people killed from cigarette smoking per year resulting in more than 500 billion dollars in economic loss.[3] In 2015, smoking was one of the main causes of death among Thai people. There were approximately 20,710 Thai people died from cigarette smoking, one-sixth among Thai men and one-thirtieth among Thai women. Smoking causes 140 death per day, shortens life about 12 years, and remains in serious illness condition about 2.5 years before dying.[4] According to the data, the average age of people who start smoking is 18.08 year, and approximately smoke 10.21 cigarette per person per day. More than 50 % of smokers purchase package of cigarette (53.3%), and make own cigarette (46.50%).[3,4] Since 1992, by using a law enforcement and advocating quit smoking through policy to control cigarette consumption, it was found that Thai people did not response in accordance with law and policy well enough. Therefore, public health sector has played an important role in counselling and modifying behaviours of smokers in order to reduce chronic symptoms from cigarette smoking and to prevent youth from getting addicted to cigarettes.[3,4] The report of smoking situation of Thailand 2015 showed that the north east region of Thailand has the highest numbers of smokers (25.7%), followed by the southern region (24.4%), the northern region (23.5%), the central region (19.9%), and Bangkok (15.7%).[5]

According to the data of the northern region of Thailand in 2014, it showed that the rates

of population age 15 years and above from Mae Hongson, Chiang Rai, Nan and Phayao provinces smoke cigarette were (30.59%, 19.58%, 16.65% and 16.01%) respectively; as well as, there are approximately 2.18 million persons of total population made their own cigarette.[4,6] In 2016, Ministry of Public Health of Thailand has initiated a strategy to control cigarette smoking by making a campaign "The project 3 million persons 3 years, Quit smoking for the King". The purpose of the project is to provide knowledge regarding health consequences of cigarette smoking and to promote health benefits of cessation smoking, as well as to have an awareness of the direct and indirect impacts of smoking among people.[7]

Creating awareness and changing behaviours are one of important strategies leading to healthy lifestyle and quit smoking. The strategies should be employed to all levels from family, community and provincial using action-based activity along with campaign-based activity. The program aims to change people's attitude and increase awareness regarding health impacts of cigarette smoking. Moreover, the program may help persuading people living in a community to cessation smoking. As a health personnel from public health sector, we should not wait until cigarette smokers become ill and get treatment from hospital, then approach them. Through these strategies, it can approach cigarette smokers directly. Therefore, this research analyses factors influencing intention to cessation smoking among people participated in the project; and information obtained from this research can be used for Phrase 2 and Phrase 3 in the future.

MATERIAL AND METHOD

This is a cross-sectional analytic research. The data was obtained from samples age 15-year and above, both male and female, participated in the Quit Smoking Project for the King since January-August 2017 (Database retrieved from Ministry of Public Health, 2016 http://www.quitforking.com). Stratified multi-stage cluster sampling was used to select regions in Thailand. Northern part of Thailand was selected as an area of study. Purposive sampling was used to select 2 provinces: Nan and Phayao. Inclusion criteria included, 1. The executives of the province are willing to cooperate in the project, 2. To obtain a variety of samples, simple random sampling is used to select population from each subdivision.

Three sub-districts were randomly selected from each division. There are 9 sub-districts in Phayao province and 14 sub-districts in Nan province.[7,8] Six sub-districts from Phayao province includes Meuang (2,291 persons), Kamyao (257 persons), Chiang Muan (273) in the total of 2,821 persons participated in the project. Three sub-districts from Nan province includes Meuangnan (237 persons), Wiang Sa (433 persons) and Tha Wang Pha (399 persons). The total of 1,069 persons were recruited in the project.[9] Sample size was calculated using existing formula.[9] Finally, researcher gained 626 samples from the calculation; and all of them were willing to participate in the study.

Research instruments included 3 parts: Part-1. General characteristic information (gender, age, marital status, education, occupation, average income, household, smoking experience, duration of smoking, duration of quit smoking, and project perception), Part-2. Project assessment applied from "CIPP Model"[10] that have been contextualized locally including contextual aspects, operation process, and project productivity in the total number of 20 questions. The scale of question is likert scale providing levels of agreement and disagreement from 1 to 5, which are strongly agree, agree, neutral, disagree and strongly disagree. Part 3. The voluntary smoking cessation of participants in the project applied from Protection Motivation Theory.[11] There are 20 yes or no questions. In term of content validity of questionnaire part-2 and part-3, the questionnaires were checked by 2 experts in the field of public health and health behaviours. The tryout of questionnaires was performed on 30 samples with the similar characteristics of the study. The coefficient of questionnaires part 2 and 3 were 0.83 and 0.86 respectively.[12]

Data collection was performed during April–June 2017 total of 30 days, during the time of 8:00–17:00. The team of researcher and research assistants asked permission and coordinated with the Provincial health office, community health promoting hospitals before doing a research. Participants were informed about the purpose of a research. After they gave consent to participate in the study, a code number of participants was used instead of real name; and their information would be kept confidential. Information obtained from the research was used for educational purpose only. Research assistants were trained before performing a research. The Research Ethics Board of University of Phayao reviewed and approval the study (Study code= 2/042.1/61).

