EXPLAINING CONDOM USE BEHAVIOR AMONG MEN WHO HAVE SEX WITH MEN IN BANGKOK, CHIANG MAI, AND PHUKET, THAILAND: A CONTEXTUAL PERSPECTIVE

Panus Rattakitvijun Na Nakorn

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Panus Rattakitvijun Na Nakorn

School of Public Administration

Professor Anchana Na Ranong Major Advisor

(Anchana Naranong, Ph.D.)

The Examining Committee Approved This Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (Development Administration).

Assistance Professor Prayong Temchavara Committee Chairperson

(Prayong Temchavara, M.D.,Ph.D.)

Professor Anchana Na Ranong Committee

(Anchana Naranong, Ph.D.)

Assistance Professor Committee

(Thanaphan Laiprakopsup, Ph.D.)

Professor Nisada Wedchayanon Dean

(Nisada Wedchayanon, Ph.D.)

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ABSTRACT

Title of Dissertation	Explaining Condom Use Behavior among Men Who Have Sex with Men in Bangkok, Chiang Mai, and Phuket, Thailand: A Contextual Perspective
Author	Panus Rattakitvijun Na Nakorn
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Thailand National AIDS Strategy (NAS) 2012-2016 was developed comprehensively and implemented intensively at the provincial level. It utilized an information-motivation-behavioral skills model as a framework to design HIV preventive interventions, including condom distribution interventions, that was insufficient in increasing the rate of condom use among men who have sex with men (MSM). HIV prevalence in the MSM population has increased dramatically compared with the general population across Thailand, particularly in major cities. There is therefore an urgent need to identify the gaps in the Thailand NAS in terms of how policy is formed at the national level and how it is implemented at the provincial level. In addition, it is necessary to seek out a new, robust theoretical framework in order to design effective interventions and in order to halt HIV transmission in the MSM population in Thailand.

There were three objectives for this study. First was to explore the current Thailand NAS 2012-2016 in terms of its characteristics, formation, application, and implementation at the provincial level. Second was to analyze the theoretical perspectives that underlie the Comprehensive Package of Services (CPS) Model used as a framework for the HIV preventive model mentioned in the Thailand NAS 2012-2016. Third was to propose a robust theoretical framework to explain condom use behavior among the MSM population in selected sites in Thailand in terms of identifying the characteristics of condom use behavior and testing the hypotheses on

which determinant factors have influenced on condom use behavior these individuals in selected sites.

This study employed a mixed-method approach in order to respond to all three main objectives mentioned above. Objective #1 and #2 utilized a semi-structured questionnaire for interviewing key informants both at the national and provincial levels. This semi-structured questionnaire consisted of eight dimensions, which attempted to look at the efficiency, effectiveness, and sustainability of the organizations that formed, applied, and implemented Thailand NAS 2012-2016, which included structure and process, partnership and networking, project management, monitoring and evaluation, technical capacity building, financial management, and human resource management. Meanwhile, objective #3 utilized a structured-questionnaire to collect data from the MSM population in those selected sites. The questionnaire consisted of demographic data and condom use behavior, HIV-related information, motivation, behavioral skills, self-efficacy, perceived cost and perceived benefits of condom use, contextual situation-sexual excitement, intimacy, and behavioral setting, all of which were obtained from the literature reviewed. A cross-sectional survey was conducted from June 2014 to October 2014. Three hundred and one respondents that had lived in these three provinces for more than 6 months, that were willing to voluntarily participate in this study, and that were willing to answer sensitive questions about their sexual behavior in the past month responded to the structured questionnaire.

It was obvious that by 2016, based on mathematic modeling projection, the MSM group would be the most newly-HIV-infected persons; therefore, they were prioritized in Thailand's NAS for 2012-2016. These significant data led the country to call for an urgently-needed curving down of HIV prevalence among the MSM population across country. In order to achieve the ultimate national goal in this context, called the three zeros—namely, zero on new infections, zero on AIDS-related death, and zero on stigma and discrimination—Thailand NAS 2012-2016 employed two directions and five strategies in order to halt this severe situation in key populations, particularly the MSM population. Thailand NAS 2012-2016 was formed strategically through evidence-based data from various sources. In addition, engagement with non-governmental, governmental, and international aid agencies occurred throughout the development processes.

In terms of applying and implementing Thailand NAS 2012-2016 at the provincial level, it showed good collaboration between the representatives of non-governmental organizations (NGOs) and governmental organizations (GOs). However, lack of good governance in selecting representatives, sharing roles, and responsibilities between the representatives from the NGOs and GOs and information sharing among the Provincial Coordinating Mechanism Committee members led to incomprehensive implementation of Thailand NAS 2012-2016, as anticipated at the national level.

The Comprehensive Package of Services (CPS) model mentioned in Thailand NAS 2012-2016 as an HIV preventive framework was built from five reviewed theoretical frameworks. These five-theoretical frameworks included the Health Belief Model (HBM), Social Cognition Theory (SCT), the Theory of Reasoned Action (TRA), The Planned Behavior (TPA), and the Information-motivation-behavioral skills model (IMB). However, the main contributing theories regarding the CPS model fell under the HBM and IMB. In addition, these five theoretical frameworks were also interconnected through having overlapping key critical concepts used for explaining the HIV preventive behavior of people, such as attitude, subjective norms, intention, HIV information, motivation, behavior skills, and self- efficacy.

In terms of the factors predicting condom use, 227out of the 301 that have reported using condom with their partner whenever having every time anal intercourse within last two weeks, 34 (15%) reported that they still did not use a condom with their partners every time they had anal sexual intercourse, which was still high and leads to HIV transmission in the MSM population. A path analysis demonstrated that attitude towards condom use, as one of three key concepts under the motivation factor, was the highest predictive of condom use. In addition, information, attitude towards condom use, perceived social support as two critical concepts of motivations, and behavioral skills were found to be predictive of condom use among the MSM population, with sexual excitement towards unprotected anal sexual intercourse as a mediating factor. This was a robust concept that was able to increase the power of explanation of the IMB model regarding condom use in this population.

Although Thailand NAS 2012-2016 has engaged with various stakeholders, including NGOs, GOs, and international aid agencies throughout the development and implementation processes, lack of sharing roles and responsibilities and an information-sharing system between the representatives of the NGOs and GOs has led to less comprehension in the application and implementation of Thailand NAS 2012-2016 and non-cohesive collaboration between both of them at the provincial level. Therefore, enhancing the sharing roles and responsibilities and a information-sharing system between both of them needs to be taken systematically into consideration.

Rather than distribute condoms, it is necessary to be sure that MSM that have a low monthly income and could not access condoms are able to access whenever needed. A routine tracking system both for the number of condoms distributed and condom use needs to be established in order to monitor the situation and to be able to reshape intervention as needed.

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Panus Rattakitvijun Na Nakorn

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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

In the late 1980s, Thailand became the first country in Asia to experience a major epidemic of the human immunodeficiency virus (HIV) infection. Because an estimated one million Thais have been infected with HIV, of whom approximately 641,000 have died (Wipas Wimonsate et al., 2010), the primary focus of prevention efforts has been on reducing HIV transmission to heterosexual people and injecting drug users.

The Royal Thai government has put lot of effort into mitigating HIV. The core components of the government's strategy include ensuring that male clients, those that visit brothel-based female sex workers, use condoms to protect themselves from HIV acquisition; providing anti-retroviral treatment (ART) widely available at facility-based hospitals for pregnant women and their infants for the prevention of mother-to-child transmission of HIV; and promoting HIV preventive awareness campaigns nationwide. As a result of these nationally-coordinated efforts, HIV prevalence, which peaked at 3.4 percent in military conscripts and 2.3 percent in antenatal care clients in the 1990s, had dropped to 0.4 percent and 0.8 percent respectively in 2006–2007. The number of new HIV infections per year decreased from an estimated 143,000 cases in 1991 to an estimated 14,000 cases in 2007, and the decline continues Spratt and Escobar (2011). The table below is a summary of the most recent statistical data on HIV in Thailand.

Thailand Statistics on HIV*

Estimated total population, 2011	66,720,153
Estimated number of people living with HIV, end 2009	530,000
Adults (15+)	520,000
Women (15+)	210,000
Estimated adult (15-49) HIV prevalence	1.3%
Estimated number of AIDS deaths in 2009	28,000

Sources: United States Agency for International Development: USAID, 2010.

Since 2002, ART has been covered under the universal health insurance program that reimburses public and private hospitals for treatment of people living with HIV/AIDS (PLHAs) that are registered in the program (Punpanich, Ungchusak, & Detels, 2004 as cited in UNGASS, 2008). However, the success of Thailand's prevention programs does not extend to other risk groups such as men who have sex with men (MSM). Compared with the HIV prevalence among heterosexuals, the MSM population, including male sex workers (MSWs), MSM who have sex with men and women, and Transgender women have dramatically raising on HIV prevalence (UNGASS, 2008).

The HIV prevalence among the MSM population in Thailand, particularly in big cities, has increased since 2003. In Bangkok, HIV prevalence among the MSM population was 17.3% in 2003. Then, it increased to 30.7% in 2007 (Van Grienven, Thanprasertsuk, Jommaroeng, 2005). In addition, the sero-surveillance survey in Chiang Mai and Phuket pointed out that HIV prevalence among the MSM population was 17% and 20% respectively (Van Grienven,Varangrat, and Wimonsate, 2010). Compared with the HIV prevalence in the adult population, which had only 0.9% (UNAIDS, 2010) by 2010, the Bureau of Epidemiology revealed that HIV prevalence in Bangkok, Chiang Mai, and Phuket was 31%, 13% and 7% respectively (Ministry of Public Health, 2010). Therefore, the Ministry of Public Health (MoPH) attempted to halt this severe circumstance.

One of challenges that Thailand has been facing is a continuous increased in HIV prevalence among the MSM population, which is one of the most difficult

groups to reach. Thus, it is a difficult for health care providers to reach out to them in order to provide HIV prevention information messages and distribute condoms as they do for the general population.

To date, there are two critical HIV preventive strategies implemented around the world. The first one is the biomedical HIV preventive strategy to reduce HIV transmission, which includes circumcision, HIV vaccine, microbicides, and Pre-Exposure Prophylaxis (PrEP, where an HIV-negative person takes an antiretroviral medication daily). The second is the behavioral change strategy to reduce HIV transmission, which attempts to delay the onset of first intercourse, reduce the number of sexual partners or increase condom use, which are achieved by engaging multilevel approaches: couples, families, social and sexual networks, institutions and entire communities.

Thomas and Linda (2008) presented data about adhering to the use of various HIV preventive technologies more than 10 years by comparing those that perfectly use and those that imperfectly use, as in common in real life. Their study showed that using condoms imperfectly led to 75% of HIV infections while using them perfectly was able to reduce HIV infection roughly from 75% to less than 5%. While using either vaccine imperfectly or perfectly as HIV preventive technology, the percentage of HIV infection rate has showed similarly that was around 40% of HIV infection rate. Meanwhile with reference to the use of oral anti-retroviral drugs, for those that have adhered to this preventive method for more than 10 years, the rate of HIV infection for their use imperfectly and perfectly varied from 20%-50%. In the meantime, the rate of HIV infection among those that use microbicides as a preventive method imperfectly and perfectly vary from 40% to 75% respectively. In fact, those that have adhered to oral antiretroviral and microbicides still need to use male condoms along with these two methods to prevent HIV infection. Therefore, given the evidence-based data above, it implies that using condoms perfectly is better at reducing HIV infections than other types of technologies, as mentioned above.

In addition, in terms of the accessibility of HIV preventive technologies, cost, availability, and practice, male condoms are the most convenient method of prevention, which everyone can access, compared with other types of HIV preventive technologies such as vaccines, oral anti-retrovirals, female condoms, microbicides,

etc. Therefore, promoting male condom use is more cost efficient and effective in reducing HIV transmission in all settings than other existing methods.

In 2008, the Ministry of Public Health (MoPH), the Department of Disease Control (CDC), received a five-year grant from the Global Fund to fight AIDS, Tuberculosis, and Malaria (GFATM) round 8 aiming to halt the severe circumstances of HIV infection among key affected populations by injecting drug users, female sex workers, and men who have sex with men in 43 provinces. This program focused on HIV prevention among these key affected populations through working closely with non-governmental organizations and referring HIV positive people to access HIV care and treatment under the national thirty baht scheme at both private and public hospitals that were in the network of the National Health Security Office.

For MSM, MoPH, CDC, as principal recipients and non-governmental organizations serving both sub-recipients and sub-sub recipients, and the implementing agency of the GFATM round 8 agreed to employ the HIV comprehensive prevention package (CPP) model as a guide for an HIV prevention framework for MSM. The HIV CPP model consists of two parts: 1) the comprehensive package of services (CPS) model, and 2) enabling environment interventions.

In terms of the CPS model, it includes the following: 1) HIV prevention information distribution by outreach workers that reach MSM at bars, saunas, and entertainment venues; 2) condom distribution; 3) referrals to voluntary counseling and testing at facility-based or community-based sites that provide this service; 4) referrals to sexually transmitted infections (STIs) screening and treatment. The figure below depicts the comprehensive prevention package model.

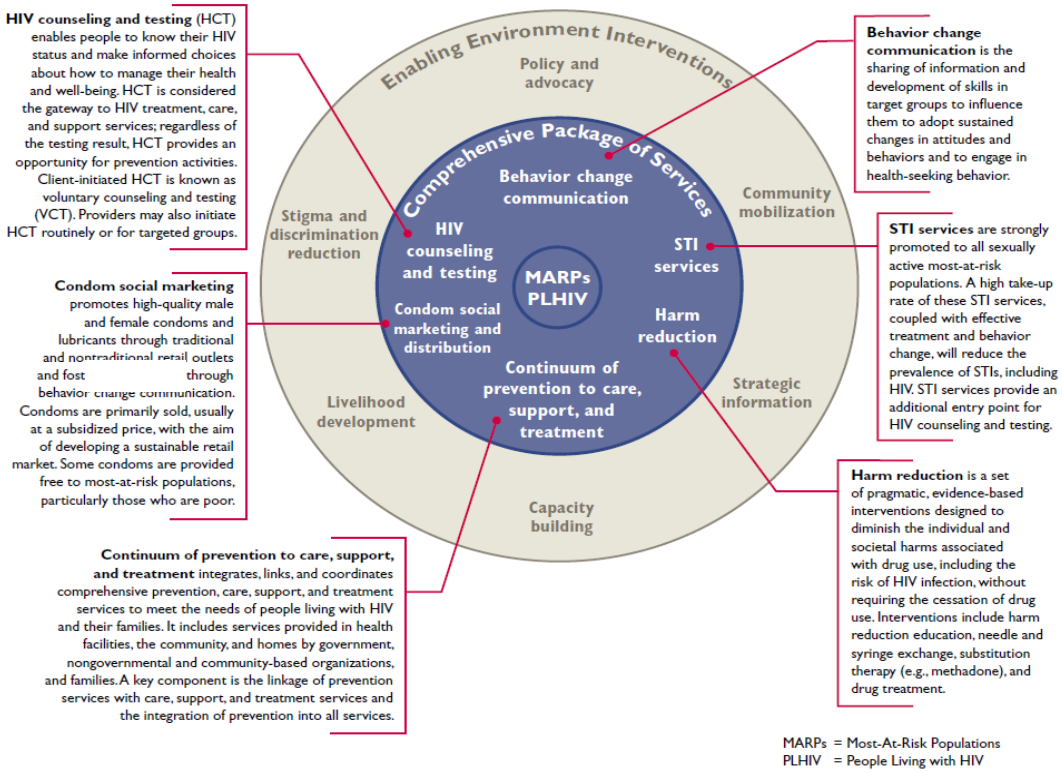

Figure 1.1 Comprehensive Prevention Package: Outline of the Comprehensive Package of Services

Source: Cassel, 2012.

Normally, HIV prevention intervention is based on a comprehensive package of services employed by the out-reach workers of each non-government organization at the province level as paid volunteers under the GFATM round 8 reaches MSM at hotspots such as bars, saunas, and public parks, and initiates a discussion on HIV risk assessment and HIV prevention information, including the availability of medical services at their site. The out-reach activities include condom distribution as an HIV preventive tool and convincing MSM to get HIV counseling and testing and STI screening at facility-based hospitals or community-based organizations that are able to provide these services.

The basic assumption behind providing HIV prevention information plus condom distribution is that whenever MSM receive correct HIV prevention information, including condoms as an HIV preventive tool, they are likely to use it in

order to prevent HIV infection whenever they have sexual activity. Therefore, this assumption is influenced by information- motivation-behavioral skills model (IMB).

Given the fact that the IMB model explains HIV preventive behavior, HIV preventive behavior has been influenced by the following: 1) information about how to prevent HIV; 2) the motivation to consistently engage in non-risky behavior; and 3) having behavioral skills to enact these non-risky behaviors.

The unsuccessful promotion of condom use among MSM through utilizing the IMB model by the Department of Disease Control and GFATM round 8 has been reflected in the gradual increase of HIV prevalence among MSM from 2003 until the present in Bangkok, Chiang Mai, and Phuket as mentioned above. This aligns with Tareerat, Taweesak, (2010), who studied condom use behavior among MSM, MSW and TG in Thailand in Bangkok, Chiang Mai and Phuket. The study found that 46% of MSM, 34.9% of MSWs, and 52.3% of TGs reported recent inconsistent condom use. This situation could lead to an increase in HIV prevalence among the MSM population in Thailand.

Given the situation mentioned above, we can conclude that the assumption of the IMB model—providing HIV prevention information, motivating people to reduce risky behavior, distributing condoms, then assuming people would use condoms—is insufficient to explain condom use behavior among the MSM population in Thailand.

The CDC, under MoPH, has announced Thailand National AIDS Strategy (NAS) 2012-2016 focusing on key population, including MSM as public policy for health under the theme of Getting to Zero- zero on new infections, zero on AIDS deaths, and zero on stigma and discrimination. In order to achieve getting to three zero goals particular zero on new infection, MSM are prioritized as the target group and need to be emphasized because the mathematic modeling project showed for 2012-2016 that 41% of new infections (43,040 new cases) would be MSM (National AIDS Strategic Plan for 2012-2016).

Because HIV prevention interventions for MSM based on the IMB model are insufficient to explain condom use behavior among the MSM population, seeking a robust theoretical framework that has more power of explanation regarding the condom use behavior among the MSM population is urgently needed in order to help Thailand achieve the zero goals mentioned at the Thailand NAS 2012-2016 focusing on key populations, including MSM.

Thus, this study aims to explore the current Thailand NAS 2012-2016, including MSM, as public policy for health regarding how it has been applied and implemented in three provinces, Bangkok, Chiang Mai, and Phuket, as the selected sites. In addition, this study aims to examine whether the CPS as a national HIV preventive guideline was built upon a theoretical framework and how that theoretical framework contributed to CPS model development. Finally, this study aims to propose a robust theoretical framework to explain the condom use behavior among the MSM population in Bangkok, Chiang Mai and Phuket as three areas in Thailand with the highest prevalence of HIV. The results of this study can lead to the reshaping of HIV preventive interventions, particularly in increasing condom use behavior among the MSM population based on a robust theoretical framework.

1.2 Objectives of this Study

1.2.1 To Explore the Current Thailand NAS 2012-2016 focusing on key populations, in terms of the following questions:

1.2.1.1 What are the characteristics of the current Thailand NAS 2012-2016?

1.2.1.2 How has the current Thailand NAS 2012-2016 been formed at the national level?

1.2.1.3 How has the current Thailand NAS 2012-2016 been applied and implemented at these three provincial levels?

1.2.2 To Analyze the Theoretical Perspectives/models that underlie the CPS model as part of the CPP model being used as a guide for the HIV prevention model under the Thailand NAS 2012-2016 in terms of:

1.2.2.1 Identifying whether the CPS model was built upon reviewed theories; that is, the health belief model (HBM), the AIDS risk reduction model (ARRM), the transtheoretical model (TM), the social cognition theory (SCT), the theory of reasoned action (TRA), the theory of planned behavior (TPB), information-motivation-behavioral skills model (IMB);

1.2.2.2 Identifying which theory has contributed to the CPS development;

1.2.2.3 Analyzing how those contributed theories are interconnected in the CPS model.

1.2.3 To Propose a Robust Theoretical Framework to explain condom use behavior among the MSM population in selected sites in Thailand in terms of:

1.2.3.1 Identifying the characteristics of the MSM population regarding their condom use behavior;

1.2.3.2 Identifying what conditions/situations have influenced condom use behavior among the MSM population when they engage in sexual activity, such as sexual excitement, emotional involvement, and a place to meet their partner.

1.3 Significance of this Study

There are three significances of this study. The first one is the theoretical significance. The proposed robust theoretical framework can provide new insight regarding the condom use behavior among the MSM population in these three sites. The second one is the practical significance of this study. The results of this study based on the proposed robust theoretical framework can be evidence-based information for the National HIV/AIDS Strategic Plan for MSM in terms of reviewing and revising HIV prevention interventions for MSM, particularly in promoting condom use behavior. The final one is that the results of this study might be able to enhance the National HIV/AIDS Strategic Plan for MSM in the next round in terms of designing interventions efficiently and effectively.

1.4 Scope of this Study

This study employed both qualitative and quantitative methods for the data collection. In terms of the qualitative method, it was used in interviewing key informants for both community-based organizations and government organizations at

both national and provincial levels that have been involved with the development of the National AIDS Strategic Plan for 2012-2016. On the other hand, the quantitative method was employed to collect data from MSM that have lived in these three provinces more than 6 months and that voluntarily participated in this study and responded to sensitive questions about their sexual behavior in the past month.

