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Factors Promoting Participatory Communication to Create Health Communication Behavior in the Community

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Traditionally, Thai people have tended to perceive healthcare as being the responsibility of only public health officers. As a result of this realization, the 11th National Health Development Plan and District Health System Policy created a new vision: healthcare operations should be adopted by several sectors. This research was meant to study the means of communication based on the concepts of health communication behavior and to analyze the communication factors that lead to the success of communities regarding health communication. The qualitative research method, employed the in-depth interview technique for data collection. For this purpose, the researcher selected 20 key informants involved in community health communication. The responses revealed that successful communities still congruently utilize the three concepts of health communication behavior: education, promotion, and communication, depending on the current health situations to choose the suitable ones to be adapted for use. As for the communication factors, they consisted of four factors: (1) public health officers extended their viewpoints toward other sectors to be health communicators; (2) a variety purposes for exhibiting messages; (3) integration of various types of media; and (4) locals could be health communicators. These results can be adjusted for policy implementation by the Office of Disease Prevention and Control, in Bangkok, and its subordinate provinces to focus on the communication factors in community health communication operations.

***Keywords**:* communication factors, means of communication, health communication behavior

Healthcare was typically the domain of the public health officers in Thailand. As a consequence, Thais have traditionally become reliant on the practice of finding cures instead of promoting prevention, good health and well-being. However, doctors, nurses, and the use of medicine were of little use to people in case that they did not change their health behaviors (National Health Act 2007, 2012). Additionally, according to a government report, "Thai Society during the 4th Quarter and the whole year of 2015" found numerous Thai people became physically and mentally ill as a result from non-communicable diseases have been grown, especially hypertension, diabetes mellitus, ischemic heart disease, stroke, and cancer. These diseases resulted from unhealthy lifestyle habits such as inadequate exercise or insufficient consumption of vegetables or fruits, including causes of modern health problems, i.e. stress, social problems, and deteriorated environment (Office of the National Economic and Social Development Board, 2015).

Therefore, the focus should be on protection rather than medication, in addition, the participation of communities, localities, government organizations, the private sectors, and academic institutes must be promoted for the public's good health in a peaceful harmonious environment.

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As a result of this realization, the 11th National Health Development Plan under the Eleventh National Economic and Social Development Plan created a new vision**:** *"All citizens are healthy, collaborate on a sufficient health system that is equitable, leading to a healthy society"* (Ministry of Public Health, Office of Permanent Secretary, 2012). Therefore, it can be seen that the National Health Development Plan is considerably congruent with the District Health System or DHS, the policy of the Department of Disease Control, Ministry of Public Health, which the researcher employed as the principal criterion for this study. In all this, the utmost purpose is to create "Healthy Districts", where those public sectors are able to take responsibility and care for the citizenry properly. Better still, this policy requires the collective effort of not only the Ministry of Public Health but also the local administrative sector, the private sector, and the civil society groups as well (Department of Disease Control, Bureau of Planning, 2014).

The research setting was the area under the supervision of the Office of Disease Prevention and Control, 1st area of Bangkok, in which three provinces are included: (1) Nonthaburi, (2) Pathum Thani, and (3) Phra Nakhon Si Ayutthaya. The reason why the researcher selected these provinces was because their operations are more challenging and quite different from other areas. They operate in more complex and huge urban areas, encounter population density problems, a high rate of migration, and also a high rate of passive population problems more than other areas with Offices of Disease Prevention and Control (2014b).

Consequently, the researcher needed to search for the perspectives of those related to the health communication operations in the community, both internal and external viewpoints, in order to respond to two research objectives as follows: (1) to study the means of communication based on the three concepts of health communication behavior, and (2) to analyze the communication factors that lead to the success of communities regarding health communication.

Literature Review

It is believed that in order to holistically understand all the factors that influence the health communication behavior of a community, communication concepts and theories need to be discussed. In addition, theory related to behavioral science is required to provide additional explanations. Therefore, the researcher separated the presented content into 2 parts.