Descriptive statistics including percentage, mean, and median were used to describe general characteristics. Multiple Linear

Regression analysis was used to analyse factors influencing with the statistical analysis $p<0.05$.

RESULTS

More than half of participants were male (68.8%) and female (31.2%), age between 15–90 years old (30.5%), 31–40 (28.8%), 41–59 (27.8%) and ≥59 (12.9%) respectively. More than half of them are married (71.9%) and single (28.1%). Almost half of participants received education at high school level (43.9%) followed by bachelor's degree level (30.2%), and elementary school level (25.9%). Main occupations among participants were farmer (50.6%), employees (40.8%) and work in government service (8.6%). The average income among participants was 5,000 Baht per month (74.9%) and less than 5,000 Baht (25.1%). In term of history of smoking, more than half of participants quit smoking (63.6%), still smoke but do not smoke everyday (26.5%) and smoke everyday (9.9%). In term of awareness, they received health information from village health volunteer (48.3%), public health personnel (26.0%), and public media (25.7%) respectively as showed in table-1.

In table-2, the results of the 3-million persons 3 years Quit Smoking for the King project found that more than half of participants could quit smoking within 1 month (53.3%), followed by less than 6 months (24.6%) and within 3 months (21.9%). According to the project assessment, participants had neutral agreement with the project operation process and project productivity (56.5% and 55.3%). The operational process of the phrase I program received strong agreement (46.6%) from participants. In term of intention to quit smoking found that participants had low knowledge regarding to health impact of cigarette smoking (35.1%), communication skills, decision making and self-management were at fair level (35.5%m 41.8%, and 43.0%) respectively.

In term of factors influencing intention to cessation smoking, there were statistically significant relationships of personal factors to cessation smoking among participants ($p=.007$); and other factors including intention to quit myself, participation in the program, invitation to join the program, and participants' willingness to participate in the program had statistically relationship with intention to cessation smoking ($p<.000$), ($p<.000$), ($p<.000$) and ($p<0.009$) respectively. Moreover, there were statistically significant relationships of knowledge and communication skills on intention to cessation t smoking ($p=.030$) and ($p=.039$) respectively as showed in table-3.

Table-1: Socio demographic characteristic of participants (n=626)

Variables	Number	Percentage
Gender		
Male	431	68.8
Female	195	31.2
Age (years)		
15–30	191	30.5
31–40	180	28.8
41–59	174	27.8
>59	81	12.9
Status		
Single	176	28.1
Marry	450	71.9
Education		
Primary school	162	25.9
Secondary school/Diploma	275	43.9
Bachelor	189	30.2
Occupation		
Agriculturist	316	50.6
Employee	258	40.8
Government	52	8.6
Income per month (Baht)		
≤ 5,000	469	74.9
≥ 5,001	157	25.1
Smoking history		
Daily smoking	62	9.9
Ever smoked but not smoked	396	63.6
Smoking but not every day	166	26.5
Media and knowledge of smoking		
Media and campaign	161	25.7
Health staff	163	26.0
Volunteer of health	302	48.3
Cessation behaviours (n=532)		
1 month	284	53.5
3 months	117	21.9
≥6 months	131	24.6

Table-2: Number/ percentage of evaluation and intentions to cessation smoking

Variables	Level evaluation and health literacy of smoking		
	Low n (%)	Moderate n (%)	High n (%)
Evaluation			
Input	68 (10.9)	354 (56.5)	204 (32.6)
Process	68 (10.6)	270 (43.1)	288 (46.0)
Output	86 (13.7)	346 (55.3)	194 (31.0)
Intentions to cessation smoking			
Knowledge of smoking	220 (35.1)	212 (33.9)	194 (31.0)
Communication skill	239 (38.2)	222 (35.5)	165 (26.3)
Decision skill	187 (29.9)	262 (41.8)	177 (28.3)
Self-management	214 (34.2)	269 (43.0)	143 (22.8)