1.5 Limitations of this Study

Since there is no consensus about the number of MSM in these three provinces, employing the non-probability random sampling method, namely purposive sampling, was suitable for this study. Consequently, generalizations of the results of this study to other provinces that have different contexts will be limited. In addition, the recall affect from asking respondents about their sexual activities in the past might have been difficult for them.

CHAPTER 2

LITERATURE REVIEW

This chapter begins with elaborating on how each psychological and sociology perspective explains behave regarding preventive behavior. Then, how the Royal Thai Government, particularly the MoPH has responded to the HIV/AIDS situation in Thailand regarding the MSM population will be discussed. Finally, the determinant factors regarding HIV preventive behavior among the MSM population through existing research findings will be investigated in order to create a conceptual framework for this study.

2.1 Psychological Perspective: Explaining Preventive Behavior

Psychology is both an academic and applied discipline employs the scientific method to explore mental processes and behavior. This perspective studies phenomena such as the perception, cognition, emotions, interpersonal relationships, personality, and behavior of the individual in order to understand and explain human behavior regarding how they behave. Psychology has various schools of thought that attempt to understand human behavior. One of these schools of thought is behaviorist psychology. Behaviorist psychology believes that people behave in response to environmental stimuli. This means that environmental conditions stimulate people to respond. This explanation falls into the stimulus response model. Behaviorist psychology was established with the publication of Watson's classic paper "Psychology as the Behaviorist Views It" in 1913. In this sense, this perspective is an individualistic approach. In terms of applying a psychological perspective to explain and predict human behavior, particularly from a health preventive behavior, there are various models that attempt to explain this. Each model will be discussed as follows:

2.1.1 The Health Belief Model (HBM)

This model was founded in early 1950 by social psychologists in the United States Public Health area. It has been used as a conceptual framework to explain how and why people change their behavior and how they maintain their preventive behavior. The key concepts of the HBM are used to explain and predict action in order to prevent, screen for, or even control illness conditions, including susceptibility, seriousness, benefits, barriers to behavior, cues to action, and self-efficacy (Rimer, 2008, p. 46).

The assumption of the HBM is that if individuals are susceptible to a disease, belief that a condition from the disease would have potentially serious consequences and belief that a course of action is available to them would be beneficial in reducing either their susceptibility or the severity of the condition, and believing that they gain more benefits than costs in taking action, they are likely to take action that they believe will reduce their risk. The HBM has been employed to study various populations in order to explain health preventive behavior on the individual level.

In terms of the predictive power of HBM regarding HIV preventive behavior; however, the results were inconsistent with those of various studies. Perceived susceptibility has been found to be positively associated with HIV preventive behavior in some research findings, but not in others. Ronis (as cited in Rimer, 2008) mentioned that it might be a problem of the measurement of the constructs of this concept. Therefore, the author proposed that the measurements of this construct should be specific to conditions, for example, asking the question "if you do not practices safe sex, how likely are you to become infected with HIV virus?"

However, although the HBM has been useful in explaining health behavior in some areas of health, it has proved to be less of a contribution in some areas of HIV prevention (Fisher & Fisher, 2000).

The challenge of the HBM that might be fundamental and which was mentioned by Fisher and Fish is that the empirical relationship between belief and behavior is generally inconsistent. It has rarely been shown that beliefs *per se* are sufficient to promote action. This means that there have to be some moderating factors between belief and behavior that are able to increase the power of explanation of the HBM.

2.1.2 The AIDS Risk Reduction Model (ARRM)

This model focuses on behavioral change. According to this model, change is a process that the individual must to go through and different factors affect the movement through different stages of the process (Fisher & Fisher, 2000). This model emphasizes the stage of change and focuses on the behavioral changes at each stage that have meaningful outcomes. This implies that short-term behavioral change outcomes at each stage of change are the main focus of this model, while change in actual overt behavior is not emphasized.

Given this point of view, this model has been differentiated from other models in terms of what outcomes are looked for. Catania et al. (as cited in Fisher & Fisher, 2000) elaborated on the ARRM in terms of stages of change and stated that the ARRM is applicable to sexually active or injecting-drug-using individuals with a nonzero risk of HIV. Moreover, the authors stated that the ARRM consists of three stages of change that individuals must go through. First, an individual must label his or her action as risky in terms of contracting HIV. Second, he or she must make a commitment to reduce HIV-risky behavior through increasing safe sex. Third, the individual must seek or enact strategies to attain HIV-risk-behavioral change.

The ARRM has been used to explain the behavioral change of various populations. Regarding HIV preventive behavior, Malow et al. (cited in Fisher & Fisher, 2000) applied the ARRM to construct intervention for recovering drug abusers by using all critical variables of the model, and the results showed that intervention containing some ARRM variables led to greater change in self-efficacy, communication skills, and condom use skills at the post-test level compared with information only about intervention.

Fisher and Fisher (2000) indicated that one of the challenges of the ARRM is that the factors associated with the attainment of one stage may be associated with the attainment of other stages. This characteristic of the model makes it difficult to be empirically tested as a multivariate or integrated model.

2.1.3 The Transthoretical Model (TM)

Like the ARRM, the TM also focuses on the dynamics or processes of behavior rather than static behavioral change. Both models assert that change is not

linear. During the changing process, it might have a moving back and forth or a recycling of behavioral change (Fisher & Fisher, 2000).

There are six stages for those that want to change their behavior. The first stage is pre-contemplation, which means those people that do not intend to change their behavior; the second stage is the contemplation stage, which refers to those people that intend to change their behavior within the next 6 months; the third stage is the preparation stage, which means those people that intend to take effective action to change in the next month. The people at this stage usually have an action plan for action the next time. The fourth stage is the action stage, which means people that have to meet some criteria for efficacy for up to six months. In addition, the behavioral changes made during this stage are highly visible to others. the maintenance stage is the fifth. For HIV prevention, for example, people at this stage need to practices safer sexual behavior for more than six months. The final stage is the termination stage. At this stage it is assumed that people are no longer tempted to relapse and have a complete sense of self-efficacy concerning their ability to maintain healthy behavior.

The TM has been used in various ways in the HIV preventive context. Grimley and Prochaska (cited in Fisher & Fisher, 2000) conducted a study that concluded that an individual's stage of changes in condom use predicts his or her actual condom use. Interestingly, self-efficacy has been studied in the context of safer sex using the TM.

Galavotti, Grimley, and Cabral (cited in Fisher & Fisher, 2000) found that for women, self-efficacy in using condoms is low in the context where they believe that the man may become angry if they insist on using condom with them. However, self-efficacy in using condoms varies based on the type of partner. For example, self-efficacy in this regard is higher with casual partners than with one's main partner. According to this study, an interesting question is whether the status of the partner; casual or main partner, would indicate condom use if self-efficacy were controlled for.

Fisher and Fisher (2000) concluded that the TM and the ARRM models offer us insight into the process of behavioral change rather than focusing only on the outcome of behavioral changes; however, it is unclear how each of the six

components or sub-components interacts with the others, leading to behavioral change. Moreover, the TM still lacks of multivariate data that could identify on which construct contributes uniquely to behavioral prediction. These points should be taken into consideration when using the TM to explain and predict an individual's behavioral changes.

2.1.4 The Social Cognition Theory (SCT)

SCT emphasizes that changing an individual's behavior does not rely on instructing them to do what should be done, particularly regarding safer sex; it relies on the social and self-regulation skills and self-behavioral skills for practicing safer sex. Fisher and Fisher (2000) stated that even though an individual might have posses social and self-regulation skills, he or she needs to belief in their self-efficacy in practicing safe sex. This implies that self-efficacy is a moderating relationship between social and self-regulation skills and the save sex on the part of each individual. In addition, SCT includes the social factors that affect an individual's behavior, and social and self-regulation skills, in the model, which is different from other models reviewed above.

Following what Fisher and Fisher (2000) elaborated on regarding safer behavioral practice, it was shown that the safer behavioral practice was predicted by self-efficacy itself and through motivation. In addition, self-efficacy itself also was predicted by having related information on safer behavioral practice, self-regulation, and risk reduction skills. In the meantime, risk-reduction skills were associated with self-regulation in determining self-efficacy. Finally, self-regulation was predicted by social support and social norms of the group. The following figure displays the relationships discussed above:

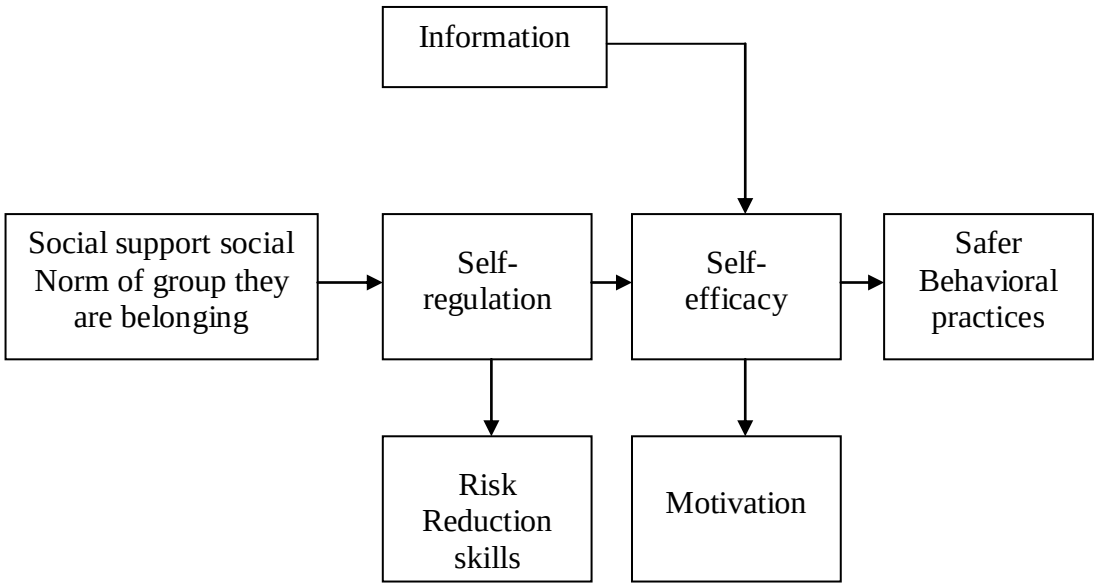

Figure 2.1 Social Cognition Theory

Source: Fisher and Fisher, 2000.

In terms of the utilization of SCT, Fisher and Fisher (2000) stated clearly that it has not demonstrated an interrelationship between each element. Therefore, this means that it has never been tested as a multivariate model and cannot show whether elements overlap to explain safe behavior. This point is a critical challenge for this theory and reduces its power of explanation.

2.1.5 Theory of Reasoned Action (TRA)

The TRA has been applied to study various health areas, particularly regarding HIV preventive behavior. This theory has been well tested with empirical data at the ground level in order to determine HIV preventive behavior. Fishbein (as cited in Glanz, Rimer, & Viswanath, 2008) stated that this theory was developed to look at the relationships between attitude, intention, and behavior.

Regarding HIV preventive behavior, Fisher and Fisher (2000) elaborated on the relationships between attitude, intention and behavior and suggested that HIV preventive behavior is predicted by an individual's intention; meanwhile, intention is predicted by an individual's attitudes and subjective norms. However, in light of the development of this theory, Rimer (as cited in Glanz, Rimer, & Viswanath, 2008)

emphasized that attitude, which is able to predict behavioral change, needs to be emphasized in terms of attitudes toward behavior, for example, one's attitude towards mammography rather than one's attitude towards the object, cancer. In addition, Fisher and Fisher (2000) were clearly about the determinant factors affecting the attitude towards HIV preventive behavior, stating that this attitude is a function of belief about the consequences of performing the act multiplied by the evaluation of the consequences. Given Fisher and Fisher's and Rimer's stated on the relationships among attitude, subjective norm, intention, and HIV preventive behavior, the following figure can be drawn.

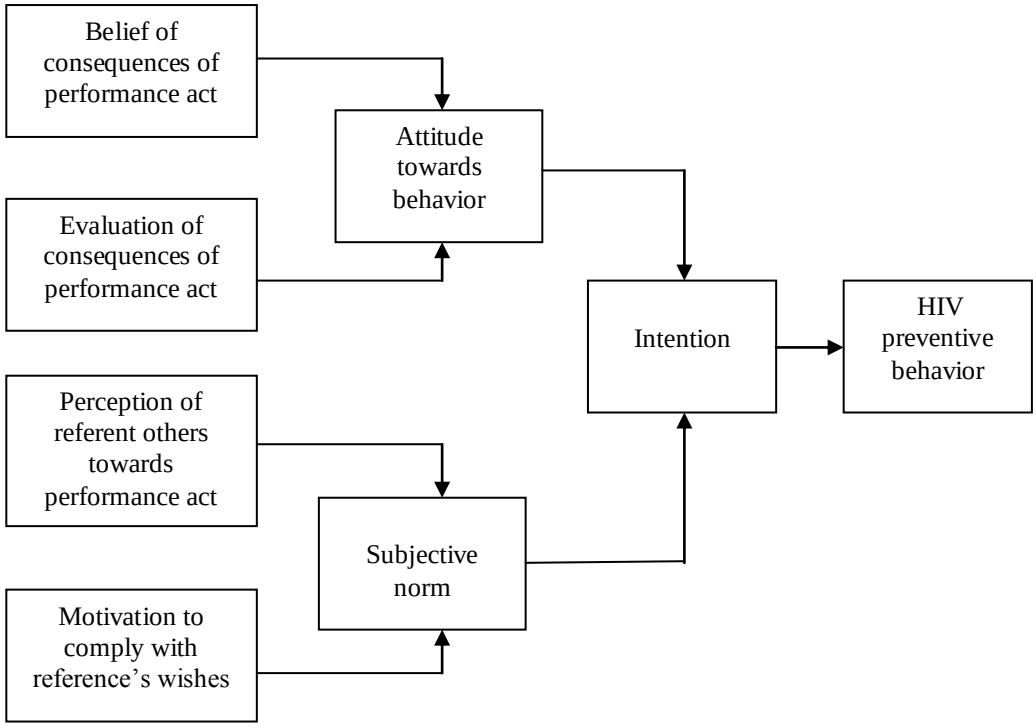

Figure 2.2 Theory of Reasoned Action

Source: Fisher and Fisher, 2000.

The contribution of the TRA has been confirmed to predict HIV preventive behavior. Fisher and Fisher (2000) explained that this theory has consistently observed that condom use intention predicts condom use behavior across prospective intervals, across sexes, and across sexual orientation and ethnic group categories.

The TRA emphasizes the cognitive factors (beliefs and values) that determine motivation (behavior intention); however, it neglects other factors that influence HIV preventive behavior such as perceived susceptibility, HIV-related information, the perception of the vulnerability to HIV, and behavioral skills, including past experiences. These factors should be considered when constructing the model in order to increase the power of explanation of the TRA (Fisher and Fisher, 2000)

2.1.6 The Theory of Planned Behavior (TPB)

Given the limitations of the theory of reasoned action, as it focuses only on attitude, subjective norms, and intention to determine behavior, which are insufficient to explain an individual's behavior, the TPB is an extension of the TRA by adding perceived behavior control to the TRA model, taking into account situations where one may not have complete volitional control over a behavior, such as sexual arousal, gender-based power differentiation and alcohol and drug use.

Rimer (2008) elaborated that the TPB postulates that perceived control is an independent determinant of behavioral intention, along with attitude towards the behavior and subjective norms. Perceived control is a function of reflecting an individual's beliefs and assessment of the ease or difficulty of performing (Fisher and Fisher, 2000). The relationships among attitude, subjective norms, intention, and an individual's behavior can be seen in the figure below.

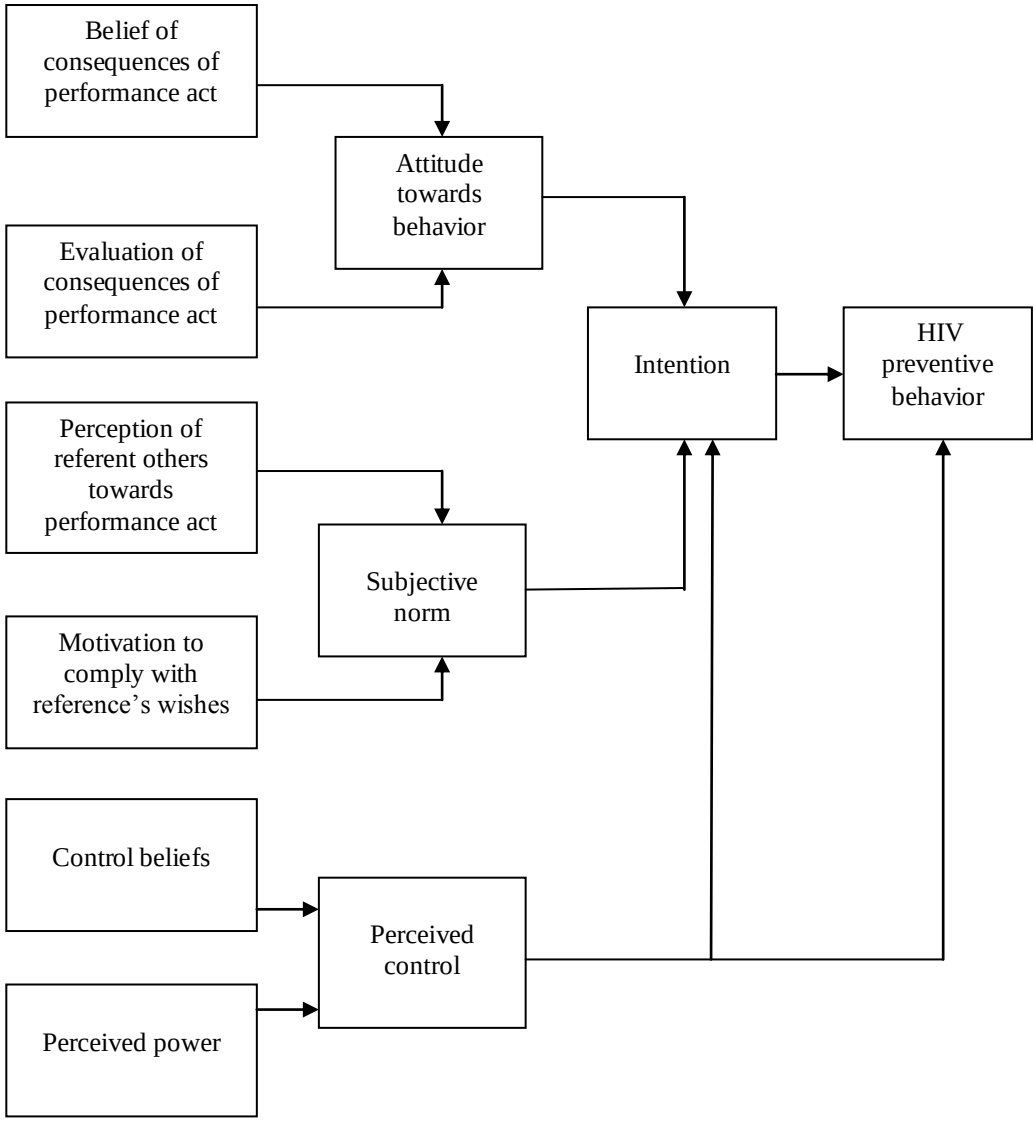

Figure 2.3 Theory of Planned Behavior
Source: Fisher and Fisher, 2000.

The TPB model has been used widely to predict social, health-related behavior. In many studies, it has confirmed the correlation between perceived control and intention. For example, Rye (as cited in Fisher and Fisher, 2000) reported that perceived control contributed to the prediction of intention in approximately 75% of the cases examined. In this sense, the TPB emphasizes the importance of perceived control over behavior and has an indirect influence on behavior through intention.

However, this correlation between perceived control and HIV-preventive behavior through intention has been inconsistent in various studies.

In terms of the criticism of the TPB, like the TRA, it ignores the motivational and behavioral skills that influence practices and maintain the individual's behavior. Rye (as cited in Fisher and Fisher, 2000) provided critical challenges to the TPB. He mentioned that the TPB was control belief construct under TPA. Further, the control belief construct was treated as an independent construct, which may be seen as a basic underpinning of attitudes and subjective norms. However, the critical question is whether the perceived control construct should be treated as independent or should be explored further in ground.

All of the psychological theories mentioned above are able to explain preventive behavior and also provide an angle for understanding preventive behavior regarding its own area of interest for each concept under its theoretical framework. However, each theory still has challenging points, which need to be taken into consideration when applied to the real world.

The next section discusses Thailand NAS 2012-2016 in terms of what it is why it was developed, how it was developed at the national level, and how it was applied and implemented at the provincial level.

2.2 Thailand National AIDS Strategic 2012-2016

Since 2002, ART has been covered under the universal health insurance program in Thailand, which reimburses public and private hospitals for treatment of people living with HIV/AIDS (PLHA) that are registered in the program (Punpanich; Ungchusak; and Detels 2004 as cited in UNGASS, 2008). However, the success of Thailand's prevention programs does not extend to other risk groups such as MSM. Comparing with heterosexuals, MSM population including MSWs, MSM who have sex with men and women, male-to-female TGs has dramatically increased on HIV prevalence (UNGASS, 2008).