Part I: **Theory Related to Behavioral Science**

Theory of reasoned action (TRA): this is one of the psychological theories that are crucial in explaining the factors resulting in health communication behavior. The theory proposes two key factors that explain an individual's behavior. These are: (1) personal factors: an individual that believes that performing a given behavior will lead to a positive outcome will hold a favorable attitude and have constant intention toward performing behaviour, (2) subjective norms: the referents' thought such as friends, family, and others also have an influence on the individual's intention—that they should or should not perform certain behavior (Ajzen & Fishbein, 1980). Therefore, TRA was used to explain the persuasion to promote health from friends and family, who are influential and closely

associated to the thoughts driving the decisions that influence the locals' intention to perform health communication behavior, thus answering the second research objective.

Part II: Theory and Concepts of Communication

Concept of communication factors: to be complete the communication process must engage four factors, i.e. (1) the sender factor: the initiator of the message; (2) the message factor: what the sender attempts to transmit; (3) the channel factor: the medium carries the message from the sender to the receiver; moreover, channel still refers to the "time, space, and occasion" in which the communication process occurs; and (4) the receiver factor: the person that receives and encodes the message from the sender. Moreover, when the focus of the communication process is on the behavioral changes of the targeted receivers, the factors affecting the outcome need to be identified. These factors are sender qualifications, including communication skills, knowledge, and attitude toward the targeted receivers; communication content; adjustment of message conforming to receiver's requirements and previous knowledge; and easy accessibility to media that is consistent with the lifestyles in both the social and cultural context (Berlo, 1960; Chitsawang, 2006; Kaewthep, 2009; Kamnoonwatana, Sampao-ngern, & Siwapathomchai, 2008; Nilobol, 2004; Rodkamdee, 1989).

Knowledge-Attitude-Practice theory (KAP theory): this theory was developed and adjusted from psychological theories. The theory proposes that media exposure, e.g. mass media, personal media, or new media, could increase the individual's knowledge. In turn this leads to positive attitudes toward performing a given task. When the media and message are in accordance with an individual's desire and previous knowledge, including consistent action; the given practice can be expected to be undertaken (Benjarongkij, 2011; Pilanthaowat, 2011; Rogers, 2003).

Therefore, the researcher utilized the concept of communication factors and the KAP theory to respond to the second research objective. It is proposed that by providing the factors of the sender, message, and channel, targeted receivers would be enticed to perform health communication behavior. This will occur provided that the three aforementioned factors are consistent with the receivers' tastes and needs.

Concept of health communication behavior: health communication behavior can be divided into three concepts (Kaewthep, Nilphueng, & Jenjad, 2013; King, 1981). Thus, the point of view of each concept is exhibited as follows: (1) the concept of health education: public health officers have pointed out that one-way communication through the mass media and personal media make healthy public, especially in relation to epidemic diseases or outbreak cases (Hinviman, 2003; Kaewthep et al., 2013); (2) the concept of health promotion: shifting the point of responsibility to the health owner and preferring prevention such as vaccination or screening for a remedy. Even after re-assigning "community assets" as "media in the community" in conformity with social and cultural norms, public health officers consistently utilize a persuasive strategy for participatory communication (Hinviman, 2003; Kaewthep et al., 2013); and (3) the concept of health communication. This concept emphasizes participatory and two-way communication by means of role shifts between the sender and the receiver. Therefore, local people can develop themselves at the participation level from active audience to sender or content exhibitor, and even planner or determiner. In addition, health communication operations must utilize the "media integration strategy" for

operating in communities, e.g. personal media, mass media, community or activity media, and even new media (Heldman, Schindelar, & Weaver, 2013; Hinviman, 2003; Kaewthep et al., 2013).