Table-3: Factor influencing participants' intentions to cessation smoking

Factors	B	*SE*	for β	95%CI		*p*-value
				lower	upper	
Demographic factors						
Intention to quit	0.617	0.228	1.853	1.853	2.897	0.007
Intentions to cessation smoking						
Quit smoking myself	1.974	0.363	5.021	3.530	14.674	<0.001
Participation in the program	1.614	0.303	5.021	2.770	9.101	<0.001
Invitation to join the program	2.275	0.242	9.725	6.053	15.626	<0.001
Willingness to participate	0.650	0.248	1.916	1.179	3.155	0.009
Knowledge of smoking	0.133	0.061	1.142	1.013	1.287	0.030
Communication skill	0.131	0.063	1.140	1.007	1.29	0.039

DISCUSSION

The study found that people who volunteered to participate in the program because it is a campaign under the concept of commemorate to the His Majesty the King. The project campaign creates awareness among people to concern about their health and well-being, motivates people to quit smoking. Participants participated in the project have had history of smoking. After they joined the project, more than half of them quit smoking. Some of them have reduced the amount smoke of cigarette, and do not smoke every day; and some participants smoke occasionally. This can be discussed that the campaign uses the motivation model to create awareness of benefits of good health and health consequences of cigarette smoking. Everyone should have awareness of direct and indirect impacts of cigarette smoking to themselves and to others surrounded. The idea of self-control can motivate a person to perceive health impacts from smoking and to start changing their behaviours for himself and his love ones.[11] The study of self-intention to cessation smoking and the use of model to change behaviours found that love and care for health have significant relationship to quit smoking.[11,12]

Moreover, family role model, love and support from family members, and care for health have relationship with quit smoking among family members and relatives.[13] The study of perceived health impacts of cigarette and health benefits of cessation smoking showed that participants who quit smoking after having surgery CABG have high level of knowledge more than other groups of participants who are still smoking. However, there is a positive significant relationship between having high perceived health benefits of smoking and quit smoking.[14] This is consistent with previous research using boost motivation and self-efficacy to help smokers quit smoking.[15] Technique helps changing behaviors among cigarette smokers including giving advice, supporting from family and friends, applying self-efficacy theory to the program, and assess nicotine dependence. These mentioned factors have significant relationship with reducing and quitting smoking.[13,14]

Intention to cessation smoking, willingness to participate in the project and invitation to participate in the project has statistically significant relationship with quit smoking among participants. This is because people who voluntarily cessation smoking see health benefits through public health promotion, media, and advice from medical personnel. This motivates people to have confident that they can really quit smoking. This is similar to the concept of positive attitude can change to positive behaviors.[11] Attitude is one of important factors influencing behaviour of a person. There is a strong relationship between positive attitude and positive behaviours which is consistent with previous studies.[16,17] There are statistically significant relationship of knowledge and communication skill on intention to quit smoking. Participants received knowledge from health staff and support from family which is consistent with the concept of perceived self-efficacy. People have intention to accomplish thing they aim to do.[18] Therefore, good health communication through village health volunteers, community leader, family members and medical health staff can have impact on quit smoking. This is because village health volunteers provide knowledge and act as a health role model. It motivates people to quit smoking as similar with the concept of Pender[19] by using information support to help cigarette smoker understand themselves and act upon their aim to quit smoking. Family support is also one of important factors that helps smoker quit cigarette smoking.[19] Many researchers found that public media has an influence on quit smoking among smokers.[20]

In term of project operation process and project productivity assessment, majority of participants agreed with the concept of knowledge transfer and public relations activity throughout the period of the project. Health experts provide knowledge regarding health consequences and health benefits of cigarette smoking. Public relationship activity applied CIPP Model increases the strength of the community and project organization.[10] The assessment process provides a broad view of the overall operation in which area of the project can become successful, where the implementation plan should be approached, and how to get satisfied results as set out. It is important element that represents the successful of the overall project. This is consistent with the study that the development of a leader' potential will help strengthen the community.[21,3] There are several limitations of the study. Since this is the first phrase of the study and participants are voluntarily, information obtained from the research can be complicated and some data may be missing. For future research, information should be collected altogether and up-to-date.

CONCLUSION

After the program, the rate of smoking among people have reduced. Furthermore, they are willing to cooperate with public health personnel regarding to prevention and control of cigarette smoking. Therefore, quit smoking campaign by using health communication will help approaching people in the public and enhance knowledge and understanding among people in term health effects and

consequences of smoking. Moreover, health campaign using fear of health impacts from smoking is one of the best strategies. This may help boosting motivation and self-efficacy among people regarding to benefits of quit smoking and maintaining healthy lifestyle.

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AUTHOR'S CONTRIBUTIONS

KS: Conceptualize, designed the study and prepared the draft of the manuscript. PT: Reviewed, added intellectual part, analysed, supervised research interpretation of data. All authors have read and approved the final draft.

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