> The National Strategic Plan for Integration of AIDS Prevention and Alleviation 2007–2011, Policy responses to HIV from recent Thailand governments have been inadequate. Prevention strategies should be developed and improved with the changing epidemiological and behavioral situation in population groups such as youth, discordant couples, sex workers (male and female), clients who visit sex workers, MSM, drug users and ethnic minorities including populations along borders and mobile populations.

The consequence of launching the National Strategic Plan for the Integration of AIDS prevention and Alleviation 2007-2011 was the establishing of the provincial coordinating mechanism (PCM) involving both governmental and non-governmental organizations at the provincial level. The provincial public health office takes care of this platform to ensure that HIV preventive interventions for key affected populations—female sex workers, injecting drug users, and men who have sex with men—take place and are implement effectively and timely by working closely with stakeholders, including community-based organizations that work with this key affected populations.

The National Strategic Plan for Integration of AIDS Prevention and Alleviation 2007–2011 was evaluated at the end of 2011. The results of this evaluation were fed into the development of the National Strategic Plan for Integration of AIDS prevention and Alleviation 2012-2016. This aligns with the UNAIDS theme whose goals are to get to three zero; zero on new infections, zero on AIDS deaths, and zero on stigma and discrimination.

The table below elaborates on the vision and goals of the National Strategic Plan for Integration of AIDS prevention and Alleviation 2012-2016.

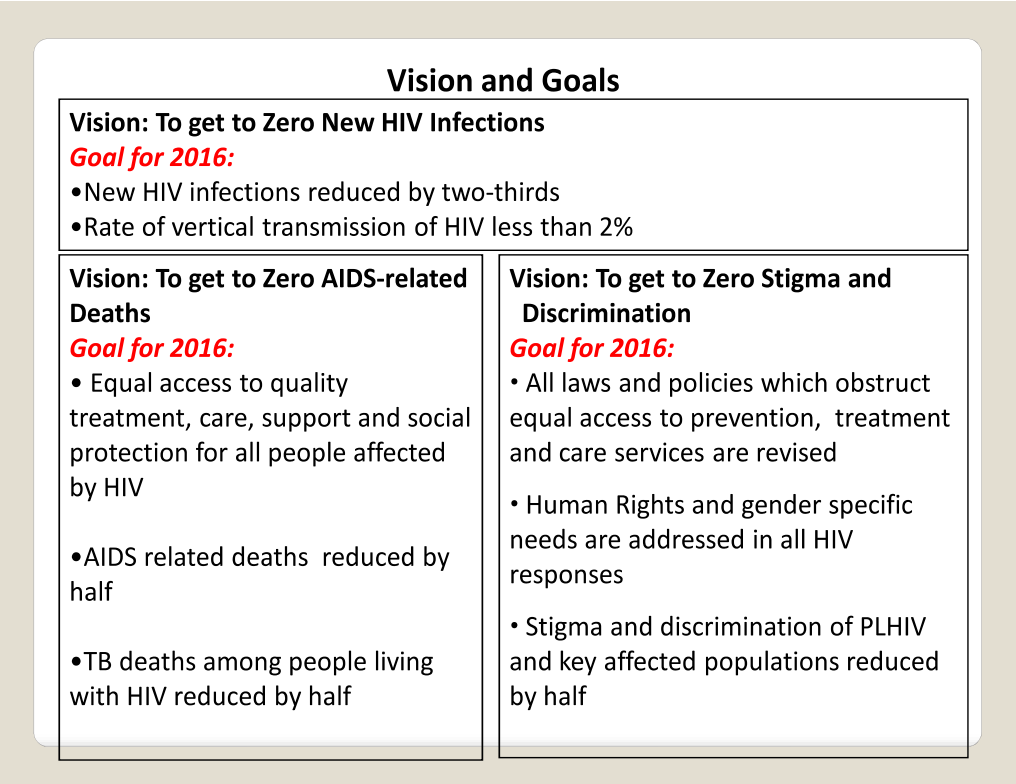

Figure 2.4 Vision and Goals

To date, all of the interventions implemented at the provincial level for key affected populations regarding MSM have been implemented under this national strategic plan.

As mentioned earlier, particularly in chapter one regarding the insufficiency of IMB model that has been treated as an assumption to implement HIV preventive interventions by DDC and GFATM round 8, in the next section, more detailed information will be offered on what the IMB model is and how this theory has been employed to study various health areas, including HIV prevention interventions. Finally, this study will propose hypotheses derived from the IMB model in order to be tested with empirical data at the ground level.

2.3 Policy Implementation

Before policy implementation is discussed in terms of the factors that determine its success or failure, what public policy is will first be discussed.

Many scholars provide a definition of public policy. Kratt and Furlong (2013) stated for example that "public policy is what public officials within government, and by extension the citizens they represent, choose to do or not choose to do about public problems", while Thomas R. Dye (as cited in SombatThomrongthayawong, 2009) suggested that "public policy means what the government should to do or not do. This includes all activities, both routine and occasional activities".

What we have seen in the definition provided by Michael and Thomas above was similarity in terms of the definition of public policy that was government chooses to do or not choose to do about public problem. Once a government develops a comprehensive public policy through rigorous study in order to improve a public problem, the policy implementation begins a critical role, ensuring that the comprehensive public policy is implemented effectively and in a timely way.

Public policy implementation is a critical stage of public policy cycle because this process could have impacts and consequences for both citizens and the public widely (Michael & Scott, 2013). There are several factors leading to the success or failure of policy implementation, as discussed by many scholars, such as sufficient resources, clear objectives of public policy, and specifics on procedure.

Mountjoy and O'Toole Jr. (as cited in Sombat Thomrongthanyawong, 2009, p. 478) found that there were two critical factors in implementing public policy effectively: having sufficient resources to implement the public policy and having specific procedures. Phuengjan (2009), on the other hand, stated that there were six factors leading to the success of public policy implementation, including the following:

1) Having realistic objectives to be achieve within a timeline

2) Having good collaboration among stakeholders, including having clear standards of procedure that all stakeholder are able to follow

3) Having an organization that takes the lead in implementation of the public policy

4) Having clear objectives under public policy

5) Having good communication and effective coordination
6) Willingness to implement public policy by leaders

If we look at the development of the Thailand NAS 2012-2016, it was a top-down development. This means that the national government came up with the Thailand NAS 2012-2016 through a series of consultative meetings with stakeholders from national governmental organizations, non-governmental organizations, and international aid agencies including UN families. Once Thailand NAS 2012-2016 was completed, it was implemented at provincial level through an established mechanism by the National AIDS Committee (NAC). In terms of the success or failure of the implementation of the Thailand NAS 2012-2016, it depends on how well the national government prepares, provides, and manages all factors mentioned above. This study utilized these factors for the data collection in order to be able to have a comprehensive picture on how Thailand NAS 2012-2016 has been implemented at the provincial level.

2.4 The Information-Motivation-Behavioral Skills Model (IMB)

The IMB model was developed by Jeffery D. Fisher and his colleagues in 1992. The core principle of this model consists of three core components, which are information, motivation, and behavioral skills. The IMB model emphasizes the importance of the information, motivation and behavioral skills that affect HIV preventive behavior in various populations.

The assumption of the IMB is that when individual has well-informed, motivated to act and having appropriate behavioral skills, then they would likely to initiate and maintain the pattern of HIV preventive behavior. According the model, Fisher, Fisher and Malloy (1999) stated that the information that is relevant to HIV preventive practices is a prerequisite for determining HIV preventive behavior. On the other hand, the motivation to practice preventive acts, based on attitude and social norms concerning these preventive acts, are the second basic determinant of HIV prevention behavior. Finally, behavioral skills, including the objectives in performing preventive acts, are the third determinant of HIV preventive behavior. Ferry et al. (2010) demonstrated the information-motivation-behavioral skills model of health behavior as below:

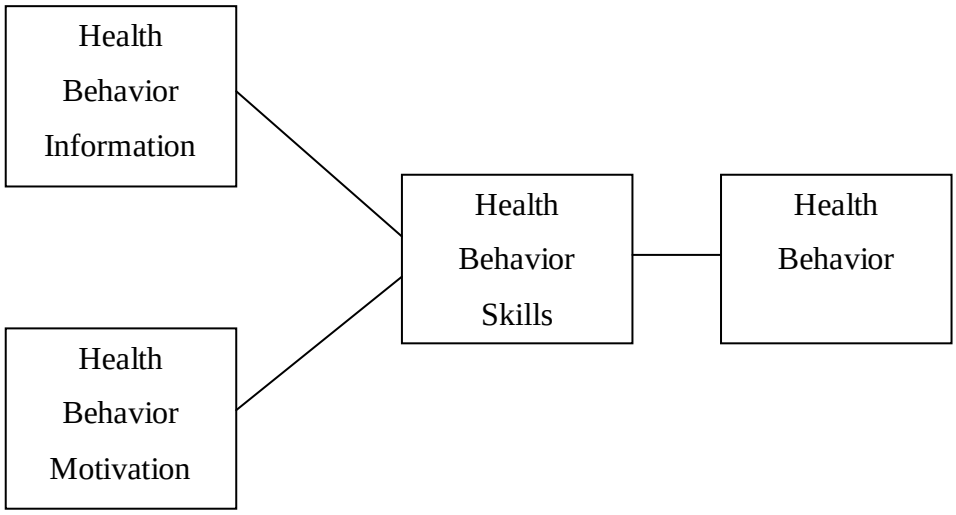

Figure 2.5 Information, Motivation, and Behavior model

The IMB model has been employed to explain HIV preventive behavior among various populations. For instance, Zhang et al. (2011) utilized the IMB model to predict consistent condom use among female sex workers (FSWs) in Jinan, China. The conclusion was that the IMB model could be used to predict condom use in this group. Social reference support, experience with and attitudes toward condoms as motivation constructs, self-efficacy, and health behavior and condom use skills as behavioral skills are the determinant factors in HIV preventive behavior of FSWs.

Another study was conducted by Deborah and Sarah (2007) in order to support the utility of IMB model. This study attempted to explore the effectiveness of the IMB model by collecting data from truck drivers in India. Two hundred and fifty males participated in this study. The finding showed that there was an effect of the IMB intervention on attitudes, norms, behavioral skills, and intention specific to condom use with marital partners but no effects in the construct related to non-marital partners.

Another utilization of the IMB model predicting sexual risk behavior among ethnically-diverse young men who have sex with men aged 14-21 was conducted by Fisher (2011) and investigated how fit the IMB model was in terms of predicting sexual risk among the sample. The results showed that the fit of this model was acceptable for most indicators for primary and secondary risk.

The IMB model has been developing since 1992 and is being tested with various health areas, including HIV preventive behavior and populations. However, Fisher and Fisher (2000) pointed out that, at the conceptual level, the role of information constructs under the IMB model seems to be inconsistent across studies compared with motivation and behavior skills, which are consistent in predicting HIV preventive behavior. In addition, he also stated that the relationship between information and motivation was inconsistent.

Regarding the research findings mentioned above concerning the relationship between the determinant factors in HIV preventive behavior, it is possible to derive 14 hypothesizes as follows:

1) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio.

2) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived social support and behavioral skills.

3) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived social support.

4) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on the perception of being vulnerable to HIV infection.

5) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by high score on attitude towards condom use and behavioral skills.

6) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by high score on perceived social support and behavioral skills.

7) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by high score on the perception of being vulnerable to HIV infection and behavioral skills.

8) MSM that have a high score on attitude towards condom use are more likely to exhibit high condom use.

9) MSM that have a high score on perceived social support are more likely to exhibit high condom use.

10) MSM that have a high score on the perception of vulnerability to HIV infection are more likely to exhibit high condom use.

11) MSM that have a high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills.

12) MSM that have a high score on perceived social support are more likely to have high condom use moderated by a high score on behavioral skills.

13) MSM that have a high score on the perception of vulnerability to HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills.

14) MSM that have a high score on behavioral skills are more likely to exhibit high condom use.

Fisher (2011), who investigated the fit of the IMB model to predict sexual risk among young MSM aged 14-21, suggested that more investigation on the influence of self-efficacy on sexual risk behavior among young MSM was needed.

2.5 Self-efficacy

Following the suggestion above, self-efficacy as one of the determinant factors explaining the percent of condom use behavior among the MSM population was investigated. This suggestion aligns with what Fisher and Fisher (2000) found in reviewing research papers; they concluded that self-efficacy was significantly associated with HIV preventive behavior.

Fisher and Fisher (2000) stated that self-efficacy means “the perception that one can perform preventive health successfully and experience expected positive outcomes. It also means that self-efficacy is related to both perceived successful performance and the actual experience of the performance”. While, Zhang et al. (2011) studied the predictors of consistent condom use based on the IMB model among female sex workers in Jinan, India. One of the conclusions was that self-efficacy as one of the indicators of behavior skills was significantly associated with

condom use. This conclusion was consistent with prior research among FSWs in China. In addition, Kensen, Vaughan, and Walter (1982) studied self-efficacy in relation to AIDS preventive behavior among tenth grade students. The author concluded that those students with lower self-efficacy regarding correct, consistent condom use were five times less likely to have used condoms consistently. Another study of unprotected anal intercourse among immigrant Latino MSM on the characteristics of the person and the sexual encounter conducted by Zea, Reisen, Poppen, and Bianchi (2008) revealed that the personal characteristic of self-efficacy in relation to safe sex was negatively associated with unprotected anal intercourse over the previous three months, at the most recent encounter, and over multiple encounters reported by each participant.

Based on the findings from the literature review on self- efficacy above, it can be seen that this concept has a critical role in determining condom use among various populations. Therefore, this concept was incorporated into the proposed model being tested through developing the following hypothesis:

15) MSM that have a high score on self-efficacy are more likely to exhibit high condom use.

2.6 Perceived Costs and Benefits of Condom Use

Perceived cost was mentioned on the HBM. In this model there are three key components, which include perceived susceptibility, perceived severity, and perceived vulnerability. Fisher and Fisher (2000) stated that individual health outcomes could be evaluated from the point of view of individual perceived costs and benefits in performing preventive behavioral practices. On the other hand, individual benefits include beliefs about the effectiveness of available options in order to reduce the threat from disease. Individual costs in performing preventive behavioral practices involve any potential negative aspect of a particular preventive behavioral practice. Even if an individual feels vulnerable to disease infection, changing preventive behavioral practices is based on a comparison between perceived costs and benefits that they are favorable.

This means that the perceive costs and benefits of condom use are two determinant factors that explain HIV preventive behavior that need to be tested.

In concluding section of the "Theoretical Approaches to individual-level change in HIV risk behavior," Fisher and Fisher (2000) also discussed the idea that the relationship between perceived costs and self-efficacy constructs have been much more consistent on its relationship. Wulfert, Wan, and Backus (cited in Karen, Rimer, and Viswanath, 2008) found that whenever perceived barrier (cost) increased, condom use decreased. Further, barriers such as the reduction of sensation and pleasure were associated with condom use, as well as worry about negative reactions from sexual partners.

Based on the findings from the literature review on perceived costs and perceived benefits above, the following was hypothesized:

16) MSM who have a high score on the perceived cost of condom use are more likely to exhibit low condom use moderated by a low score on self-efficacy

17) MSM who have a high score on the perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy.

As discussed above on the psychological theories, the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model, attempt to explain the individual's behavior based on psychological factors. In this sense, the psychological perspective focuses on an individualistic approach and only internal factors. It ignores the external factors that influence people to act. This ignorant point of view from a psychological perspective can comprehended by the sociological perspective in order to increase the power of explanation of the phenomenon.

The sociological perspective aims to explain how social structure such as social norms and culture influences people in terms of action and behavior. The assumption of the sociological perspective is that social structure sharpens people's attitudes, beliefs, and then people act or behave according to how they perceive the social structure, that is the norms, values, and culture, ensuring that their action and behavior aligns with social expectations. In order to increase the power of the explanation of the information-motivation-behavioral skills model in terms of HIV preventive behavior, this study aims to incorporate the contextual/situation factors, such social structure, that influence an individual's behavior into the model. In

addition, these contexts/situations are treated as moderating factors between the psychological factors and HIV preventive behavior. The following will elaborate more on the contextual/situation factors that will be incorporated into the model being tested with empirical data at the ground level.

Catherine et al. (2014) conducted a study entitled the "Situational Analysis of Young People at High Risk of HIV Exposure in Thailand" by using a face-to-face interview and focus group discussion with around 2,000 young MSM in Bangkok, Chiang Mai, and Phuket and found that life skills in terms of managing risky situations properly, together with the use of alcohol and drugs, placed them at risk for HIV and STI infections. This study included contextual/situational factors in the conceptual model.

2.7 Contextual/Situation Factors

There are contextual factors that play a significant role as moderating factors affecting the ratio of condom use. In this study, these factors were explored and incorporated into the model being tested.

2.7.1 Sexual Excitement

The study entitled "Behavior and cognitive barrier to safer sex between men in steady relationships: Implications for prevention strategies" conducted by Davidovich et al. (2004) found that high scores on anticipated sexual excitement regarding unprotected anal intercourse was associated with more risky, unprotected, anal intercourse. Therefore, the following is hypothesized:

18) MSM that have a low score on sexual excitement are more likely to exhibit high condom use.

2.7.2 Intimacy

This concept plays a critical role in determining condom use among the MSM population. In general, whenever we have strong intimacy with someone, we are likely to follow any belief of that person. Likewise, regarding the condom use behavior among the MSM population, the feeling of intimacy is a determining factor

in condom use. McLean et al. (1994) concluded that gay men were more likely to be emotionally involved in regular partner and to perceive unprotected penetrative sex with a regular partner as not risky. Based on this, the following is hypothesized:

19) MSM that have a low score on the feeling intimacy with their latest partner are more likely to exhibit high condom use.

2.7.3 Behavioral Settings

The environmental setting has an influence on an individual's decision making in terms of protecting himself from HIV acquisition by using a condom. Latkin and Knowlton (2005) explained that attendance in certain settings, e.g., bars, shooting galleries, brothers, bathhouses, or public transportation stations, are associated with higher HIV risk. This implies that settings where MSM meet their partner have an influence on their decision-making in terms of protecting themselves from HIV acquisition.

The study of the sexual behavioral and risk factors for HIV infection among homosexual and bisexual men in Thailand conducted by Andrea et al. (2009) concluded that although bisexual men venue based selling sex reported a higher rate of behaviors commonly associated with HIV transmission risk, including drug use and frequent partners change, HIV prevalence among bisexual men venue based selling sex was nearly three times lower than among the general MSM population. One of the rationales behind this phenomenon is that bisexual men who sell sex at venue based are perceived as high-risk persons; therefore, clients are willing to protect themselves by using condoms when they have sexual activity with bisexual men who sell sex at venue based, while bisexual men who sell sex at venue based are also concerned about their HIV risky behavior.

This implies that the setting where MSM meet their partners determines condom use and protecting themselves from HIV acquisition. Therefore, the following is hypothesized:

20) MSM that have a high score on perceived behavioral setting are more likely to exhibit high condom use.

As mentioned earlier, the contextual factor is critical in explaining condom use among the MSM population; in this study, these contextual/situational factors are treated as moderating factors in order to test them as to whether these factors

influence condom use among the MSM population. The following then are hypothesized:

21) MSM that have a high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.

22) MSM that have a high score on behavioral skill are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with their latest partner.

23) MSM that have a high score on behavioral skill are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.

24) MSM that have a high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a low score on sexual excitement.

25) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived social support, a high score on behavioral skills, and a low score on sexual excitement.

26) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on the perception of vulnerability to HIV infection, a high score on behavioral skills, and a low score on sexual excitement.

27) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a high score on the feeling of intimacy with their latest partner.

28) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skill and a high score on feeling intimacy with latest partner.

29) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on exhibit

perception of vulnerability to HIV infection, a high score on behavioral skills, and a high score on exhibit feeling intimacy with their latest partner.

30) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a high score on perceived behavioral setting.

31) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived social support, a high score on behavioral skills, and a high score on perceived behavioral setting.

32) MSM that have a high score on HIV-related information are more likely to exhibit a high condom use ratio moderated by a high score on the perception of vulnerability to HIV infection, a high score on behavioral skills, and a high score on perceived behavioral setting.

33) MSM that have a high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.

34) MSM that have a high score on perceived social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.

35) MSM that have a high score on the perception of vulnerability to HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.

36) MSM that have a high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on the feeling intimacy with their latest partner.

37) MSM that have a high score on perceived social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on the feeling intimacy with their latest partner.

38) MSM that have a high score on the perception of vulnerability to HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on the feeling intimacy with their latest partner.

39) MSM that have a high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

40) MSM that have a high score on perceived social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

41) MSM that have a high score on the perception of vulnerability to HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

42) MSM that have a high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.

43) MSM that have a high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a high score on the feeling intimacy with their latest partner.

44) MSM that have a high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral settings.

45) MSM that have a high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.

46) MSM that have a high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on the feeling intimacy with their latest partner.

47) MSM that have a high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral settings.

48) MSM that have a high score on the perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a high score sexual excitement.

49) MSM that have a high score on the perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a high score on the feeling intimacy with their latest partner.

50) MSM that have a high score on the perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a low score on perceived behavioral settings.

51) MSM that have a high score on the perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a low score on sexual excitement.

52) MSM that have a high score on the perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a low score on the feeling intimacy with their latest partner.

53) MSM that have a high score on the perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a high score on perceived behavioral settings.