Furthermore, community health communication demands a wide array of media, consisting of: (1) community media: folk media, local radio, local mass media, wire broadcasting and bulletin boards; (2) specialized media: pamphlets, posters, clothes, stickers, bicycles, A4 paper, and vinyl; (3) personal media: public health officers, local administrative officers, peer educators, public health volunteers, and community leaders; (4) activity media: this type of communication includes a project or an activity that is related to health communication; and (5) social media, such as websites, search engines, Facebook, Line, YouTube, etc. However, the most effective media resulting in appropriate health behavior are "personal media" since these media can represent or operate in parallel with other media, e.g. employing personal media to explain and simplify the complex content in a brochure or to be a content presenter for an activity or project. Furthermore, personal media also perform as health communicators much better than mass or new media have performed, for example in (1) instructing, advising, and counseling when locals face a severe epidemic disease or even a normal situation (locals have to always strengthen their health in order to face an epidemic disease, or a recurring or emerging disease that might arrive in the future); (2) supporting and creating campaigns for health promotion and prevention; (3) giving priority to teamwork by providing excellent coordination between related sectors by building participatory communication within networks; and (5) being an ideal for the health model (Arroyave, 2012; Kaewthep, 2009; Northouse & Northouse, 1992; Tiplert, Amphansuk, Rattanapasura, Siripanich, & Rattanapasura, 2006). Therefore, the researcher employed the concept of health communication behavior to respond to the first research objective. It is reasoned that each concept of health communication behavior has points that are common and different in terms of the means of communications. Moreover, personal media is one of the essential means required for the success of every health communication behavior concept.

Methodology

Selecting the Sample

The researcher has employed the purposive sampling technique to select three research setting areas under the supervision of the Office of Disease Prevention and Control 1st area of Bangkok, including: (1) Phra Nakhon Si Ayutthaya District, Phra Nakhon Si Ayutthaya Province, which was awarded the best "Active District in Long-term Disease Protection" in 2014 by the Office of Disease Prevention and Control, 1st area of Bangkok; (2) Bang Yai District, Nonthaburi Province; and (3) Nong Sua District, Pathum Thani Province; which received the highest assessment scores in the province by the Office of Disease Prevention and Control 1st area, Bangkok (2014a).

Participants and Sampling Procedures

The participants in this research were key informants involved in community health communication operations, divided into three groups: (1) public health operators; (2) local administrative officers; and (3) the general public—from three successful districts, a total of 20 persons. For the sampling procedures, the researcher utilized two methods: (1) the

purposive sampling method: for sampling key informants from public health officers; and (2) the snowball sampling method: obtained from public health officers to introduce leaders from local administrative and public sectors those involved in health communication operation.

Material and Procedures

1. Material design: the research methodology was qualitative and employed the in-depth interview technique for the data collection; therefore, the research tool was the semi-structural interview. Guided questions were constructed to adhere to the research objectives and were developed from reviewing theories and the concepts of reasoned action and communication. However, due to the diversity in the educational and occupational backgrounds of the key informants, the researcher separated the research material into 2 parts, part 1: for public health and local administrative officers; and part 2: for the public sector; however, the guided questions for the 2 parts still adhered to the research objectives.

2. Validity examination: all of the guided questions were examined for content and construct validity before collecting the data. This was done in 2 steps consisting of step I: examination of the dissertation committee and the Graduate School Research Ethics Committee; and step II: the data triangulation technique in order to verify the trustworthiness of the data obtained from the key informants that were involved in the various sectors.

3. Interview procedure: during the interviewing process from September to November 2015, the researcher was able to adjust the guided questions to conform to the community context. The results have been used for the development of new questions based on the criteria set in the research objectives in accordance with the review of theories and concepts.

Data Analysis

The researcher analyzed the data in the form of content analysis based on the analysis guidelines of Miles and Huberman (1994) with the following steps: (1) the researcher transcribed the complete raw data obtained from the in-depth interview process and reduced the data without significant loss of information; and (2) the researcher organized and summarized the data based on the 2 research objectives in the form of theme and sub-theme supported with quotations and tables.

Results

The research findings were divided into 2 parts in order to adhere to the research objectives.

Part I: The Means of Communication Based on the Three Concepts of Health Communication Behavior

The researcher found that all successful areas used all the three concepts of health communication behavior in their communities from the content analysis.

1. The concept of health education: public health officers had the opinion that mass media and personal media, especially television and public health officers, had greatly impacted the provision of health knowledge, adjusting health care attitudes, and the behavior of every sector except public health agencies toward the proper direction, especially when a severe epidemic disease or emerging disease occurred.