2.8 Demographic Data

2.8.1 Age

Many research studies have suggested that age is associated with condom use. Gordon et al. (2006) concluded that slightly older age individuals (25-29) versus younger individuals (18-24) were associated with more consistent condom use. Frist et al. (2009) concluded that the estimated HIV incidence among young MSM increased from 4.1% in 2003 to 6.4% in 2005 and then to 7.7% in 2007. This implied that age is a determinant of condom use among the MSM population. Regarding these literature reviews, the following is hypothesized:

54) MSM that are older are more likely to exhibit high condom use.

2.8.2 Education and Income

Maria et al. (2009) collected data from Latino MSM and concluded that the demographic factors of education and income were associated with sexual risk. Therefore, this study tested these demographic factors and hypothesized the following:

55) MSM that have a high educational level are more likely to exhibit high condom use.

56) MSM that have a high level of income are more likely to exhibit high condom use.

According to the literature reviewed throughout this chapter, it was found that even the IMB model has been able to explain condom use among the MSM population, the IMB model as HIV preventive framework mentioned under Thailand NAS 2012-2016 was an incomprehensive model to explain on preventive behavior among the MSM population in Thailand. Because the HIV prevalence among the MSM population has gradually been increasing in major cities particularly Bangkok, Chiang Mai, and Phuket. The advantage of this study was that it attempted to identify the theoretical gaps that needed to be filled in order to increase the power of explanation of condom use in the MSM population.

Rather than explaining condom use behavior in the MSM population through the IMB model as a psychological explanation, contextual or situational factors as sociological explanations such as behavioral settings, intimacy, and sexual excitement leading to unprotected anal sexual intercourse were added to this model in order to increase the power of explanation of the IMB model, which was an added value of the study. Furthermore, the concept of the costs and benefits of condom use for MSM, which are able to explain condom use behavior in westerner society based on the literature reviewed, was added to the conceptual model for this study in order to test whether it could increase the power of explanation of the IMB model along with the sociological factors.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter was organized into eight parts in order to elaborate more on the detailed information on how this study developed the hypotheses, the design research method, the population and sampling, the measures on concepts, and employed the data collection and data analysis tool. The eight parts consist of the following:

3.1 The proposed conceptual framework

3.2 Research hypotheses

3.3 Research design

3.4 Unit of analysis

3.5 Population and sampling

3.6 Operational definitions and measurements

3.7 Data collection

3.8 Data analysis

3.1 The Proposed Conceptual Framework

This study consists of three objectives, which are listed below:

1) To explore the current Thailand NAS 2012-2016

(1) What are the characteristics of the current Thailand NAS 2012-2016?

(2) How has the current of Thailand NAS 2012-2016 been formed at the national level?

(3) How has the current of Thailand NAS 2012-2016 been applied and implemented at these three provincial levels.

2) To analyze the theoretical perspectives/models the underlie the CPS model as part of CPP model which is used as a guide for the HIV prevention model for Thailand NAS 2012-2016.

(1) To identify whether the CPS Model was built upon reviewed theories: the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model.

(2) To identify which theory has contributed to the CPS model development.

(3) To analyze how those contributed theory are interconnected in the CPS model.

3) To propose a robust theoretical framework to explain condom use behavior among the MSM population in selected sites in Thailand.

(1) To identify the characteristics among the MSM population regarding their condom use behavior.

(2) To identify the conditions/situations such as sexual excitement, emotional involvement, and choosing a meeting place to meet their partner that have an influence on condom use behavior among the MSM population when they engage in sexual activity.

In terms of objective #1, this study will explore Thailand NAS 2012-2016 through eight dimensions, which consist of structure and process, strategy and planning, partnership and networking, project management, monitoring and evaluation, technical capacity building, financial management, and human resource management.

In terms of objective #2, this study will analyze the theoretical perspectives/ models that underlie the CPS model as part of the CPP model being used as guide for HIV prevention for MSM in Thailand. This study will identify whether the CPS model was built upon reviewed theories in chapter 2, the HBM, the ARRM, the TM the SCT, the TRA, the TPB, and IMB model, which theory contributed to the CPS model and how those contributed theories are interconnected in the CPS model.

Regarding objective #3, in the literature review, the determinant factors that affect condom use behavior among the MSM population mostly depended on individual and psychosocial factors such level of information that people have, their internal motivations such as attitude toward condoms, perceived peer support and perceived vulnerability to HIV infection, and their behavior skills including past experiences about condom use. In addition, the self-efficacy concept was introduced

as one of the vital factors in predicting condom use among the MSM population, and in the meantime, perceived cost and benefits in using condoms were found to significantly to predict condom use among the MSM population as well. However, all of the concepts discussed above were individual and psychosocial factors that were necessity factors but insufficient in providing a comprehensive explanation for condom use behavior among the MSM population.

Thus, this study proposes a comprehensive explanation model of condom use behavior among the MSM population by introducing contextual factors in order to provide a comprehensive model among the MSM population model based on both individual and psychosocial and contextual factors. The figure below demonstrates that the conceptual framework for this study came from the literature review in Chapter 2

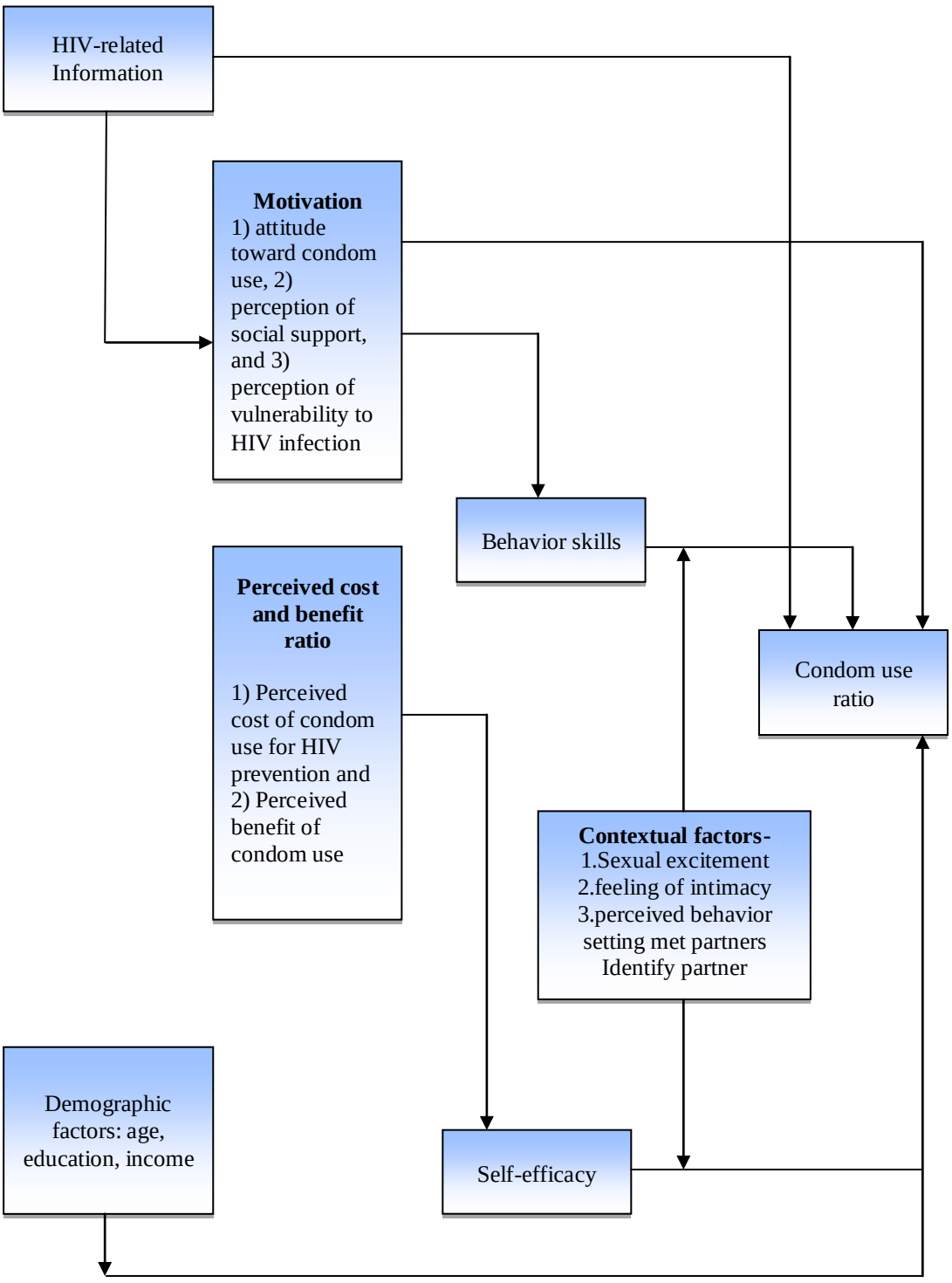

Figure 3.1 Conceptual Framework

3.2 Research Hypotheses

According to the literature review, this study consists of 56 hypotheses as listed below:

1) MSM that have a high score on HIV related information are more likely to exhibit a high condom use ratio.

2) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use.

3) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having social support.

4) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection.

5) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use and behavioral skills.

6) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having social support and behavioral skills.

7) MSM that have high score on HIV related information are more likely to exhibit a high condom use moderated by a high score on high score on perception of vulnerability of HIV infection and behavioral skills.

8) MSM that have high score on attitude towards condom use are more like to have high condom use ratio.

9) MSM that have high score on perceived having social support are more like to have high condom use ratio.

10) MSM that have high score on perception of vulnerability of HIV infection are more like to have high condom use ratio.

11) MSM that have high score on attitude towards condom use are more like to have high condom use ratio moderated by a high score on behavioral skills.

12) MSM that have high score on perceived having social support are more like to have high condom use ratio moderated by a high score on behavioral skills.

13) MSM that have high score on perception of vulnerability of HIV infection are more like to have high condom use ratio moderated by a high score on behavioral skills.

14) MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio.

15) MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio.

16) MSM that have high score on perceived cost of condom use are more likely to have low condom use ratio moderated by a low score on self –efficacy.

17) MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self – efficacy.

18) MSM that have low score on sexual excitement are more likely to exhibit a high condom use ratio.

19) MSM that have low score on feeling intimacy with latest partner are more likely to exhibit a high condom use ratio.

20) MSM that have high score on perceived behavioral setting are more likely to exhibit a high condom use ratio.

21) MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.

22) MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with latest partner.

23) MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.

24) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a low score on sexual excitement.

25) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills, and a low score on sexual excitement.

26) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills, and a low score on sexual excitement.

27) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a high score on feeling intimacy with latest partner.

28) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills, and a high score on feeling intimacy with latest partner.

29) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills, and a high score on feeling intimacy with latest partner.

30) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills, and a high score on perceived behavioral setting.

31) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills, and a high score on perceived behavioral setting.

32) MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills, and a high score on perceived behavioral setting.

33) MSM that have high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.

34) MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skill and a low score on sexual excitement.

35) MSM that have high score on perception of vulnerability of HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.

36) MSM that have high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on feeling intimacy with the latest partner.

37) MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skill and a high score on feeling intimacy with the latest partners.

38) MSM who have high score on perception of vulnerability of HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on feeling intimacy with the latest partner.

39) MSM who have high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

40) MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

41) MSM that have high score on perception of vulnerability of HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.

42) MSM that have high score on behavior skill are more likely to exhibit a high condom use ratio through moderated by a low score on sexual excitement.

43) MSM that have high score on behavior skill are more likely to exhibit a high condom use ratio through moderated by a high score on feeling intimacy with latest partner.

44) MSM that have high score on behavior skill are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.

45) MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.

46) MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with latest partner.

47) MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.

48) MSM that have high score on perceived cost of condom use are more likely to have low condom use ratio moderated by a low score on self-efficacy and a high score sexual excitement.

49) MSM that have high score on perceived cost of condom use are more likely to have low condom use ratio moderated by a low score on self-efficacy and a high score on feeling intimacy with latest partner.

50) MSM that have high score on perceived cost of condom use are more likely to have low condom use ratio moderated by a low score on self-efficacy and a low score on perceived behavioral setting.

51) MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a low score on sexual excitement.

52) MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a low score on feeling intimacy with latest partner.

53) MSM that have a high score on perceived benefit of condom use are more likely to exhibit high condom use ratio moderated by a high score on self-efficacy and a high score on perceived behavioral setting.

54) MSM that are older are more likely to exhibit a high condom use ratio.

55) MSM that have a high educational level are more likely to exhibit a high condom use ratio.

56) MSM that have a high level of income are more likely to exhibit a high condom use ratio.

3.3 Research Design

Regarding objective #1, this study employed a qualitative approach to gain more information and to understand and explore the characteristics of Thailand NAS 2012-2016, how it was developed, and how it has been applied and implemented at provincial levels in three selected sites. In information was obtained at the national and provincial levels. The strength of the qualitative approach is its ability to explain the process of how Thailand NAS 2012-2016 was developed at the national level and has been applied and implemented at provincial levels at selected sites. In addition, the qualitative approach is also able to identify other conditions/factors related to how Thailand NAS 2012-2016 has been applied and implemented at provincial levels. Thus, the qualitative approach was employed for gaining in-depth information in order to respond to objective #1.

In terms of objective #2, this study aimed to analyze the CPS model by identifying whether this model was built upon the reviewed theories in chapter 2 (the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model) identifying which theory contributed to the development of the CPS model and analyzing how those contributed theories were interconnected in the CPS model. Desk review and content analysis were employed to respond to objective #2.

In terms of objective #3, this study aimed to propose a new theoretical framework to explain condom use behavior among men who have sex with men. The quantitative approach was employed to describe the characteristics of the samples of this study and to predict the relationship between the independent and dependent variables.

3.4 Unit of Analysis

This study has two units of analysis following each objective. Since objective #1 aimed to explain what the characteristics of Thailand NAS 2012-2016 are, how it was developed at the national level, and how it has been applied and implemented at provincial levels. The unit of analysis for this objective was an organization that is responsible for applying and implementing this strategic plan. According to this study, the national AIDS management center (NAMc), under DDC, MoPH is fully responsible for reviewing, revising and developing Thailand NAS 2012-2016, while the provincial coordinating mechanism (PCM) is the responsible organization for applying and implementing the national AIDS strategic plan for key populations, including MSM, in their province.

Objective #2 aimed to analyze the CPS Model; the unit of analysis for this objective is its model in order to identify whether this model was built upon reviewed theories in literature review (the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model) identifying which theory contributed to the CPS model development and analyzing how those contributed theories were interconnected in the CPS model.

Regarding objective #3, it aimed to explain condom use behavior among the MSM population, and the unit of analysis was at the individual level.

3.5 Population and Sampling

In terms of objective #1, the population of this study was the NAMc and the PCM in Bangkok, Chiang Mai, and Phuket. This study employed purposive sampling to select the samples to be interviewed. The sample included one representatives of the NAMc, the Director of the NAMc, who took full responsibility to review and develop Thailand NAS 2012-2016, and one representative from a community-based organization that worked closely with MSM issues at the ground level. Two selected representatives were interviewed on what the development process of Thailand NAS 2012-2016 was like at the national level.

At the provincial level, however, the population of this study was PCM member in the three provinces. This study employed purposive sampling to select sample who were be interviewed. Three members of the PCM, one a chair of the PCM, and two representatives from a community-based organization, were interviewed on how Thailand NAS 2012-2016 has been applied and implemented at the provincial level.

Regarding objective #2, a population of this study is the CPS Model.

In terms of objective #3, the population of this study was men who have sex with men that have been in Bangkok, Chiang Mai, and Phuket provinces more than 6 months.

In terms of sampling, first, the purposive sampling method was employed to identify areas that would be used to collect the data. In Bangkok data from those that have lived in 52 areas were collected, while in Chiang Mai and Phuket, data from those that have lived in Muang district were collected. There were several reasons why Muang district was selected for the data collection. First, Muang district is an area that has universities, colleges, and business center districts where MSM gather for studying, working, and living. Secondly, Muang District is a higher-density area for MSM than other districts and was convenient to access them there rather than in other provincial districts.

In addition, purposive sampling was also employed to select the samples from each area based on the criteria below:

1) Identifying themselves as men who have sex with men
2) Living in Bangkok, Chiang Mai, and Phuket provinces for more than 6 months before this study
3) Being willing to voluntarily participate in this study

3.6 Measurement Construction

Regarding objective #1, the current Thailand NAS 2012-2016is the country's road map for implementing HIV prevention for MSM from 2012 to 2016. This study explored the current Thailand NAS 2012-2016, particularly regarding how it was developed and how it proceeded, and how it has been implemented at these three provincial levels.

In terms of national level, this study was measured on how the current Thailand NAS 2012-2016 was developed and implemented. The study utilized the organizational capacity development conceptual framework developed by the Pact Community REACH project, supported by United State Agency for International Development (USAID), Regional Mission Asia since 2008, which was able to assess organizational efficiency, effectiveness, and sustainability (David, Pakprime, Shirley, Siddhi, Kipp, 2012).

This study will measure it according to eight dimensions by interviewing representatives of each question as follows:

1) Structure and Process of Thailand NAS 2012-2016

(1) How was Thailand NAS 2012-2016 formed?

(2) How was the committee of Thailand NAS 2012-2016 selected?

2) Strategy and Planning

How did Thailand NAS 2012-2016 committee prioritize MSM as the top priority in this current strategic plan?

3) Partnership and Networking

How did Thailand NAS 2012-2016 committee engage with other stakeholders for partnership and networking to gain other perspectives from them?

4) Project Management

(1) How did Thailand NAS 2012-2016 committee come up with the national HIV/AIDS strategic plan for MSM?

(2) How has Thailand NAS 2012-2016 committee ensured that it has been applied and implemented at the provincial level?

(3) How has Thailand NAS 2012-2016 committee ensured that it has improved the quality of services for the key affected population, particularly MSM?

(4) How has Thailand NAS 2012-2016 committee ensured that it has controlled the quality of services of key affected populations, particularly MSM?

5) Monitoring and Evaluation

(1) How can Thailand NAS 2012-2016 committee achieve its goals and objective?

(2) How did Thailand NAS 2012-2016 committee monitor and evaluation HIV/AIDS program for MSM at the provincial level?

6) Technical Capacity Building

(1) What kind of mechanism did Thailand NAS 2012-2016 committee receive for technical capacity building in order to provide technical assistance to other stakeholders in their province?

(2) What kind of mechanism did Thailand NAS 2012-2016 committee provide for capacity building for stakeholders that run the HIV/AIDS program for MSM?

(3) What was the process of technical capacity building, both receiving and providing roles, like?

7) Financial Management

(1) How did the process of Thailand NAS 2012-2016 committee allocate its budget to respond to the HIV situation in the province?

(2) What kind of mechanism did Thailand NAS 2012-2016 committee use for financial management when they implemented the HIV/AIDS program for MSM?

8) Human Resources

How many staff members from Thailand NAS 2012-2016 committee were assigned to take care of the HIV/AIDS program for MSM? Where they fully or partially responsible for the HIV/AIDS program for MSM?

In terms of the provincial level, this study measured how the current national HIV/AIDS prevention strategic plan for MSM has been implemented in each provinces (Bangkok, Chiang Mai, and Phuket) through employing in-depth interviews with key informants that were members of the PCM. Since the PCM has a mandate to apply and implement Thailand NAS 2012-2016 in their province, the PCM as an established mechanism that implemented Thai NAS 2012-2016 at provincial level was measured according to eight dimensions by interviewing representatives for each question as follows:

1) Organizational Structure and Process

How did structure of PCM form and how did PCM members recruit?

(1) What did the PCM selection process look like?

(2) What did the PCM's organization look like?

2) Strategy and Planning

(1) How did the PCM prioritize MSM as a top priority in its province?

(2) How did the PCM plan to implement the HIV/AIDS prevention program for MSM at the provincial level?

3) Partnership and Networking

How did the PCM engage with other stakeholders for partnership and networking to achieve HIV/AIDS implementation for MSM at the provincial level?

4) Project Management

How did the PCM apply and implement Thailand NAS 2012-2016?

(1) How did the PCM manage the HIV/AIDS prevention program for MSM?

(2) How did the PCM improve the quality of services for key affected populations, particularly MSM?

(3) How did the PCM control the quality of services of key affected populations, particularly MSM?

5) Monitoring and Evaluation

How could the PCM achieve its goals and objectives in applying and implementing the HIV national strategic plan?

How could the PCM monitor and evaluate the HIV/AIDS program for MSM?

6) Technical Capacity Building

What kind of mechanism did the PCM provide for capacity building for stakeholders that run HIV/AIDS program for MSM?

What did the process look like?

7) Financial Management

(1) How did the process of the PCM allocate a budget to respond to the HIV situation in the province?

(2) What kind of mechanism did the PCM use for financial management when it implements the HIV/AIDS program for MSM?

8) Human Resources

How many staff members from the PCM were assigned to take care of the HIV/AIDS program for MSM? Did they fully or partially responsible for the HIV/AIDS program for MSM?

3.6.1 Dependent Variable: Condom Use Ratio

In this study, condom use means using condoms while having anal sexual intercourse with each partner within the last three months.

The condom use ratio will be calculated according to the number of condoms used divided by the number of anal sexual intercourses with one's partner in the last three months by asking the participants the following:

"How many times have you had anal sexual intercourse within the last two weeks?"

"How many condoms did you use when you had anal sexual intercourse within the last two weeks"

3.6.2 Independent Variables

3.6.2.1 HIV-related Information

HIV-related information means the level of HIV preventive information the participants had, such as how to protect themselves from HIV infection, how HIV is transmitted, etc. This study adjusted the HIV related information from Michele, Josephine, and Julius's study (2013) on examining the application of the IMB model in predicting condom use among sexually-active secondary school students in Mbarara, Uganda using ten items to measure HIV related information. These items consisted of the following:

1) If you have sex and have an HIV test within the next week, it can definitely tell you if you got HIV.

2) The HIV/AIDS virus can be transmitted through male sperm/semen.

3) You can safely store a condom in your wallet for at least 2 months.

4) The same male condom can be use more than once.

5) Condoms from health clinics or pharmacies are better than condoms from shops.

6) The HIV virus is small enough to go through a condom.

7) If you know a person very well, you don't need to use condom to protect against getting HIV from them.

8) Vaseline or baby oil should never be used with condoms.

9) MSM that play passive roles during sexual activity have more risk of getting HIV than MSM that play a more active role if they do not use a condom.

10) Condoms are one of the most effective available methods to protect against HIV infection.

Respondents were asked to respond to each item. The items were scored based on the criteria below:

If the respondent gave the correct answer for each item, it was scored 10. While if the respondent gave the wrong answer for each item, it was scored 0. The total score was 100.

3.6.2.2 Motivation

Motivation means the level of motivation to consistently engage in non-risky behavior. Fisher and Fisher (2000) stated clearly that HIV preventive motivation includes personal motivation to practice preventive behaviors, such as attitude toward practicing specific preventive acts, social motivation to engage in prevention, such as the perception of social support in performing such acts, and the perception of personal vulnerability to HIV infection.

Based on Fisher and Fisher mentioned above, attitude towards condom use was constructed, perception of social support, and perception of vulnerability to HIV infection as listed below:

Attitude toward condom use

1) Using condoms would protect me from getting HIV infection.

2) Using condoms is not a barrier for me.

3) Using condoms does not reduce my sexual pressure at all.

4) Carrying condoms would not be a problem for me.

5) It is fine for me to use a condom every time I have sexual activity with my partner.

Perception of social support

1) When I compare myself to the average MSM, there is a special person who is always around when I am in need.

2) When I compare myself to the average MSM, there is a special person with whom I can share my joys and sorrows.

3) When I compare myself to the average MSM, I have a special person who is a real source of comfort for me.

4) When I compare myself to the average MSM, there is a special person in my life who cares about my feelings.

Perception of vulnerability to HIV infection

Meg et al. (1996) discussed the notion that perception of vulnerability to HIV can be measured by comparing with others. Therefore, in this study perception of vulnerability to HIV infection was measured with the question below:

"When you compare yourself to the average MSM, what would you say your chances are of getting HIV infection?"

The respondent was asked to rate each item of motivation ranging from 1 to 10. One meant extremely disagree, meanwhile, ten meant extremely agree.

3.6.2.3 Behavior Skills for HIV Prevention

Fisher and Fisher (2000) explained that behavior skills are consisted of an individual's ability and his or her perceived self-efficacy on the performance of HIV preventive behavior al practices.

In this study behavior skills were measured according to Michele and Josephine (2013) with the constructs listed below:

1) For me, buying condoms during the next two months would be …

2) For me, getting condoms for free during the next two months would be …

3) During the next two months, carrying a condom with me would be …

4) If I have sex during the next two months, using a condom every time would be …

5) If I am to have sex during the next two months, telling my partner we have to use a condom would be …

6) Talking to my partner about whether or not we should have sex would be …

The respondent was asked to rate each item of behavior skills from 1 (very difficult) to 10 (very easy).

3.6.2.4 Perceived Cost of Condom Use for HIV Infection Protection

Vitoria and Celette (cited in Karen, Rimer, and Vuswanath, 2008) provided a definition of the perceived barriers (cost) that is a belief about the tangible and psychological costs of the advised action. The perceived cost of condom use for HIV infection protection was measured using the items below:

1) Using a condom reduces my pleasure while engaging in sexual activity.

2) Using a condom creates trouble for my sexual partner.

3) Accessing a condom is not easy for me.

The respondent was asked to rate each item ranging from 1 to 10. One meant definitely untrue and ten meant definitely true.

3.6.2.5 Perceived Benefit of Condom use

The perceived benefit of condom use meant the belief in the efficacy of using condoms to protect HIV infection. This concept was measured using the items below:

1) Using a condom can protect me from HIV infection.

2) A condom is one of effective methods to protect against HIV infection.

3) In the long run, protecting myself against HIV infection by using a condom is a benefit for me in terms of treatment and other relevant costs.

4) Using a condom every time when I engage in sexual activity has made me safer from sexually transmitted diseases.

The respondent was asked to rate each item ranging from 1 to 10. One meant definitely untrue and ten meant definitely true.

3.6.2.6 Self-efficacy

Bundura (1997 cited in Karen, Rimer, and Viswanath, 2003) defined self-efficacy as the conviction that one can successfully execute the behavior required to produce the outcomes. This concept was measured using the items listed below:

1) I believe I can take an independent decision about having sex when in a relationship.

2) I believe I can make a decision about what things I will and will not do when I have sex.

3) If I am not in a sexual mood, I believe I can tell my partner I do not want to have sex.

4) If I am in a sexual mood, but I do not want to have sex, I believe I can tell my partner I do not want to have sex.

5) I do not feel that I would be in control of my partner in a sexual situation.

The respondent was asked to rate each item ranging from 1 to 10. One meant strongly disagreed while ten meant strongly agreed.

3.6.2.7 Sexual Excitement

Sexual excitement means the anticipated sexual excitement of unprotected sexual activity. This concept was measured by asking the respondent to rate the question below:

"How much they have anticipated sexual excitement of unprotected sexual activity?" The respondent will be asked to rate his anticipation of sexual excitement ranging from 1 to 10. One meant definitely not strong while 10 meant definitely strong.

3.6.2.8 Intimacy

Intimacy means the level of emotional involvement towards one's partner. This concept was measured by asking the respondent to rate the following question: "what was the degree of your emotional involvement with your last sexual partner?" The scale ranged from 1 to 10. One meant strong, no emotional involvement, while 10 meant strong emotional involvement.

3.6.2.9 Behavioral Setting

Behavioral setting means the setting where the sample met his last partner and that had an influence on the decision-making regarding the use of a condom to protect himself from HIV infection.

This concept was measured by asking the respondent to respond concerning where he met his partner. If he met his partner at an identified risky place such as a bar, sauna, karaoke or even a risky location, a score of 1 was given, and if not the score of 0 was assigned.

Demographic Data

3.6.2.10 Age

The respondent was asked to identify his real age.

3.6.2.11 Education

Education means the respondent's latest degree held. The was measured according to the following categories:

1) Below bachelor degree or certificate.
2) Bachelor degree.
3) Master degree and up.

A score of 1 was assigned for below a bachelor degree or certificate, 2 for a bachelor degree, and 3 for a master degree and up.

3.6.2.12 Source of Income

Source of income means the source of income of the respondent. Here answers were categorized into five categories including parent, employed, partner, self-employed, and other.

3.6.2.13 Income

Income refers to the individual's monthly income. The respondent was asked to provide his monthly income.

3.6.2.14 Current Sexual Relationship Status

Current relationship status meant what type of current relationship status the respondent had with his partner. This was categorized into five categories, including single, having a regular partner, making a relationship, having a casual partner, having more than one in the making a relationship process, and other.

3.6.2.15 Timing for Current Sexual Relationship with their Partner

Timing for current sexual relationship with their partner means how long they have known their partner in their current sexual relationship. The categories were divided into four categories which consisted of 1-15 days, 16-30 days, 31-60 days, and more than 60 days.

3.6.2.15 Sexual Preference

Sexual preference means the respondent's favorable attitude toward his sexual identity.. This was categorized into four categories including active role only, passive role only, versatile role, and other.

3.6.2.16 Secure Condom

Secure condom means how they obtained/received the condom. This was categorized into three categories, which included distributed, bought it, and other.

3.6.2.17 Ability to Acquire a Condom

This concept means the respondent's ability to acquire a condom whenever he was going to engage in sexual activity. This concept was measured with the following question:

"Do you think you are able to acquire a condom whenever you want to have sex?"

There were two response categories for this question: yes or no. A score of 1 was assigned if they responded "Yes" and 0 if they responded "No".

3.6.2.18 Affordable Condom Price

Affordable condom price means if the respondent feels that he is able to afford the condom price in the market whenever he is going to have sex. This concept was measured using the following question:

"Do you think that cost of a condom price is a burden for you whenever you are going to engage in sexual activity?"

There were two response categories for this question: yes or no. A score of 1 was assigned to those that responded "Yes," and a 0 score for those that responded "No."

3.6.2.19 Experience of Anal Sexual Intercourse

The experience of anal sexual intercourse means the respondent's past experience of anal sexual intercourse within three months, measured with the following question:

"Have you had anal sexual intercourse within the past three months?"

There were two response categories here: yes or no. A score of 1 was given to those that responded "Yes," and 0 to those that responded "No."

3.6.3 Scale Construction

Regarding scale construction, there was a variety of scale points to measure attitude and perception, ranging from 3 to 11 points. The scale also exhibited differenced in strengths and weaknesses. This study employed an 11-point scale (score from 0 to 10) to measure on and perceived variables because an 11-point scale could produce data with greater variety than a scale with fewer points.

3.6.4 Pretest, Validity, and Reliability

A semi-structured questionnaire was used to collect the data in response to objective #1 and was pretested with members of the NAMc and PCM that were involved in applying and implementing Thailand NAS 2012-2016, ensuring that each question was valid. In addition, this study used the triangulation method by re-checking with other members that participated in Thailand NAS 2012-2016and other members of the PCM from other provinces responding to the semi-structured questionnaire in order to seek reliability.

Regarding objective #3, the structured questionnaire was pretested with the samples in order to determine validity. Factor analysis was employed for the internal validity of each construct. The reliability employed a reliability coefficient alpha to test for the reliability of each concept such as the information, motivation, behavior skills, perceived cost of the negative aspects, perceived benefits of using a condom, self-efficacy, sexual excitement, and intimacy constructs.

3.7 Data Collection

Regarding objective #1, this study employed a semi-structured questionnaire to interview the key informants from national level and three provincial levels in order to gain in-depth information about Thailand NAS 2012-2016 in terms of how it was developed at the national level, and how it has been applied and implemented at

the center and provincial levels. A total of four persons were interviewed to respond to how the current Thailand NAS 2012-2016at the national level was developed at the national level, and how it has been applied and implemented at the center and provincial levels. In addition, six persons were interviewed to respond to how Thailand NAS 2012-2016 has been applied and implemented at the provincial level.

In terms of objective #2, this study used desk- review-related information on the CPS model in order to identify whether the CPS Model was built upon the reviewed theories in chapter 2 (the HBM, the ARRM the TM, the SCT, the TRA, the TPB, and the IMB model) to identify which theory contributed to the CPS model, and to analyze how those contributed theories were interconnected in the CPS.

For objective #3, this study collected data by using a structured-questionnaire with those individuals that fit the criteria discussed above in the population and sampling section in order to gain an understanding of the condom use behavior among the MSM population in the three provinces. In order to increase the ability to reach out to the MSM, this study employed two channels. The first was employing a web-based link. This web-based link was distributed to MSM networks through a network of MSM community-based organizations in each province. The second channel was a paper-based questionnaire for those that did not able to contract to the web-based link questionnaire. The total 301 questionnaires items were received.

3.8 Data Analysis

In terms of describing the current Thailand NAS 2012-2016 in Thailand, particularly regarding what the characteristics of the current Thailand NAS 2012-2016 were, how it was developed at the national level, and how this strategic plan has been implemented in the three provinces (Bangkok, Chiang Mai, Phuket), this study analyzed data by interviewing key informants, four persons at the national level and nine persons at the provincial level, in order to describe on how each province has applied and implemented The National HIV/AIDS strategic plan for MSM and what differences and similarities existed among these three provinces when implementing the plan for MSM in their provinces.

In terms of analyzing the CPS model in order to identify whether it was built upon the reviewed theories in chapter 2 (the HBM, the ARRM the TM, the SCT, the TRA, the TPB, and the IMB model) and how it was built. Deck review and content analysis were employed.

In terms of proposing a new theoretical model to explain condom behavior among the MSM population, SPSS was employed to analyze the data and to create statistical tables in order to present the data. The statistics were employed for this study as follows:

1) Frequency tables were employed in order to describe the characteristics of the samples of this study.

2) Regression was employed to predict the relationship between the independent and dependent variables.

CHAPTER 4

RESERCH FINDINGS

As seen in the methodology chapter, the sample for this study was first, MSM that have been in Bangkok or Chiang Mai or Phuket for more than 3 months before this study was conducted; second, they voluntarily participated in this study since there were some sensitive questions concerning their sexual behavior in the past three months that they needed to respond to; third, they had to identify themselves as MSM. In the end 301 respondents participated in the study.

The results of the study were divided into 3 parts according to the objectives of the study as listed below:

4.1 Objective 1. Exploring the Current Thailand NAS 2012-2016 in Terms of:

4.1.1 What the characteristics of the current of Thailand NAS 2012-2016 are

4.1.2 How has it been formed at the national level

4.1.3 How has it been applied and implemented at the provincial level.

4.2 Objective 2. Analyzing the theoretical underpinning of the CPS in terms of:

4.2.1 Identifying whether the CPS model was built upon the reviewed theories, namely the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model

4.2.2 Identifying which theories have contributed to the CPS model

4.2.3 Analyzing how those contributed theories are interconnected in the CPS model.

4.3 Objective 3. Explaining the condom use ratio of MSM in selected provinces under the study in terms of:

4.3.1 Identifying the characteristics of MSM that use condoms

4.3.2 Identifying which determinant factors have influenced the condom use ratio of MSM.

Regarding 4.1. Objective 1: Exploring the current Thailand NAS 2012-2016, it will be discussed based on each sub-objective below:

4.1 The Characteristics of the Current Thailand NAS 2012-2016

The Asian epidemic model suggests that 41 of 43,040 new HIV infections during 2012-2016 fell under the MSM population, sex workers, and clients. Therefore, Thailand NAS 2012-2016 prioritized key populations through using innovation and optimization as themes in order achieve the "getting to zero theme"- zero on new infections, zero on AIDS deaths, and zero on stigma and discrimination.

The Thailand NAS 2012-2016 consists of two directions and five strategies, which are as follows:

Strategic direction 1: Innovation in change consists of four strategies as listed below:

Strategy 1 Expand rights-based approach and gender-sensitivity comprehensive prevention services for populations with the highest number of HIV transmissions

Strategy 2 Expand the protective social, legal, and gender-sensitivity environment essential for HIV prevention and care

Strategy 3 Increase involvement and a sense of ownership at national, provincial and local levels in the expansion of the prevention and control of AIDS

Strategy 4 Develop a strategic information system to increase the efficiency of prevention and control of AIDS at all levels

Strategic Direction 2: Optimization and Consolidation

Strategy 5 Improve quality standards and existing programs so that they are more intensive and integrated in the following areas:

1) Prevention of mother-to-child HIV transmission
2) Prevention among youth
3) Comprehensive condom programming
4) Blood safety

5) Treatment and care for people living with HIV/AIDS
6) Care and support for children affected by AIDS
7) Reduction of stigma and discrimination
8) Public communication

In addition, it was mentioned how the management for Thailand NAS for 2012-2016 structure was established and functioned to ensure that the Thailand NAS for 2012-2016 was implemented effectively at lower levels, particularly the provincial level. Finally, the estimated budgeting was also discussed in order to achieve the ultimate goal of Thailand NAS 2012-2016, which included the indicators.

4.1.1 Forming Thailand NAS 2012-2016

In terms of how Thailand NAS 2012-2016 has been formed, an interview was conducted with two key informants that took the lead in the development of Thailand NAS 2012-2016 at the national level. One was a senior government officer from the Department of Disease Control, Ministry Of Public Health, and one was a representative of the MSM community-based organization that had been involved in the entire process of the development of Thailand NAS 2012-2016, particularly the MSM component.

This study employed a semi-structured questionnaire to interview those two key information persons. The semi-structured questionnaire consisted of eight dimensions including structure and process, partnership and networking, project management, monitoring and evaluation, technical capacity building, financial management, and human resource management.

In order for having a comprehensive picture of how Thailand NAS 2012-2016 has been formed at the national level, and then applied and implemented at the provincial level, this study employed the same semi-structured questionnaire to collect data at both the national and provincial levels. However, some of the content of semi-structured questions for both the national and provincial levels may have differences since they were adjusted in order to be tailored to the national and/or provincial context.

Under this objective, the results of how Thailand NAS 2012-2016 has been formed at the national level is discussed below:

4.1.1.1 Structure and Process of the Development of Thailand NAS 2012-2016

Both key informants from the government and MSM community-based organization provided a historical brief in terms of how Thailand NAS 2012-2016 was developed. Both of them mentioned that the NASP actually is conducted every five years.

An observation from both key informants was that Thailand NAS 2004-2008 did not look like a strategic document since the process of coming up with it was just a matter of pushing all of the existing interventions/activities for key populations particularly MSM and putting them into a format provided by the bureau of AIDS, tuberculosis and sexual transmitted infections (BATs). The process to come up with Thailand NAS 2004-2008 was that the BATs convened a meeting by inviting community-based organizations (CBOs) and governmental organizations (GOs) partners to brainstorm and come up with activity lists for key populations, particularly MSM, that were implemented during that period of time. Actually, the activity lists did not reflect much what the country would plan to implement in order to reduce HIV prevalence in key populations, particularly MSM, across the country as strategic direction documents. Finally, Thailand NAS 2004-2008 arrived and it should be counted as an operational plan document rather than as a strategic plan for reducing HIV prevalence in key populations, particularly MSM.

In 2007, it was time to develop Thailand NAS 2008-2012. This updated Thailand NAS 2008-2012 was officially counted as Thailand NAS that included key populations, particularly MSM, in this strategic document.

During that period of time, the study of Thailand-U.S. Collaboration revealed that the HIV prevalence in MSM in Bangkok was 17.8%, which was higher than the general population. There therefore was an urgent need of the Thailand MoPH, DDC to tackle this situation. These data also were paid attention to by international aid agencies and donors that were considering putting their effects in order to help Thailand curve down the HIV prevalence among the MSM population, particularly in major cities.

Given the severe situation above, the DDC developed a proposal to be submitted to the GFATM round 6, focusing on key populations, including MSM prevention, care, support, and treatment projects. Being unclear about HIV prevention, care, support, and treatment strategies for key populations, including MSM, unfortunately, they were not able to succeed in securing funding from the GFATM round 6.

In 2008, having a clear strategy on HIV prevention, care, support, and treatment for key populations, particularly MSM, through utilizing the CPS model as a framework of implementation, using existing evidence-based interventions, and receiving technical assistance from international aids agencies, the DDC, along with community-based organization partners, again put their effort into jointly submitting a proposal to the GFATM round 8, focusing on key populations, including MSM. Finally, Thailand was able to secure five-year funding from the GFATM round 8,which began to be implemented during 2008-2012.

Whereas the GFATM round 8 had been implemented in 31 prioritized provinces, the NAMc under the DDC, MoPH, also prepared all related information in order to review and revise Thailand NAS 2012-2016 by utilizing the CPS model as a framework for implementation and evidence-based information from those 31 prioritized provinces. Those members that were part of the development of Thailand NAS 2012-2016 came up with a strategic direction theme for Thailand NAS 2012-2016 that was focused on innovation and optimization for HIV prevention, care, support, and treatment interventions. Consultative meetings supported by international aid organizations such as WHO and UNAIDS by hiring consultants and convening meetings were held. Finally the first draft of Thailand NAS 2012-2016 arrived in the country.

In terms of selecting the NAS members that were to help develop Thailand NAS 2012-2016, rather than setting up a formal selecting process, both key informants mentioned that it actually did not have a formal process of member selection. They invited those that had expertise in HIV prevention, care, support, and treatment from both GOs, non-governmental organization, and CBOs to be members of technical working groups divided into different areas such condom procurement, MSM, including men sex worker and transgender women, female sex worker, etc.

Then, each technical work group voted for their representative to serve as an NAS member in order to develop Thailand NAS 2012-2016.

In addition, international aid agencies such as Thai-U.S. collaboration, UNAIDS, WHO and USAID were invited and provided technical input as technical experts whenever the DDC convened a series of consultative meetings regarding the development of Thailand NAS 2012-2016.

4.1.1.2 Strategy and Planning

Both key informants stated clearly why the members of Thailand NAS 2012-2016 prioritized MSM as the key population. They mentioned that based on data from the TUC revealed in 2005, surveillance data conducted from the Bureau of Epidemiology (BoE), MoPH, HIV prevalence among MSM had been increasing significantly compared with the general population that did not excess 0.2%. In addition, the series of projections from Asia Epidemic Model—statistical projection modeling—also showed that MSM would be a main driver for the HIV epidemic in the country if the country did not intervene in this kind of situation with a comprehensive program. Thus, this crisis situation drew the attention of the government, particularly the DDC, MoPH, in order to put all resources and efforts from various stakeholders into halting this epidemic.