2. The concept of health promotion: every sector emphasized "health prevention" more than "remedy," for example, getting vaccinations against diphtheria, tuberculosis, and influenza, screening for diabetes mellitus, hypertension, breast cancer, and putting on a mask for prevention. Although this concept extended the health communicator's role to the public sector operating as public health volunteers and community leaders, they had to obtain instructions from public health officers, i.e. district public health officers or sub-district hospital officers. Furthermore, public health officers began to bring "community asset" assigned to be "media in community" in health communication operation, e.g. Thai-style antiphon, tom-tom crafts, antique basketry, wire broadcasting, bulletin boards, pamphlets, posters, cloth, stickers, bicycles, A4 paper, calendars, and 3D media. It was crucial to properly adjust to the locals' taste in both the social and cultural context. Meanwhile, public health officers consistently utilized the persuasive strategy in participatory communication through conferences and in giving public leaders a chance to express their opinions in relation to produce media master, e.g. pamphlets, posters, leaflets, campaigns or activity details.

3. The concept of health communication: all sectors agreed that each person could strengthen his or her health since they were healthy. For the health communication operations, public health officers extended their viewpoints toward other sectors those who had the potential to be health communication leaders. In addition, every relevant sector emphasized community-based problems and two-way communication through role shifting between officers and public sectors; therefore, every sector could take on the role as "sender" or "receiver" all the time. In addition, public health officers employed a "media integration strategy" for operating, not only traditional media, but also new media: email, YouTube, Facebook, and Line. Moreover, some locals, especially the elders, became "opinion leaders," persuading others to do exercise in order to have good health in order to become cheerful like them. Plus, they could motivate people and helped to promote the community to become a healthy one.

In addition, the researcher found that the difference in health situations still determined the different uses of the concept of health communication behavior.

(1) Health communication behavior in unusual situations: the researcher found a relationship between two sets of concepts. They were the concepts of health education and health promotion. Both of the concepts proposed that people needed to rely on public health officers in unusual situations. As district public health officer stated his view:

"When there was an urgent agenda, we went to the community to give more knowledge and awareness. What's more, we could transfer policies regarding what to do." (Male district public health officer, Bang Yai district)

On the other hand, when community people seemed to perform unhealthy behavior, a campaign "to protect" instead of "to heal" after an infection by the public health officers would be launched.

(2) Health communication behavior in usual situations: people that were already healthy prefer to stay fit by exercising or eating healthy food. This helped to prepare for health crises in the future according to the "concept of health communication." As provincial public health officer explained his view:

"In a normal situation we try to get ready, to stay healthy, and to avoid illnesses so that when there are health crisis situations we are well-prepared. That is to say we are always well-prepared." (Male provincial public health officer, Phra Nakhon Si Ayutthaya province)

The researcher has shown the common and different points of means of the communication of each concept discovered from the findings in Table 1.

Table 1

Means of Communication for Each Concept of Health Communication Behavior

Means of Communication	Three Concepts of Health Communication Behavior		
	Health Education	Health Promotion	Health Communication
Employed various types of personal media who were health communication leaders, i.e. public health officers, public health volunteers, community leaders, and recovered patients together with other media in the community for health communication operations.	/	/	/
Emphasized health prevention more than remedies when the people became ill.		/	/
Employed opinion leaders to persuade other locals to be aware of the health promotion advantages.		/	/
Employed one-way communication when epidemics or outbreak cases occurred.	/		
Employed mass media, especially television, to build accurate knowledge, change previous attitudes and improper behavior when epidemics or outbreak cases occurred.	/		
Concurrently employed persuasion and participatory communication strategy through express opinions related to the media master and activity details of community leaders and public health volunteers through conferences.		/	
Adjusted media and content form which were consistent with community's taste in social and cultural context.		/	
Employed two-way and participatory communication through exchanging opinions and giving feedbacks.			/
Employed media integration strategy between traditional and new media, including explanation of complex messages in brochures through personal media or being a content presenter in activity media.			/

As can be seen in Table 1, the findings pointed out that the most effective means of communication which could be utilized together and that led to proper health communication behavior according to the aims of three concepts, included employment of various types of personal media. These were health communication leaders, i.e. public health officers, public health volunteers, community leaders, and recovered patients together with other media in the community in health communication operations, because personal media such as public health officers could give instructions when epidemics or emerging diseases occurred according to the concept of health education. When there was an outbreak that could be prevented by vaccination, the community, or public health volunteers and community leaders, had to transmit the necessary health message provided by the public health officers to the locals. It was their job to persuade the locals to go for a vaccination and screening, which was done in accordance with the concept of health promotion. As sub-district hospital officer said of her view:

"Currently, public health agencies can't operate health work as a single unit any longer. Though we still have the core knowledge, in times of crisis, we had to rely on our network such as when an outbreak case occurred or an epidemic disease arrived, e.g. diphtheria, and we had to ask public health officers and community leaders or even local administrative officers to take us to the scene and tracked the results after we gave instructions to the victims." (Female sub-district hospital officer, Bang Yai district)

Moreover, public health volunteer also thought that personal media could be integrated with other media. Examples include being a content presenter in activity and community media or describing and clarifying complicated content in specialized and new media in order to make it easier to understand. As she expressed in her view:

"The person is the best medium. When I distributed brochures or leaflets to locals almost no one was interested in reading read or sometimes they read them but didn't understand the complex message, e.g. content in brochure related to the MERS and Ebola virus. Meanwhile, if there were public health officers or public health volunteers there and they explained the confusing messages, utilizing Line application to chat or sending an explanation with a picture to them, they would be satisfied because they could interact and ask about the issues that they didn't understand immediately." (Female public health volunteer, Bang Yai district)

In addition, opinion leaders; for instance, community leader and public health volunteer could be utilized to persuade other locals to be aware of health promotion advantages. Also recovered patients could be asked to explain how to recover from an illness and provide encouraging messages about always strengthening their health according to the concept of health communication.

Part II: The Communication Factors That Lead to the Success of Communities Regarding Health Communication

It was found that there were 4 communication factors: (1) sender, (2) message, (3) channel, and (4) receiver-leading to the success of communities regarding health communication; therefore, the conclusive findings were illustrated in the form of a table:

Table 2

Themes and Sub-Themes of Each Communication Factor

Sender	Message	Channel	Receiver
Health senders extend their viewpoints toward other sectors to be health communication leaders and emphasized participation in health communication operations	Variety of purposes for exhibiting healthcare messages conforming to the requirements of locals	Integration of various types of media in the community and employing participatory communication within networks	Active role of locals in order to be a part of health communicators
• Public health officer gave opportunity to other sectors to participate as senders in health communication operations; • Public sector leaders including community leaders, public health volunteers, or recovered patients willingly participated in health operations as content presenters.	• The health message conforming to locals' taste, including social and cultural contexts; • The health message focused on how to remedy; • The health message focused on health prevention; • The health message focused on health promotion; • The health message focused on awareness arising from health threats.	• The network level: two-way and participatory communications within the networks; • The media level: integration of media in community, including community media, activity media, specialized media, new media, and personal media.	• Locals strengthened their health even when they were still healthy; • Locals participated in health communication operations as senders; • Locals, especially the elders, themselves acted as opinion leaders related to health promotion.

Table 2 exhibits the 4 communication factors leading to the success of communities regarding health communication; the findings of each factor are presented together with supportive quotations of each sub-theme consecutively as follows.

1. Factors related to the sender: health senders extended their viewpoints toward other sectors to be health communication leaders and emphasized participation in health communication operations. The senders in this factor were classified according to 2 levels

1.1) Public health officer gave an opportunity to other sectors to participate as senders in health communication operations. As municipal public health officer and local administrative officer explained their views:

"At present, public health officers give a chance to other sectors, e.g. local administrative agencies, community leaders, public health volunteers, or recovered patients,

to be health communication leaders. So when we visited the community we would take them with us because they were more familiar with locals than us; they may also encourage the locals to see the advantages of health prevention such as when we had a project about screening or vaccination; moreover, recovered patients could also give counseling better than us since they had direct experience." (Female municipal public health officer, Phra Nakhon Si Ayutthaya district)

"I emphasized this problem though I didn't graduate in an area related to the public health field. In the past, there were frequent accidents. When I realized the problem, I saw that the real causes of accidents came from having solid trees, the bridge wasn't evident, there were no flashing lights, and no traffic warning signs, so when I improved, the accidents decreased." (Male local administrative officer, Nong Sua district)