4.1.1.3 Partnership and Networking

Both of key informants stated clearly that, fortunately, the DDC, MoPH, had been working with CBOs and had a positive attitude towards them because they believed that the government organization did not have direct experience working with people such as MSM whom they wanted to work with. Partnerships and networking with MSM CBOs could help them design appropriate prevention, care, support, and treatment interventions tailored to MSM's needs.

In addition, both of them also mentioned that the members of the NAS 2012-2016 wanted to pull all existing resources, particularly technical and expertise from international aid agencies, in order to help country achieve the goals of prevention, care, support, and treatment projects. For example, the NAS started to partnership and network with stakeholders through opening forums aiming at learning from international aid agencies and CBO's experiences and to create collaboration with those agencies. Finally, the NAS members invited representatives from each

agency in order to participate in technical working groups under the MSM NAS committee.

Besides having meaningful information to design HIV prevention, care, support, and treatment interventions tailored to the needs of MSM, one of the key informants mentioned that partnerships and networking with MSM CBOs were able to empower and build their capacity in order to absorb the technical and management skills from experts both from international aid agencies and GOs. This processes brought about mutual benefit between the CBO and government sides. All of the reasons mentioned above showed why and how Thailand NAS 2012-2016 created a partnership and networking with the CBOs and international aids agencies.

4.1.1.4 Project Management

In terms of how the NAC has played a critical role in developing Thailand NAS 2012-2016, one of the key informants that was a senior government officer and had taken a lead in the development of Thailand NAS 2012-2016 explained how Thailand NAS 2012-2016 was managed, from the national level to the provincial level as seen in the figure below.

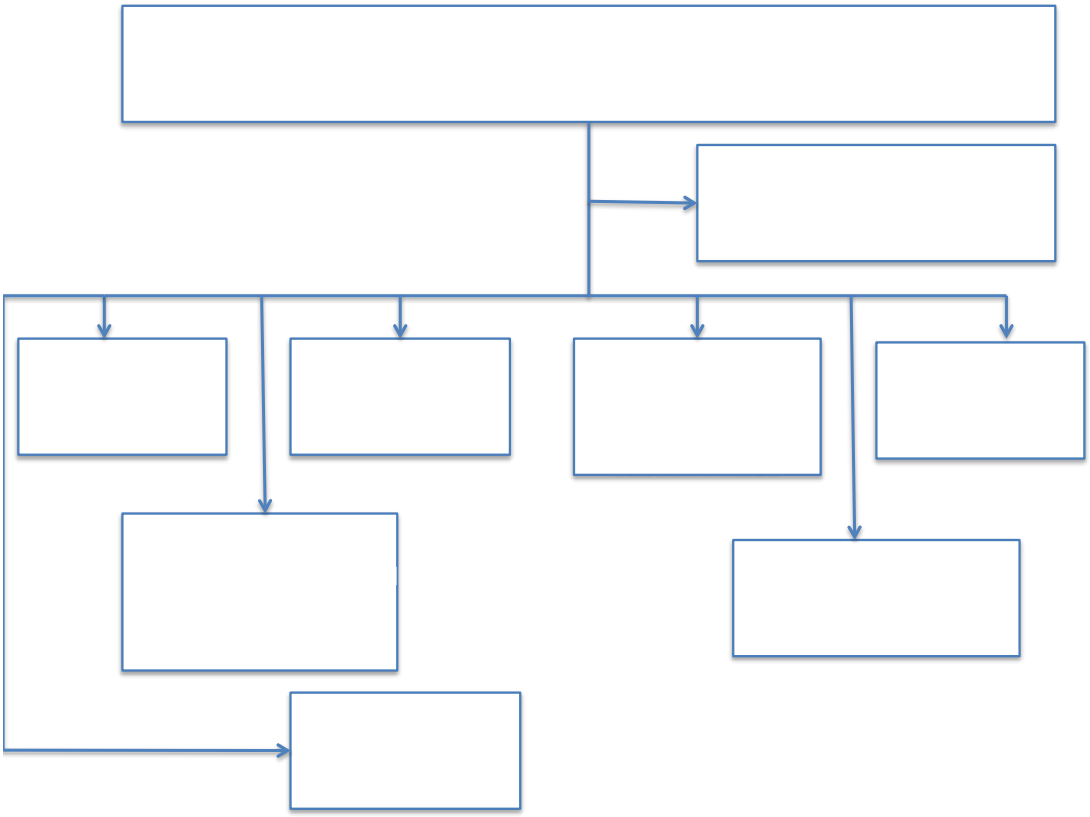

Figure 4.1 The National AIDS Committee Organizational Structure

As seen in the figure above, the NAC through NAMc facilitated a dialogue and discussion between the stakeholders those who have been working with MSM interventions on the part of the government, CBOs, and international aid agencies in order to develop Thailand NAS 2012-2016.

To ensure that Thailand NAS 2012-2016 mentioned clearly why it needed to work with the MSM population and how it has been applied and implemented effectively at the provincial level, the NAMc as secretariat worked closely with the PCM—which was chaired by the head of the provincial health office—by encouraging the PCM to utilize Thailand NAS 2012-2016 as a framework to develop an operational plan for HIV prevention, care, support, and treatment interventions for MSM at the provincial level. However, both of key informants provided similar information, saying that even if the national level attempted to encourage all provinces to utilize Thailand NAS 2012-2016 as a framework for the

development of HIV prevention, care, support, and treatment intervention for MSM, the NAC through the NAMc did not provide a budget to implement those interventions aligned with Thailand NAS 2012-2016.

In addition, one of the key informants that was a senior government officer and took the lead on the development of Thailand NAS 2012-2016 mentioned that in order to ensure that each province applied and implemented Thailand NAS 2012-2016 effectively at the provincial level, the NAMc as secretariat of the NAC set up indicators and targets at the national level, related with getting to three zeros; namely, zero on new infections, zero on AIDS-related deaths, and zero on stigma and discrimination. This needed to be achieved by each province and such an achievement would contribute to national-level achievements. This implies that the PCM needs to apply and implement Thailand NAS 2012-2016 as a framework to develop an operational plan for HIV prevention, care, support, and treatment interventions for MSM and report back to the national level in order to aggregate all of the data to indicate national achievements.

Having a clear on management structure of Thailand NAS 2012-2016 based on the figures above, both key informants stated clearly that the NAMc as secretariat of the NAC has worked closely with the PCM, who took care of the management of HIV prevention, care, support, and treatment interventions for MSM at the provincial level; however, this management structure did not work as anticipated for several reasons. For instance, the PCM did not take care of only MSM-related HIV issues at the provincial level. Moreover, the PCM had different experiences working with key populations, including MSM. This two reasons mentioned above led for ineffectively design the HIV prevention, care, support, and treatment interventions for key populations including MSM, even Thailand NAS 2012-2016 was utilized as framework for design intervention.

4.1.1.5 Monitoring and Evaluation

Given the project management structure mentioned above, the NAMc introduced the Routine HIV Information System (RHIS) in order to monitor the progress of HIV prevention, care, support, and treatment interventions for MSM that utilized the CPS model as a framework to develop an operational plan at the provincial level. All of the data were collected by the PCM and sent back to the

national level. The NAMc took a lead in aggregating the data and came up with an annual HIV national report.

Thailand has actively responded to the HIV situation. For example, the NAMc introduced a real time monitoring data system called the AIDS Zero portal to collect data for all populations, including MSM, in terms of the progress of HIV prevention, care, support, and treatment interventions.

This kind of innovation gave the national level real time data and enabled the production of an HIV national report that fit with the current situation and improved it as much as possible.

In addition, this real time monitoring data system collected at the provincial level was encouraged by the NAMc to be used for designing and reshaping HIV prevention, care, support, and treatment interventions at the provincial level led by the PCM. This encouraged all levels to use the data in strategic decision making.

Both key informants also illustrated that even if the monitoring and evaluation system was not implemented as planned, the NAMs, as a secretariat for Thailand NAS 2012-2016, was able to provide and share resource tools from various agencies that were effective and aligned Thailand NAS 2012-2016 with the PCM at the provincial level.

4.1.1.6 Technical Capacity Building

Regarding the NAMc as secretariat for the management structure of Thailand NAS 2012-2016, both key informants mentioned that the NAMc set up a capacity development plan in order to build the technical capacity of the members of each technical working group under the structure mentioned above. However, it was mostly a meeting that did not cover other aspects of the capacity-development area.

In addition, one of the key informants that was a senior of governmental officer mentioned that the NAMc originally planned for utilizing the existing DDC structure to build the technical capacity for those members of the Office of Disease Prevention and Control (ODPC) throughout the country to be a technical lead office helping each province under their responsibility to develop an action for technical capacity building. This included the development of a monitoring and evaluation plan that aligned with the RHIS. However, it did not happen as anticipated since the ODPC has an insufficient staff for coaching and mentoring provision for each province under

their responsibilities. Moreover, one of the key informants from the MSM CBO indicated that it was a ridiculous situation that when the NAMc set up training courses such as monitoring and evaluation, operational plan development, etc., they invited the ODPC and all provinces to participate in the train course at the same time; it meant that the representatives from the ODPC, which was expected to provide coaching and mentoring for each province under their responsibility, had equal knowledge with the representatives from each province. Thus, it was a difficult situation for the ODPC staff to provide coaching and mentoring for each province.

In terms of where the members of Thailand NAS 2012-2016 received technical capacity building, both key informants stated clearly that all of the members of the technical working groups were experts from representatives of GOs, the MSM CBO, and international aid agencies. Therefore, these expert persons did not need to build their technical capacity. In reality, all of them provided technical guidelines and inputs for effective implementation of HIV prevention, care, support, and treatment interventions for MSM.

At the provincial level, rather than having a budget for technical capacity building at the national level as a lead for technical capacity development provision as planned, all of the members of the PCM used a project-based budget to build their own capacity. Therefore, the national level was not able to control in terms of the topics needed for the training of the PCM members to be able to help to design interventions effectively for HIV prevention, care, support, and treatment for MSM. One of key the informants from the CBOs made a critical observation—that without setting aside budgeting for technical capacity building and relying on project-based budgeting for this components was not a sustainable method since whenever a project ends, the capacity development plan ends as well.

However, in the current situation, Thailand NAS 2012-2016 through the NAMc as secretariat developed a national operational plan and utilized BATs as one of the DDC's structures to provide technical capacity building at the provincial level rather than relying on the ODPC as planned since the OPDC has a insufficient staff. The BATs conducted a mapping exercised by utilizing the CPS model as a framework for what had been implemented in both provinces receiving and not receiving GFATM round 8 funding in order to develop a long-term strategy for HIV prevention,

care, support, and treatment for key populations, including MSM. This activity was under PCM's responsibility.

4.1.1.7 Financial Management

One of the key informants that was a senior government officer mentioned that the NAMc took a lead in the projection of the finances needed to ensure that the country could achieve the goals of ending AIDS strategy as anticipated in 2030.

The national operational plan including costing for each province was set up. This could help the country identify where they could receive the money as planned to end AIDS in 2030 as aiming for.

Moreover, a senior government office that was one of the key informants of this study mentioned further that actually, the National Health Security Office (NHSO), which was the main contributor for care, support, and treatment interventions, could be able to provide services to key populations, including MSM; however, investing in the prevention side was critical and did not have main government funders for this part. Thus, the NAMc together with the DDC had attempted to seek prevention funding for key populations including MSM through requesting a budget from the national level to set up a preventive fund. One of the main government funders to fund preventive funding was the NHSO by amending its mandating from care, support, and treatment to prevention, care, support, and treatment interventions. This was in processes of seeking for funding. Once they receive prevention funding as planned to implement prevention, care, support, and treatment for key populations, including MSM, the budget would be distributed to each provincial level through the PCM, which would take charge of managing this budget and report back at the national level.

4.1.1.8 Human Resource Management

Both key informants mentioned that the NASP through the NAMc did not assign a person to take care of HIV prevention, care, support, and treatment interventions for MSM.

4.1.2 Applying and Implementing Thailand NAS 2012-2016 at Provincial Level

In order to respond to how Thailand NAS 2012-2016 has been applied and implemented at the provincial level, the qualitative method was employed to collect the data by using a semi-structure questionnaire which consisted of eight dimensions (organizational structure and process, partnership and networking, project management, monitoring and evaluation, technical capacity building, financial management, and human resources management) in order to interview the three key informants that were part of applying and implementing Thailand NAS 2012-2016 at the provincial level. The results from the interview are discussed below.

4.1.2.1 Organizational Structure and Process to Apply and Implement Thailand NAS 2012-2016

Given successful and secure funding from the GFATM round 8 targeted for key populations including MSM, the PCM was proposed under this proposal to coordinate and manage HIV prevention, care, support, and treatment interventions.

Given the experiences of the government-led HIV management at the provincial level by the Provincial AIDS Committee (PAC), the DDC, MoPH as government principal recipient (PR- DDC) that took the lead in GFATM round 8 proposal development, thought carefully that the current management of the PAC did not have flexibility to allow CBOs to have meaningful participation in order to raise the related issues from the ground. In addition, all of PAC members were occupied by GO representatives from various ministries at the provincial level. Moreover, the chairperson of the PAC was the provincial governor. This mechanism seemed to be an official structure and was not able to create more room for dialogue and discussion among all stakeholders.

In order to implement effectively the GFATM round 8 targeted on key populations including MSM, the meaningful participation from the CBOs at the provincial level was needed in order to provide meaningful information so that the project could be a success as anticipated. That was why the PCM was established in 2009. The chairperson of the PCM was the Chief of the Provincial Health Office.

However, there was overlapping in the anticipated roles and responsibility of the PAC and PCM. The difference between the PCM and PAC was

only in its members. The PAC members were dominated by representatives of GOs from various ministries at the provincial level, whereas the PCM members were a balance between government officer representatives from various ministries at the provincial level and representatives from the CBOs, including MSM CBOs.

Given the strengths of the PAC, three key informants from the provincial level in this study mentioned that the provincial level has attempted to utilize the PAC's strength for various purposes. When the PCM needed to advocate for policy-changing issues related to the HIV and MSM at the provincial level, for example, the chief of the HIV prevention section of the Public Health Office (PHO), who took a lead in being the chairperson of the PCM, utilized the strengths of the PAC in terms of having power for policy change at the provincial level in order to create effective HIV implementation.

The PAC members consisted of representatives of GOs from various ministries at the provincial level, who were able to make changes on policy at the provincial level, but the PCM did not have the kind of power that PAC members have.

This implies that the PCM in this study has been successful in integrating and leveraging the strengths of the PAC in order to facilitate and accelerate HIV implementations at the provincial level.

In terms of selecting PCM members, actually, the chief of HIV prevention from the PHO served as a chairperson of the PCM and mentioned that the PCM did not have a formal selective process concerning who should be invited as a PCM member. However, the way in which they selected PCM members was to invite representatives from the CBOs that worked on the same areas, such as sexual diversity groups, including MSM, and transgender women, minority groups, youth, IDUs, etc. Given autonomy to the CBOs, each group has its own selective process in order to propose who should be selected to serve as a member of the PCM. Finally, the PCM members consisted of 16 persons that came from both government organizations and CBOs. The province under study here categorized all existing CBOs into nine sub-groups called the sub-PCM as presented in the figure below.

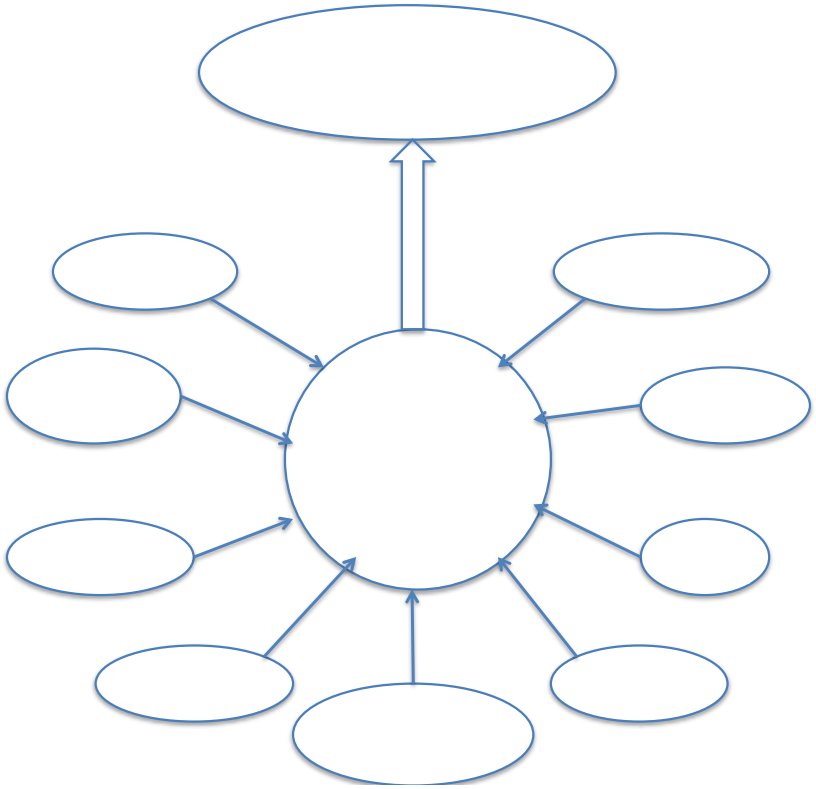

Figure 4.2 Provincial Coordinating Mechanism Organizational Structure and How it Links with the Provincial AIDS Committee

4.1.2.2 Strategy and Planning

The three key informants mentioned the similarity in how the MSM was prioritized at the provincial level because the province in this study participates in an integrated biomedical behavioral survey conducted every two years by the Bureau of Epidemiology, Ministry of Public Health. The data have shown that HIV prevalence among MSM has been increasing significantly in the major cities across the conducted sites including the provinces in this study. This situation called for attention from the DDC, MoPH in order to alert all of the major cities to prioritize MSM as a high-risk group that needed the prevalence of HIV to be lessened.

The three key informants also stated clearly that the PCM in this study utilized the current activities conducted by the MSM CBOs, who implemented prevention, care, support, and treatment interventions for MSM in order to respond to

the HIV situation in their province. The PCM just helped all of the MSM CBOs to ensure that they could work together effectively and compliment each other and finally be able to achieve the goals as anticipated. Fortunately, the CPS model was employed as a framework to implement HIV prevention and care for MSM projects at the national, provincial, community levels; therefore, the achievement of HIV prevention, care, support, and treatment interventions at the community level were able to contribute to higher levels, such as provincial and national levels.

4.1.2.3 Partnership and Networking

All of the key informants agreed upon on the benefits of partnership and networking with MSM CBOs. They mentioned that the PCM believed that they could not achieve the objective of HIV prevention, care, and treatment interventions for MSM at the provincial level if they did not work closely with existing MSM CBOs and its network, which was at the forefront to reach MSM and to be able to give these MSM access to care, support, and treatment as needed in order to reduce HIV prevalence at the provincial level. Rather than working without insightful information, the PCM believed that working closely with the MSM CBOs and their network, who have more experience with MSM in the province, could help their province achieve HIV prevention, care, and treatment for MSM targets as they anticipated.

4.1.2.4 Project Management

It was quite clear what was the role of the PCM was since all of the three key informants had similar ideas about project management—that the PCM has a critical role of ensuring that Thailand NAS 2012-2016 would be implemented at the provincial level effectively. In addition, the major role of the PCM was to develop the Provincial HIV Strategic Plan (PASP), which needed to be aligned with Thailand NAS 2012-2016. This included the development of an operational plan identifying how to implement the PASP effectively in order to achieve anticipated targets and to able to contribute to national achievements, which was mentioned on the National Monitoring and Evaluation Plan aligned within Thailand NAS 2012-2016.

4.1.2.5 Monitoring and Evaluation

There was difference in the interpretation of the monitoring and evaluation system under the PCM's anticipated roles and responsibilities, as one of three information persons mentioned that the PCM did not play a critical role in the

monitoring and evaluation system—they relied this function with each project indicator implemented by the MSM CBOs. However, two of the key informants stated that the PCM utilized its roles and responsibilities as a coordinating mechanism to monitor the progress of each project implemented by the MSM CBOs funded from different sources, both international and domestic, by setting up a meeting to share lessons learned and best practices on HIV prevention, care, support, and treatment interventions for MSM. Thus, the PCM was able to monitor the progress of each project as to whether it achieved the results as anticipated. This implies that there were no clear on roles or responsibilities among the PCM members regarding on M&E system under the PCM's anticipated roles and responsibilities.

4.1.2.6 Capacity Building

Since the PCM was established from GFATM round 8 proposal to increase the effective management for HIV prevention, care, support, and treatment interventions for MSM at the provincial level, only one key informant, who was a chairperson of the PCM, was able to elaborate on the capacity-building component that was planned for capacity development for the PCM members that would manage HIV prevention, care, support, and treatment interventions for MSM at the provincial level. On the other hand, two of the key informants did not able to recall whether they attended trainings to build their capacity for better management capacity regarding HIV prevention, care, support, and treatment interventions for MSM at the provincial level.

One key informant that was able to elaborate more detained information on the capacity-building component mentioned that the main capacity building component was strategic mapping, monitoring and evaluation, and proposal writing in order to leverage resources from the Provincial Administration Office (PAO) to ensure that HIV interventions would be integrated into the PAO annual budget plan as one of the ultimate goals of the PCM's anticipated roles and responsibilities under the GFATM round 8 proposal.

This same informant also stated that the PCM had an annual meeting to review and revise the PASP. The PCM integrated all of these training courses into the annual meeting agenda in order to build the capacity of the members that did not attend the trainings at the national level. Moreover, the PCM used its strengths by

coordinating all training courses that took place at the provincial level and made an announcement to the CBOs that were interested in sending their members to participate in the training courses.

The PCM members that were interviewed in this study and were representatives of the MSM CBOs mentioned that they did not recall that there attended training courses provided at the national level as mentioned by the PCM's chairperson. This implies that the process of capacity development under the PCM did not have a clear action plan in terms of what training courses would be needed and did not have effective communication with the PCM members about the training courses provided at the national level in order to build PCM members' capacity.

4.1.2.7 Financial Management

It was obvious that all of the key informants that were PCM members in the province we studied mentioned that the PCM did not have a mandate for having financial management roles; the PCM only provided technical feedback and input on each project funded by various sources, both international and domestic, to ensure that the budget allocation was able to respond to the current HIV situation at the provincial level.

As mentioned above that the PCM did not have a role in financial management, they had a mandate for leveraging the funding from the PAO to ensure that the PAO's annual budget plan could integrate or allocate sufficient budget for HIV intervention for key populations, including MSM, who had driven the HIV epidemic at the provincial level. In addition, leveraging funding from the PAO was one of the indicators that the PCM needed to report back to the PR-DDC, which was the principal recipient of the GFATM round 8 and which funded the PCM.

4.1.2.8 Human Resource Management

In terms of assigning a person to take care of MSM intervention from the PCM, all of the key informants stated clearly that the PCM did not assign a full-time PCM member to take care of MSM interventions. The PCM just assigned only a coordinator—a Provincial Health Officer staff member—to coordinate with the MSM sub-PCM members once they convened a meeting or had urgent things the needed to be consulted. All of them mentioned that the PCM gave authority to each sub-PCM group to manage themselves in terms of the project and other related issues. The PCM only coordinated and facilitated the learning and sharing processes.

4.2 The Comprehensive Package of Services Model: Content Analysis

All of the information above elaborated on how Thailand NAS 2012-2016 has been formed, applied, and implemented at the provincial level. In the next section will discuss on item 4.2 as an objective 2 of the study that we aimed to analyze theoretical perspectives/models underlined the CPS that has been employing as a guideline for HIV prevention framework mentioned over Thailand NAS 2012-2016.

In order obtain comprehensive responses for this objective; the responses were divided into 3 sub-objectives as follows:

4.2.1 To identify whether the CPS model was built upon the reviewed theories; namely, the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB Model.

4.2.2 To identify which theory contributed to the CPS model.

4.2.3 To analyze how those contributed theories are interconnected in the CPS model.

In order to respond to sub-objective 4.2.1 concerning whether the CPS model was built upon these seven reviewed theories as mentioned in the literature review chapter, the key concepts of these seven reviewed theories will be briefly explained. Then, what the characteristic of CPS model is will be discussed, including its ultimate goal and how it functions, in order to deliver the CPS model to MSM as the targeted population. Finally, whether the CPS model was built upon these seven reviewed theories will be discussed.

4.2.1 To Identify Whether the CPS Model was Built Upon the Reviewed Theories; Namely, the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB Model.

In the literature review section, seven theories, namely, the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model. Actually, each theory has a difference concept and assumption for explaining behavioral change at the individual level. In order to obtain a big picture of these seven theories, the key concepts and the assumptions of each theory are listed below.

4.2.1.1 Health Belief Model (HBM)

This model aims to explain how and why individuals change their behavior and how those people maintain their preventive behavior. While the HBM's

assumption stated that if individuals are susceptible to disease, they are likely to take action they believe will reduce their risk. Therefore, given the information in the HBM model, it implies that HBM model explains behavioral change based on its assumption—that it begins with people's susceptibility to disease, and they are likely to take action if they believe that it reduces their risky behavior. It also implies that the HBM model supports the idea that a systematic explanation of behavioral change begins from one point to others in the line of anticipated behavior—reducing risky behavior.

4.2.1.2 The AIDS risk Reduction Model (ARRM)

This model also focuses on behavioral change. The ARRM's assumption is that change is a process that individuals must to go through. Moreover, according to the ARRM, changing individual behavior is based on the differences affecting the factors on each stage of behavioral change.

4.2.1.3 The Trans Theoretical Model (TM)

The TM model focuses on dynamic processes of behavior change like the ARRM. Its assumption is that there are six stages that people must to go through when they change their behavior called pre-contemplation, contemplation, preparation, action, maintenance, and termination. Since this theory does not believe that behavioral change is a pattern that people move forward from one point to another point in the line of anticipated behavior, therefore, this means that people are able to move back from one point to another point in the line of anticipated behavior even if they already have moved to the next stage, which is based on the affecting factors that people confront at that time.

4.2.1.4 The Social Cognition Theory (SCT)

The SCT emphasizes social and self-regulation skills and self-behavioral skills factors. This theory includes social factors that affect individual behavior. The assumption of this theory is that changing individual behavior relies on social and self-regulation skills, and self-behavioral skills. This theory explains individual behavior based on moving up to the next stage of behavioral change, where an individual moves forward from one point to another point in their behavioral change.

4.2.1.5 The Theory of Reasoned Action (TRA)

The TRA attempts to look at the relationships among attitude, intention, and behavior. Its assumption is that behavior is predicted by an individual's intention, whereas intention is predicted by the individual's attitude and subjective norms. This kind of explanation indicates that the theory of reasoned action explains behavior based on a systematic explanation, which means that an individual has to move forward from one point to another point in the line of anticipated behavior, as with the HRM and SCT.

4.2.1.6 The Theory of Planned Behavior (TPB)

The TPB was extended from the theory of reasoned action by adding perceived behavior control to the model. The theory of planned action postulates that perceived control is an independent determination of behavior intention along with attitude towards the behavior and subjective norms. Like the theory of reasoned action, the theory of planned behavior explains behavioral change as moving from one to another point in the line of anticipated behavior as a systematic explanation.

4.2.1.7 The Information-motivation-behavioral Skills Model (IMB)

The IMB focuses on the extent to which an individual is well-informed, is motivated to act, and has appropriate behavioral skills; then they will be likely to initiate and maintain the pattern of HIV preventive behavior. Like the HBM, the SCT, the TRA, and TPB the IMB model explains individual behavioral change based on a systematic explanation, which means that people change their behavior from one to another point in the line of anticipated behavior.

Table 4.1 A Summarized Psychological Theories

Theory	**General information**	**Assumption**	**Explanation**
The HBM	Explains how and why individuals change their behavior and how those people maintain their preventive behavior	If individuals are susceptible to disease, they are likely to take action they believe will reduce their risks.	Behavioral change moves forward from one point to others in the line of behavioral change.

Table 4.1 (Continued)

Theory	**General information**	**Assumption**	**Explanation**
The ARRM	Focuses on behavioral change	Change is a process that individuals must to go through. Moreover, different factors affect movement through different stages of change.	A dynamic process of behavioral change that moves forward from one point to others in the line of behavioral change.
The TM	Focuses on dynamics of behavioral change	There are six stages that people must go through when they change their behavior, called pre-contemplation, contemplation, preparation, action, maintenance, and termination.	Change is not systematic explanation. It implies that people can move forward from one step to another step and also are able to move back from one step to another.
The SCT	Emphasizes social and self-regulation skills and self-behavioral skills. This theory includes social factors that affect individual behavior.	Changing individual behavior relies on social and self-regulation skills, and self-behavioral skills.	Behavioral change is explained based on the idea of systematic explanation; that an individual moves forward from one point to others in the line of behavioral change.
The TRA	It was developed in order to look at the relationship between	The assumption is that behavior is predicted by an	Explains behavior change based on the idea of systematic

Table 4.1 (Continued)

Theory	General information	Assumption	Explanation
	attitude, intention, and behavior.	individual's intention, whereas intention is predicted by an individual's attitude and subjective norms.	explanation, where an individual moves forward from one point to another point in their behavioral change.
The TPB	It is an extended theory of reasoned action by adding perceived behavior control to the model.	It postulates that perceived control is an independent determination of behavioral intention along with attitude towards the behavior and subjective norms.	Behavioral change based on the concept of systematic explanation, where an individual moves forward from one point to another point in their behavior.
The IMB model	Focuses on information, motivation and behavior skills leading to behavioral change	Focuses on the extent to which an individual is well-informed, motivated to act, and has appropriate behavior skills; then they will be likely to initiate and maintain the pattern of preventive behavior.	Like the HBM, the ARRM, the SCT, the TRA, and the TPB, the IMB model also explains individual behavioral change based on systematic explanation, that behavioral change in individual moves from one point to another point in the individual's behavior.

In terms of having a big picture of how each theory explains behavioral change at the individual level, the table above presents general information, assumption and how each theory explains behavioral change at the individual level.

Next, what the CPS model is? And how it functions will be discussed in order to deliver the CPS model to MSM as targeted population.

4.2.1.8 The Characteristic of CPS Model

The CPS model was mentioned as an HIV/AIDS implementation framework by the Office of Public Health, RDMA, USAID in 2004. The CPS model was implemented in 5 countries in the RDMA's portfolio at that period of time, including China in Kunming, Guangxi provinces, Burma, Laos, Thailand, and Pa Pau New Guinea. The main objective in implementing the CPS model was to develop HIV prevention for key populations; namely injecting drug users (IDUs), FSWs and MSM in hotspot areas that could be replicated in other countries by other donors and host country governments.

The ultimate goal in implementing the CPS model was to ensure that key populations, particularly MSM, were able to change their risky behavior and to avoid HIV infection by utilizing a comprehensive HIV prevention package. The CPS model components include the following:

1) Behavioral change communication through peers and outreach communication and target media
2) Condom and lubricant distribution
3) HIV counseling and testing services
4) Sexually-transmitted Infection treatment services
5) Linkages to care and treatment for those that live with HIV positive result

Given the five components above as key concepts of the CPS model, it is necessary to look into how these five components were delivered to MSM as the targeted population, which will be discussed in detail as follows.

4.2.1.9 Delivering the Five Components Under the CPS Model to MSM as the Targeted Population

These five components above cannot be delivered to MSM as the targeted population without having peer educators and volunteer outreach workers as

mediators delivering these services. Both of these groups visited the hotspot areas, which were gathering places for MSM such as bars, saunas, public parks, and karaoke bars, in order to provide HIV preventive information and distribute condoms and lubricant sachets as HIV preventive methods to them.

In addition, they also provided HIV counseling and testing information in terms of what the process of HIV counseling and testing service was like and what the benefits of HIV counseling and testing were for those MSM that were interested in this service by referring them to hospitals where they would be able to take advantage of this service.

In terms of the procedure in conducting outreach intervention in order to provide HIV preventive information, peer educators and volunteer outreach workers need to proceed in the three phases as follows.

Phase I, introductory phase, peer educators and volunteer outreach workers begin with introducing themselves to their client in order to build a relationship. The introductory phase includes providing information on who they are, which organization they work with, and finally, what the main objective is to reach out to their client.

Phase II, HIV preventive information distribution; once the peer educator and volunteer outreach worker are successful in building a relationship with their clients, they provide basic HIV information; for example, what the differences between HIV and AIDS are and how they can protect themselves from HIV acquisition. Then, they discuss the client's risk assessment to ensure that clients are able to assess themselves on the risky behavior that they have engaged in the past three months. Finally, peer educators and volunteer outreach workers encourage their clients to assess themselves on HIV counseling and testing and STI screening/ treatment services at hospitals if they have engaged in risky behavior in the past three months by issuing a referral card to them, if needed.

Phase III, provision of condoms and lubricant sachets, and questions and answers, whether or not their client is willing to access HIV counseling and testing or STI screening/ treatment services or both at the hospital, peer educators and volunteer outreach works provide condoms and lubricant sachets as HIV preventive methods to the client and emphasize the use of a condom every time they have sexual

activity. This includes a condom demonstration, if needed, on how to use it properly. Finally, they respond to questions if raised by their client.

All of the information above, including what the key concepts of the reviewed theories are, what the characteristics of CPS model are, and how the CPS model delivers to MSM as the targeted population are discussed. Then, sub-objective 4.2.1 is responded to in order to identify whether the CPS model was built from the reviewed theories.

It was found that the CPS's main objective aligns with the reviewed theories. Because the main objective of all the reviewed theories was explaining how people change and maintain their preventive behavior, the ultimately goal of the CPS model was to ensure that key populations, particularly MSM, were able to change their risky behavior and to prevent HIV infection. This implies that the CPS model has the same main objective as the reviewed theories. However, the CPS model is an operationalized model, which utilizes the reviewed theories to catalyze behavioral change to the anticipated behavioral stage as planned: HIV preventive action, such as using condoms to protect themselves from HIV acquisition. Therefore, the conclusion is that the CPS model was built upon the reviewed theories. Now the next sub-objective, 4.2.2, will be discussed, identifying which theoretical model has contributed to the CPS model.

4.2.2 Identifying Which Theoretical Model has Contributed to the CPS Model

This question will be responded to by looking at how the CPS model is delivered to MSM as the targeted population. If one looks at the way in which the CPS model is employed by peer educators and volunteer outreach workers in order to deliver the CPS model to clients, it seems to be a straightforward intervention departing from providing HIV preventive information, discussing risky assessment, referring to access to HIV counseling and testing and STI screening and treatment. This implies that the explanation of behavioral change under the CPS model is a step-by-step process, departing from the one to another point approach until reaching the anticipated behavioral stage encouraged by or facilitated by peer educators and volunteer outreach workers, which aligns with the explanation of behavioral change of the HBM, SCT, TRA, TPB and IMB models.

However, given the reason above, if we look into the theories that mainly contributed to the CPS model development, it looks as though the CPS model utilizes the reviewed theories, particularly the HBM and IMB model, to encourage people to change their behavior to the anticipated stage, which is engaging in preventive action against HIV acquisition.

The HBM, for instance, explains that If individuals are susceptible to disease, they are likely to take action they believer will reduce their risk. This aligns with phase II of the CPS model when it delivers to MSM as the targeted population, because peer educators and volunteer outreach workers help their clients to assess their risky behavior during the past three months in order to make them aware of their risky behavior, leading to HIV prevention action in the future.

The IMB model, for example, explains the extent to which an individual is well-informed, motivated to act, and has appropriate behavior skills; then they will be likely to initiate and maintain the pattern of preventive behavior. This also aligns with all three phases of the CPS model when the CPS model delivers to MSM as the targeted population, since peer educators and volunteer outworkers provide HIV preventive information, and then they help their clients to assess their risky behavior during the past three months in order to make them aware of their risky behavior, leading to HIV preventive action in the future. The CPS's utilization of the IMB model is, rather than providing HIV information, helping the client to be aware of their risky behavior. The CPS also helps their clients to change their behavior by offering HIV counseling and testing, and STI screening and treatment services, along with providing condoms and lubricant sachets as HIV preventive methods as motivation to change their behavior.

In conclusion, the CPS model utilizes the HBM, the SCT, the TRA, the TPB and the IMB model in terms of an explanation of behavioral change. However, the main theory that has contributed to the CPS model development falls under the HBM and IMB, as discussed above.

The last question falls under sub-objective 4.2.3, that is, how the HBM, the SCT, the TRA, the TPB, and IMB model are interconnected with the CPS model.

4.2.3 Identifying How the Contributed Theoretical Models are Interconnected in the CPS Model

As discussed earlier, the CPS model is an operationalized model for the five theoretical perspectives by utilizing key concepts of five theoretical perspectives in order to explain how people change their behavioral and how the anticipated behavior, such as condom use every time the client engages in sexual activity, is maintained.

Given the five theoretical perspectives contributing to the CPS model, each of them has its own critical concepts that have a power of explanation regarding HIV preventive behavior, such as condom use, based on various empirical studies, as reviewed.

The critical key concepts below are based on each of the five theoretical perspectives contributing to the CSP model:

1) The HBM explains HIV preventive behavior through susceptibility, seriousness, the benefits of and barriers to a behavior, cues to action, and self-efficacy.

2) The SCT employs the concept of HIV information, self-regulation, risk reduction skills, self-efficacy, and motivation to explain safe behavior.

3) The TRA explains HIV preventive behavior through attitude towards behavior, and subjective norms and intention.

4) The TPB also explains HIV preventive behavior through attitude, subjective norms, perceived control, and intention.

5) The IMB model utilizes the concept of HIV information, motivation related to HIV prevention, and behavior related with HIV preventive skills to explain HIV preventive behavior.

If we look carefully at the list of critical concepts under the five theoretical perspectives, it can be found that there are overlapping concepts used to explain HIV preventive behavior, such as attitude, subjective norms, intention, HIV information, motivation, behavior skills, and self-efficacy.

In order for have a comprehensive picture of how the overlapping critical concepts from the five theoretical perspectives were used to explain HIV preventive behavior, such as condom use, the picture below shows how these overlapping critical concepts under five theoretical perspectives interconnected in the CPS model are in order to encourage people to use a condom as a method prevent HIV acquisition.

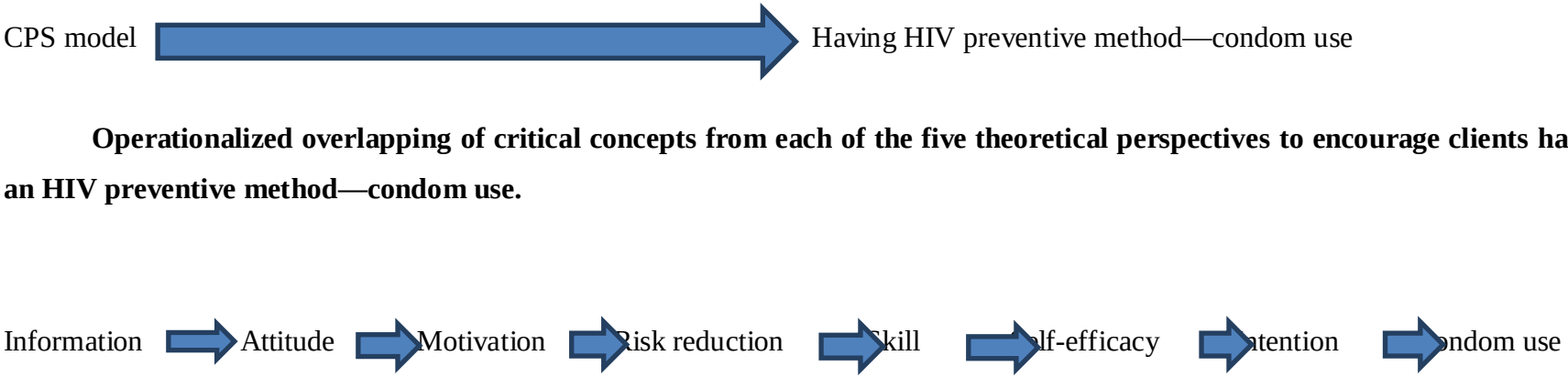

Figure 4.3 Critical Concepts from the Five Theoretical Perspectives Contributing to the CPS Model

Note: the sequence of concepts laid out above is based on historical perspectives adding further concepts to explain condom use behavior based on reviewed empirical data. However it needs to be proved by rigorous study.

Given the literature review on each theory based on historical development, the critical concepts of each theory were added to the latest theoretical perspective, which is the information- motivation-behavioral skills model, in order to explain HIV preventive behavior; that is, that the CPS model has utilized it for delivering the CPS model to MSM as the targeted population.

In order to succeed with a high rate of condom use among the MSM population, for example, it required a variety of interventions ensuring that the MSM could access an HIV preventive method in order to protect themselves from HIV acquisition. This included particularly the behavioral change communication component employed by peer educators and volunteer outreach workers, providing HIV information, attempting to instill a positive attitude towards condom use among the MSM population, motivating MSM to engage in HIV preventive behavior, condom use, leading to a discussion on risk assessment for risk reduction behavior, demonstrating and role playing regarding condom use, empowering MSM to ensure that they believe they can use a condom when they engage in sexual intercourse activity, and finally, enhancing the intention to use condoms when they have sexual intercourse.

Therefore, the conclusion was arrived the CPS model was an operationalization of the overlapping critical concepts from the five theoretical perspectives that were interconnected based on the empirical data in order to catalyze behavioral change at individual level in order to create HIV preventive action such as condom use when these individual have sex.

The final conclusion was that the CPS model was built upon on five theoretical models based on the literature review. The HBM and the IMB were the two of the five theoretical models that contributed most to the CPS model according to their assumptions aligned with delivering the CPS model to the MSM as the targeted population. In addition, the CPS model as an operationalized model of the five theoretical models utilizes overlapping critical concepts to explain behavioral change at the individual level in order to encourage HIV preventive action such as condom use.

The next section, objective 4.3 regarding the condom use of the MSM in selected provinces in this study will be discussed.