1.2) Public sector leaders including community leaders, public health volunteers, or recovered patients willingly participated in health operations as content presenters. As public health volunteer said of her view:

"I obtained an opportunity to present how to recover from diabetes mellitus on screening day. This made me proud because the officers realized that I could be a part of giving encouragement and could be a role model to other patients to fight the threats." (Female public health volunteer and recovered patient, Phra Nakhon Si Ayutthaya district)

2. Factors related to the message: there was a variety of purposes for exhibiting healthcare messages conforming to the requirements of the locals. It was found that there were five reasons for the goal of exhibiting messages, including:

2.1) The health message conforming to locals' taste, including the social and cultural contexts. As hospital officer stated her view:

"Ayutthaya is famous for Thai-style antiphon, so we applied by inserting content about health education related to dental care in melody and by singing. The results showed that locals or even public health officers were impressed because they felt that this was their lifestyle and conformed to their tastes and community context." (Female hospital officer, Phra Nakhon Si Ayutthaya district)

2.2) The health message focused on how to remedy. As district public health officer expressed in his view:

"The sample of brochures and pamphlets received feedback from public health volunteers, indicating that the content was complicated; our team adjusted the content so that it was easy to understand, e.g. "If you get a fever (1) rub your body to decrease the temperature; (2) take Paracetamol, not other pills; (3) if three days have passed, and you still have a high temperature, you must have your blood drawn and you can get this done for free blood from where and what time to what time." (Male district public health officer, Phra Nakhon Si Ayutthaya district)

2.3) The health message focused on health prevention. As district public health officer state his view:

"The content in the posters and vinyl distributed from the Ministry indicated that people can access services at the infirmary or every hospital under the Ministry of Public Health situated near their home without any charge; moreover, the vaccine injections combine 2 vaccines. These prevent diphtheria and tetanus; only 1 needle is used but it can protect against 2 diseases." (Male district public health officer, Bang Yai district)

2.4) The health message focused on health promotion. As local administrative officer explained her view:

"We need to employ psychological concepts to encourage people to be aware of taking care of their health. Messages included "You waste more time and money when being sick, millions of money means nothing at such time" or "You cannot buy good heath, you must work on it yourself." (Female local administrative officer, Nong Sua district)

2.5) The health message focused on awareness and knowledge arising from health threats. As municipal public health officer said of her view:

"The vinyl signs for the Waan Son Pit Campaign for the community are three-dimensional. We asked the public health volunteers to collect packages of green tea, M 100 (an energy drink), or soda, to present concrete examples of what people in their community consume. This could raise their awareness. For example, some people have two bottles of M 100 a day. After they learned that it contains 12 spoons of sugar, they only had one bottle a day." (Female municipal public health officer, Phra Nakhon Si Ayutthaya district)

3. Factors related to the channel: integration of various types of media in the community and employing participatory communication within networks; however, the channels in this context were classified into 2 levels-

3.1) The network level: two-way and participatory communication within the networks. As municipal public health officer expressed in her view:

"When we produced a brochure, a pamphlet, or vinyl, we needed to ask the opinions of the community leader and public health volunteers because they had to transmit this content to the locals, so when we received a media master from creative, we would ask them about the propriety of alphabet size, the positioning of the pictures, or if the content was difficult to understand or not, and then we would collect their feedback and improve appropriately." (Female municipal public health officer, Phra Nakhon Si Ayutthaya district)

3.2) The media level: integration of media in the community, including community media, activity media, specialized media, new media, and personal media together. As public health volunteer stated her view:

"If public health officers or public health volunteers were there and explained the confusing message, or utilized the Line application to chat or send an explanation with a picture, it would make them satisfied because they could interact and asked about the issues that they didn't understand immediately." (Female public health volunteer, Bang Yai district)

4. Factors related to the receiver: the active role of locals in order to be a part of the health communicators which could be found in their roles that has markedly changed from the past. There are three reasons for this change, including the following:

4.1) Locals strengthened their health even when they were still healthy. As sub-district hospital officer explained her view:

"At present, the locals are eager to exercise and eat nutritious food, but in the past, exercise still wasn't popular and the locals still did not have enough knowledge to promote their health. Another reason was because they saw the bad examples of those who didn't take care of their health properly; we tried to pull case study via various media, and then they were scared and started to adjust their health behavior." (Female provincial public health officer, Nonthaburi province)

4.2) The locals participated in health communication operations as senders. As community leader stated his view:

"I think that the main point that makes the locals are interested in participating in health activities is that the leaders from public health and local agencies give priority to health operations, listen to our opinions, the feedback makes us anxious. We need to innovate, and want to do good things." (Male community leader, Nong Sua district)

4.3) The locals, especially the elders, themselves acted as opinion leaders related to health promotion. As public health volunteer said of her view:

"I have never been given instructions from the sub-district hospital officer in order to see the advantages of exercising and not eating salty, fatty, or sweet food. Then I practiced with these instructions and saw the benefits, and I suggested to the locals to begin to exercise. Actually, I am nearly 60 years old but they thought that I looked younger than my real age. After that, they, especially the elders, began to turn to exercise because they saw me as a role model." (Female public health volunteer and exercise leader, Bang Yai district)

Discussion and Conclusions

In this part, the researcher has categorized the discussion into three subtopics. For the first two subtopics, the researcher has discussed the highlighted results that adhered to the two aforementioned research objectives. For the third subtopic, the researcher has exhibited the linkage of the findings between research objectives 1 and 2.

1. All successful areas employed all three concepts of health communication behavior in their communities: these were education; promotion, and communication, depending on the time or circumstances of the health situations. In addition, the researcher found that three concepts of health communication behavior had both common and different points of means of communication. For this reason, the researcher discussed the core means of communication which was the most effectively used with the three concepts of health. This means the integration of the influence of health communication leaders combined with activity media and new media that are effective in making the locals understand the health content being communicated. These health leaders were people who were in the community and had

influence on the locals such as public health officers, public health volunteers, community leader, and recovered patients. This finding was consistent with the sub-part of "personal media" in the concept of health communication behavior mentioned that "personal media" are the most effective means of community health communication since personal media are able to represent the communication role of television, radio, or even new media. It can operate in parallel with other media, by employing explanations and simplification of complex content in brochures or leaflets or to be a content presenter in health projects. Furthermore, personal media also perform as health communicators much better than mass or new media have performed, such as instructing, advising, and counseling. This is crucial when locals face a severe epidemic disease, a recurring or emerging disease, or even a normal situation. It is important that locals have to always strengthen their health in order to encounter a situation that might occur in the future (Arroyave, 2012; Kaewthep, 2009; Tiplert et al., 2006). What is more, Kaewthep (2009); Suggs, and Ratzan (2012) suggested that the special qualifications of personal media are that they can be integrated with other media such as be a content presenter in activity and community media or describe and elaborate complicated content in specialized media. In addition, the finding was still similar to the studies of Kamnoonwatana et al. (2008); Nilobol (2004), who mentioned that health communication leaders must not only be public health officers, but also can be those that work in other sectors but emphasize health caring and are public-minded to transmit know how about healthcare to locals.

2. Based on the two research objectives there were four communication factors that lead to the success of communities regarding health communication. These factors were: (1) health senders extended their viewpoints toward other sectors and emphasized on participating in health communication operations; (2) providing a variety of purposes for exhibiting message conforming to the requirements of locals in both social and cultural context; (3) integration of various types of media in the community through the employment of participatory communication within the network; and (4) active role of public sector related to care their health while people were still healthy. These findings regarding the 4 communication factors corresponded to the concept of communication factors, which explained that the communication process will occur when 4 communication factors are combined, the (1) sender, (2) message, (3) channel, and (4) receiver. Moreover, the combination of four factors can also lead the targeted receiver to perform a given behavior. This happens when the receivers are satisfied with multiple factors. These include the communication skill, good attitude and knowledge toward the communication message and receivers by the sender; adjustment of the message conforming to receiver requirements; and easy accessibility to the media that is consistent with their lifestyles in both social and cultural context. The presence of these factors would lead to the expected behavior (Berlo, 1960; Kaewthep, 2009; Rodkamdee, 1989). Additionally, these results were also comparable with the Knowledge-Attitude-Practice theory (K-A-P theory), which proposes that performing the expected behavior of targeted receivers will take place when media exposure, e.g. mass media, personal media, or new media, can increase an individual's knowledge and lead to a positive attitude toward performing a given task. Nevertheless, media and messages have to be in accordance with an individual's desire and previous knowledge (Benjarongkij, 2011; Pilanthaowat, 2011; Rogers, 2003). Moreover, the combination of the 4 communication factors were similar to the studies of Chitsawang, (2006); Kamnoonwatana et al. (2008); Nilobol (2004) revealed that locals as receivers will take care of their health such as performing exercise and avoiding the consumption of food that may create health risks, and participate in health communication operations. This is likely to happen when individuals are satisfied with communication skills, knowledge, and opportunity to express their potential.

These opportunities can be provided by public health officers, local administrative officers, or public leaders. These officials need to utilize the message that is related to the current health situation in community and respond to the tastes and needs. The production of community media needs to be developed from the community assets and the locals should have an opportunity to participate in the production process. Furthermore, on the part of receiver factor findings, it was found that persuasive health messages came from those perceived to be similar to the receivers. The health messages from the senders that had similar demographics and that were intimate with locals such as public health volunteers and recovered patients could influence the locals to care for their health effectively. This finding was in line with the theory of reasoned action, factor of "subjective norms." The theory explained that referents' acquaintances such as friends, family, and others also have an influence on individual's intention to perform a certain behavior (Ajzen & Fishbein, 1980; Pilanthaowat, 2011).

3. Finally, the researcher found a linkage of the findings between the two research objectives. Four communication factors have been identified for explaining each facet of health communication behavior. These factors can be categorized as follows.

Communication Factors in the Concept of Health Education:

- Sender: public health officer
- Message: build accurate knowledge, change previous attitude, and improper behavior
- Channel: mass media and personal media such as public health officer
- Receiver: every sector with the exception of public health agencies

Communication Factors in the Concept of Health Promotion:

- Sender: public health officer, public health volunteer, and community leader
- Message: emphasized on "health prevention" more than "remedy"
- Channel: assign "community asset" to be "media in community"
- Receiver: public health volunteer, community leader, and locals

Communication Factors in the Concept of Health Communication:

- Sender: public health officer, public health volunteer, community leader, and locals
- Message: strengthen your health since while still healthy
- Channel: media integration strategy between traditional and new media
- Receiver: public health officer, public health volunteer, community leader, and locals

Recommendations for Policy Implementation and Future Research

For Policy Implementation

1. These results could be adjusted and used for policy implementation by the Office of Disease Prevention and Control, 1st area of Bangkok, and its subordinate provinces in regards to giving priority to adjust utilizing each concept of health communication behavior corresponding to health situations. Firstly, during an unusual situation in the community, the public health officer should employ the "concept of health education and health promotion." To give instructions in the case of a health crisis like epidemic diseases, re-emerging diseases,

or emerging diseases occur in the community or in the case of locals in the community who begin to exhibit risky health behavior, the public health officers need to focus on promoting locals "to prevent" rather than "to cure". These behaviors include wearing a mask, getting vaccination against the diphtheria, tuberculosis, and influenza. Secondly, during a usual situation in the community, public health officers should employ "concept of health communication." It is crucial since every sector should always keep healthy in order to be ready in case that a health crisis strike the community.

2. The Office of Disease Prevention and Control, 1st area of Bangkok can focus on the communication factors in the community health communication operations including the factors of the (1) sender, (2) message, (3) channel, and (4) receiver, because these factors will be effective tools for adjusting the health communication behavior of the community corresponding to current health situations.

Future Research

This study was exploratory in nature and especially utilized the qualitative research method for the data collection; moreover, the variables discovered in the findings, i.e. communication factors, had not yet been examined, for instance if these factors could be related to or affect health communication behavior or not. Therefore, researchers that are interested in studying these guidelines should utilize quantitative research using the survey research method, starting with extracting the variables from these findings together with reviewing the concepts, theories, and literature related to the factors resulting in community health communication behavior in order to develop variables to further examine the influence or relationship among the variables.

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