4.3 The Condom Use of MSM

Selected Provinces in the Study in Terms of the Following:

4.3.1 Identifying the Characteristics of MSM that Use Condoms

These were divided into 7 sections based on the factors listed below:

4.3.1.1 Demographic Data

Given the data analysis, a conclusion was arrived at concerning the characteristics of MSM that use condoms as follows:

4.3.1.1.1 Age

From the 301 respondents, mostly of the respondents were aged 26 up at 41.4%, while 32.0% of the MSM were at the age of 21 and below, and only 26.6% were aged between 22-25, as were presented in table 4.2 below:

Table 4.2 Age

Age	Frequency (Person)	Percentage (%)
Below 21	95	32.0
22 to 25	79	26.6
26 up	123	41.4
Total	**297**	**100**
Missing	4	

4.3.1.1.2 Educational Background

Most of the respondents had a bachelor degree below, whereas 41.1% and 2.7% of the respondents held a bachelor degree or equivalent, and a master degree or above, as presented in table 4.3 below:

Table 4.3 Educational Background

Educational Background	**Frequency (Person)**	**Percentage (%)**
Bachelor degree or below	168	56.2
Bachelor degree or equivalent	123	41.1
Master degree or above	8	2.7
Total	**299**	**100**
Missing	2	

4.3.1.1.3 Source of Income

Approximately 63.2% of the respondents had an income from being employed. Only2.4% of the respondents mentioned that they had an income from their partner as presented in table 4.4 below:

Table 4.4 Source of Income

Source of Income	**Frequency (Person)**	**Percentage (%)**
Family support	85	29.0
Being employed	187	63.8
Partner sponsored	7	2.4
Self-employed	13	4.4
Other	1	0.3
Total	**293**	**100**
Missing	8	

4.3.1.1.4 Monthly Income

Half of the respondents had a monthly income ranging from 11,301 baht and up. Only 15.9% of the respondents had a monthly income of 8,000 baht and below. Table 4.5 below presents the monthly income of the respondents.

Table 4.5 Monthly Income

Range of Monthly Income (Baht)	**Frequency (Person)**	**Percentage (%)**
8,000 and below	88	34.5
8,001-11,300	41	15.9
11,301 and up	129	50.0
Total	**258**	**100**
Missing	43	

4.3.1.1.5 Sexual Relationship Status

54.7% of the respondents were single, whereas those that had a relationship with only one person and had a regular partner were 20.7% and 17.7% respectively as presented in table 4.6 below;

Table 4.6 Sexual Relationship Status

Sexual Relationship Status	**Frequency (Person)**	**Percentage (%)**
Single	164	55.0
Have a relationship with only one person	62	20.8
Have a regular partner	53	17.8
Have more than one partner	19	6.4
Total	**298**	**100**
Missing	3	

4.3.1.1.6 Number of Days that the Respondents have had a Sexual Relationship

For those respondents that identified themselves as not being single, 41.7% have had a relationship with their partner more than two months, while 33.0% mentioned that they have had a relationship with their partner less than 15 days, as presented in table 4.7 below:

Table 4.7 Number of Days that the Respondents have had a Relationship with their Partner

Number of Days That the Respondents Have Had a Sexual Relationship	Frequency (Person)	Percentage (%)
1 to 15	38	33.0
16 to 30	17	14.8
31 to 60	12	10.4
More than 60	48	41.7
Total	**115**	**100**
Missing	0	

4.3.1.1.7 Preferred Sexual Role

One-third of the respondents, 38.2%, demonstrated that they were play an active role only while 32.8% and 29.1% % played a passive role or both, as presented in table 4.8 below**:**

Table 4.8 Preferred Sexual Role

Preferred Sexual Role	Frequency (Person)	Percentage (%)
Active only	113	38.2
Passive only	97	32.8
Both	86	29.1
Total	**296**	**100**
Missing	5	

4.3.1.1.8 Condom Acquisition in the Last Three Months

Most of the respondents, 58.6%, acquired condoms in the last three months from distribution, while only 39.7% acquired them through purchase by themselves. Table 4.9 below shows where the respondents acquired condoms in the last three months.

Table 4.9 Condom Acquisition in the Last Three Months

Acquiring Condoms in the Last Three Months	Frequency (Person)	Percentage (%)
From distribution	171	58.6
Buying them themselves	116	39.7
Other	5	1.7
Total	**292**	**100**
Missing	9	

4.3.1.1.9 Able to Access to Condom Whenever Needed

Almost all of the respondents mentioned that they thought they were able to access condoms whenever they needed as presented in table 4.10 below:

Table 4.10 Able to Access Condoms Whenever Needed

Able to Access Condoms Whenever Needed	Frequency (Person)	Percentage (%)
Yes	284	95.6
No	13	4.4
Total	**297**	**100**
Missing	4	

4.3.1.1.10 Condom Price as Barrier to Acquiring Them

More than half of the respondents mentioned that condom price was a barrier to acquiring them, as presented in table 4.11 below;

Table 4.11 Condom Price as Barrier to Acquisition

Is the Price of Condoms a Barrier Acquiring Them?	Frequency (Person)	Percentage (%)
Yes	183	61.0
No	117	39.0
Total	300	100
Missing	1	

4.3.1.1.11 Engaging in Anal Intercourse within the Last Three Months

The majority of respondents had engaged in anal intercourse within the last three months as presented in table 4.12 below:

Table 4.12 Engaging in Anal Intercourse within the Last Three Months

Engaging in Anal Intercourse within the Last Three Months	Frequency (Person)	Percentage (%)
Yes	266	90.5
No	28	9.5
Total	**294**	**100**
Missing	7	

4.3.1.12 Number of Engagements in Anal Intercourse within the Last Two Weeks

Almost two-thirds of the respondents engaged in anal intercourse within the last two weeks at approximately four times. The rest of the respondents on the other hand engaged in anal intercourse within the last two weeks more than five times, as presented in table 4.13 below:

Table 4.13 Number of Times Engaging in Anal Intercourse within the Last Two Weeks

Number of Time Engaging in Anal Intercourse within the Last Two Weeks (times)	Frequency (Person)	Percentage (%)
1-2	82	36.1
3-4	97	42.7
More than 5	48	21.5
Total	**227**	**100**
Missing	74	

4.3.1.1.13 Condom Use with Partner within the Last Two Weeks

Three point five percent of the respondents did not use condoms within their partner with the last two weeks while they had anal intercourse with their partner; however, the majority of respondents still used condoms at least once, as presented in table 4.14 below:

Table 4.14 Condom Use with Partner within the Last Two Weeks

Condom Use within the Last Two Weeks with Partner	Frequency (Person)	Percentage (%)
No use condom	8	3.5
At least one condom	219	96.5
Total	**227**	**100**
Missing	74	

4.3.1.14 Ratio of Condom Use with Partner Whenever having Anal Intercourse within the Last Two Weeks

The majority of respondents exhibited higher condom use with their partner whenever having anal intercourse within last two weeks. Only 15% had a condom use ratio of less than 1.00 as presented in table 4.15 below:

Table 4.15 Ratio of Condom Use with Their Partner Whenever Having Anal Intercourse within the Last Two Weeks

Ratio of Condom Use with Their Partner Whenever Having Every Single Anal Intercourse within Last Two Weeks	Frequency (Person)	Percentage (%)
Less than 1.00	34	15
More than 1.00	193	85.0
Total	**227**	**100**
Missing	74	

4.3.1.15 HIV-related Information

Table 4.16 HIV Related Information

Item	% of correct	% of not correct	Mean (X)	Total
1. If you have sex and have an HIV test within the next week, it can definitely tell you if you have HIV.	75.2	24.8	0.7517	298
2. The HIV/AIDS virus can be transmitted through male sperm/semen.	90.2	9.1	0.9094	298
3. You can safely store condoms in your wallet for at least 2 months.	53.4	46.6	0.5336	298
4. The same male condom can be used more than once.	71.9	28.1	0.7188	288
5. Condoms from health clinics or pharmacies are better than condoms from shops.	62.6	37.4	0.6263	297
6. The HIV virus is small enough to go through a condom.	73.8	26.2	0.7381	294
7. If you know a person well, you don't need to use a condom to protect against getting HIV from him.	69.7	30.3	0.6970	297

Table 4.16 (Continued)

Item	% of correct	% of not correct	Mean (X)	Total
8. Vaseline or baby oil should never be used with condoms.	49.3	50.7	**0.4932**	292
9. MSM that play passive roles during sexual activity have more risk of getting HIV than MSM that plan an active role if they do not use a condom.	63.5	36.5	0.6355	299
10. Using a condom is one of the most effective available methods to protect HIV infection.	81.5	18.5	0.8154	298

According to the table 16 above, the majority of respondents that had well-enough on HIV related information, since most of the mean scores (X) for each item was higher than 0.500. However, there was only one item, which was number 8, "Vaseline or baby oil should never be used with condoms," that had a mean score lower than 0.500, which was only 0.4932. This means that this information "Vaseline or baby oil should never be used with condoms" needs to be delivered correctly to men that have sex with men. The correct information is that only water-based lubricant is able to use along with condom in order to protect its leak or tear during having anal intercourse protecting them from HIV acquisition.

4.3.1.16 Motivation

Motivation was composed of three concepts: attitude toward condom use, perception of social support, and perception of vulnerability to HV infection.

1) Attitude Toward Condom Use

Table 4.17 Attitude Toward Condom Use

Item	Mean (X)	S.D	Total
1. Using condoms will protect me from getting HIV infection.	6.6711	2.5406	301
2. Using condoms is not a barrier for me.	6.8870	2.5639	301
3. Using condoms does not reduce my sexual pressure at all.	6.7674	2.3019	301
4. Carrying a condom would not be a problem for me.	7.0367	2.3862	300
5. I am fine using a condom every time I have sex with my partner.	7.0333	2.2853	300

According to the table 4.17 above, the respondents were asked to rate their degree of agreement with each item above regarding their attitude toward condom use. It shows that all of the respondents had positive motivation in their attitude toward condom use because all of the respondents had high mean score, 0.650 and up, particularly for number 4, "Carrying a condom would not a problem for me." This implies that all of the respondents felt comfortable carrying a condom. In terms of S.D, item number 5, "I am fine using a condom every time I have sex with my partner," had the lowest S.D compared with other items.

2) Perceptions of Social Support

Table 4.18 Perceptions of Social Support

Item	Mean (X)	S.D	Total
1. When I compare myself to the average MSM, there is a special person that is always around me when I am in need.	7.1867	1.9929	300
2. When I compare myself to the average MSM, there is a special person with whom I can share my joys and sorrows.	7.0867	2.1136	300

Table 4.18 (Continued)

Item	Mean (X)	S.D	Total
3. When I compare myself to the average MSM, I have a special person that is a real source of comfort for me.	7.2633	1.9510	300
4. When I compare myself to the average MSM, there is a special person in my life that cares about my feelings.	7.4600	1.9202	300

According to the table 4.18 above shows that most of the respondents had high mean score, ranging from 7.0867- 7.4600, which could imply that all of the respondents relatively agreed in their perception of social support. However, only item number 2, "When I compare myself to the average MSM, there is a special person with whom I can share my joys and sorrows," had a higher S.D score than the other items.

3) Perception of Vulnerability to HIV Infection

Table 4.19 Perception of Vulnerability to HIV Infection

Item	Mean (X)	S.D	Total
When you compare yourself to the average MSM, what would you say your chances are of getting HIV infection?	5.5400	2.56847	300

According to the table 4.19 above shows that all of the respondents ranked themselves in the middle of agreement with this statement. This implies that they were not sure whether they were vulnerable to getting HIV infection.

4.3.1.17 Behavior Skills to Protect Themselves from HIV Acquisition

Table 4.20 Behavior Skills to Protect Themselves from HIV Acquisition

Item	Mean (X)	S.D	Total
1. For me, buying a condom during the next two months would be…	7.2742	2.0962	299
2. For me, getting a condom for free during the next two months would be…	7.2074	2.0959	299
3. During the next two months, carrying a condom with me would be…	7.4967	1.9568	300
4. If I have sex during the next two months, using a condom every time would be…	7.6667	1.8566	300
5. If I have sex during the next two months, telling my partner we have to use a condom would be…	7.6867	1.9045	300
6.Talkling to my partner about whether or not we should have sex would be …	7.2609	1.8260	299

According to the table 4.19 above, the respondents were asked to rate the each with which they performed the above behavior skills to protect themselves from HIV acquisition. The data showed that all of the respondents felt that it was easy to perform these six items in order to protect themselves from HIV acquisition, particularly item number 5, "If I have sex during the next two months, telling my partner we have to use s condom would be…," that had the highest mean compared with the others.

4.3.1.18 Perceived Cost of Condom Use for HIV Prevention

Table 4.21 Perceived Cost of Condom Use for HIV Prevention

Item	Mean (X)	S.D	Total
1. Using a condom reduces my pressure while having sex.	5.3010	2.4787	299
2. Using a condom brings trouble from my partner.	4.9495	2.6008	297
3. Accessing a condom is not easy for me.	4.7893	2.6758	299

According to the table 4.21 above, the respondents were asked to rate the degree of the truth of the statements for themselves. It showed that all of the respondents placed themselves in the middle of the degree of these three statements. However, item number 1, "Using a condom reduces my pressure while having sex," had the highest mean compared with others, which implies that all of the respondents thought that it was true that using a condom reduces their sexual pressure while engaging in sexual activity. This suggests that they might not use a condom every time when they have an opportunity to avoid it. Consequently, this leads to increasing their risk of acquiring HIV virus from their partner or transmitting the HIV virus to their partner.

4.3.1.19 Perceived Benefits of Condom Use to Prevent HIV Acquisition

Table 4.22 Perceived Benefits of Condom Use to Prevent HIV Acquisition

Item	Mean (X)	S.D	Total
1. Using a condom can protect me from HIV infection.	7.9430	1.9297	298
2. A condom is one of the effective methods to protect against HIV infection.	8.0168	1.9165	298
3. In the long run, protecting oneself against HIV infection by using a condom is beneficial for me in terms of treatment and other relevant costs.	7.7960	2.0238	299
4. Using a condom every time I have sex makes me safer from sexually-transmitted diseases.	7.8333	1.9523	300

According to the table 4.22 above demonstrates that all of the respondents have quite a strong perception of the benefits of using a condom in preventing HIV acquisition, particularly regarding item number 2, "Condom is one of the effective methods to protect against HIV infection." All of the respondents perceived using a condom as an effective method to protect themselves from HIV infection. Moreover, all of the statements were relatively similar on S.D. ranging from 1.9165-2.0238.

4.3.1.20 Self-efficacy

Table 4.23 Self-efficacy

Item	Mean (X)	S.D	Total
1. I believe I can make independent decisions when in a relationship in terms of having sex.	7.6867	1.87087	300
2. I believe I can make decisions about what things I will and will not do when I have sex.	7.5933	1.82732	300
3. If I am not in a sexual mood, I believe I can tell my partner I do not want to have sex.	7.5167	1.82414	300
4. If I am in a sexual mood but I do not want to have sex, I believe I can tell my partner I do not want to have sex.	7.0736	2.21827	299
5. I do not feel I would be in control of my partner in a sexual situation.	6.0669	2.38892	299

According to the table 4.23 above indicates, the respondents were asked to rate their degree of agreement with each statement. It showed that all of the respondents had high self-efficacy in deciding what they wanted to do or did not want to do in terms of having sex with their partner. However, there was an item, which was number 5, "I do not feel I would be in control of my partner in a sexual situation," which had the lowest mean compared with others. This implies that none of the respondents felt that they had controlling power over their partner in a sexual situation.

4.3.1.21 Sexual Excitement

Table 4.24 Sexual Excitement

Item	Mean (X)	S.D	Total
To what extend do you experience sexual excitement with unprotected sexual activity?	6.7692	2.07823	299

According to the table 24 above, the respondents were asked to rate their degree of sexual excitement. It shows that all of the respondents had a tendency to experience sexual excitement in this context, that is, when engaging in unprotected sex.

4.3.1.22 Intimacy Feeling with Their Latest Partner

Table 4.25 Intimacy Feeling with Their Latest Partner

Item	Mean (X)	S.D	Total
How much emotional involvement do you have with your latest partner when you have sex?	7.1111	1.97050	297

According to the table 4.25 demonstrates that all of the respondents had high emotional involvement toward their latest partner when they engaged in sexual activity.

4.3.1.23 Behavioral Setting

All of the respondents were asked where they met their latest partner and whether this had an influence on their decision to use or not use a condom to protect themselves from HIV infection.

Most of the respondents met their latest partner through the internet, through a website, or another venue (university, college, etc.) at 31.5% and 20.4% respectively, while only 7.6% met their latest partner at a massage parlor, as presented in table 4.26 below:

Table 4.26 Behavioral Setting

Setting	**Frequency (Person)**	**Percentage (%)**
Bar	45	15.6
Sauna	42	14.5
Park	30	10.4
Massage parlor	22	7.6
Internet/website	91	31.5
Others (university, college, etc.)	59	20.4
Total	**289**	**100**
Missing	12	

4.3.2 Identifying the Determinant Factors That Influence the Condom Use Behavior of MSM

This study aimed to determine which factors have an influence on condom use among the MSM population. Therefore, path analysis was employed to determine the factors that influence condom use with the MSM population. The path diagram below presents how each factor, based on the literature review, has determined condom use among the MSM population**.**

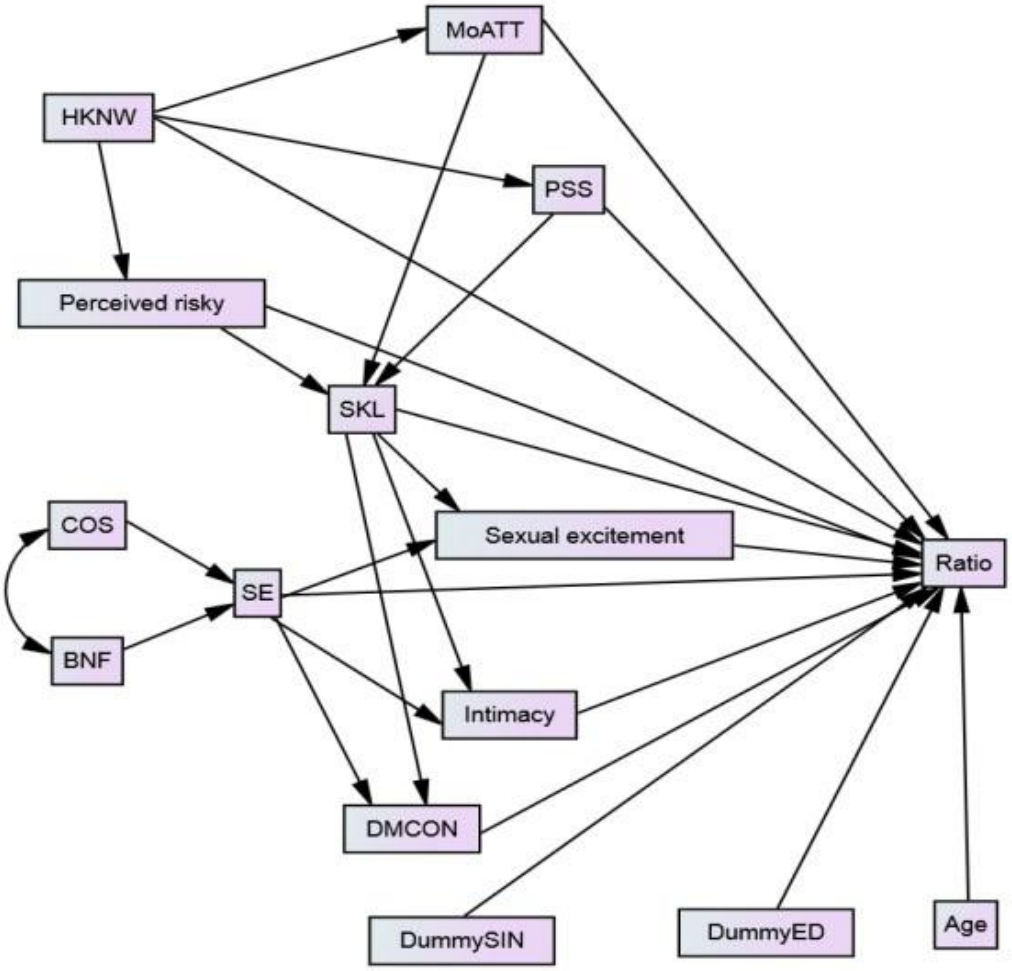

Figure 4.4 Path Diagram

Abbreviation of factors in path diagram:

1) MoATT= motivation of attitude towards condom use
2) HKNW= HIV-related knowledge
3) SKL= skills
4) PSS= perceived having social support
5) COS= perceived cost of condom use
6) BNF=perceived benefits of condom use
7) SE=self-esteem
8) DMCON= dummy of contextual factors
9) DummySIN=dummy of source of income
10) DummyED= dummy of educational background

Table 4.27 Coefficient Correlations Matrix

	HKNW	BNF	COS	PSS	MoATT	SE	SKL	SEXC	INM	DMCON	PRY	Ratio
HKNW	1.000											
BNF	.000	1.000										
COS	.000	-.340	1.000									
PSS	.371	.000	.000	1.000								
MoATT	.116	.000	.000	.043	1.000							
SE	.000	.652	-.105	.000	.000	1.000						
SKL	.246	.000	.000	.599	.259	.000	1.000					
SEXC	.060	.132	-.021	.145	.063	.202	.243	1.000				
INM	.060	.257	-.041	.147	.064	.394	.246	.139	1.000			
DMCON	-.039	.000	.000	-.096	-.041	.000	-.160	-.039	-.039	1.000		
PRY	-.126	.000	.000	-.047	-.015	.000	-.031	-.008	-.008	.005	1.000	
Ratio	-.022	.017	-.003	-.107	.176	.026	-.003	.122	.010	.001	.003	1.000

The table 4.27 shows that there was no coefficient correlation among the independent variables because the value of each pair of independent variables was less than 0.75. This means that these independent variables did not violate the multi-collinearity assumption.

Figure 4.5 below contains the recursive path model, which was a predictor of condom use in this study,

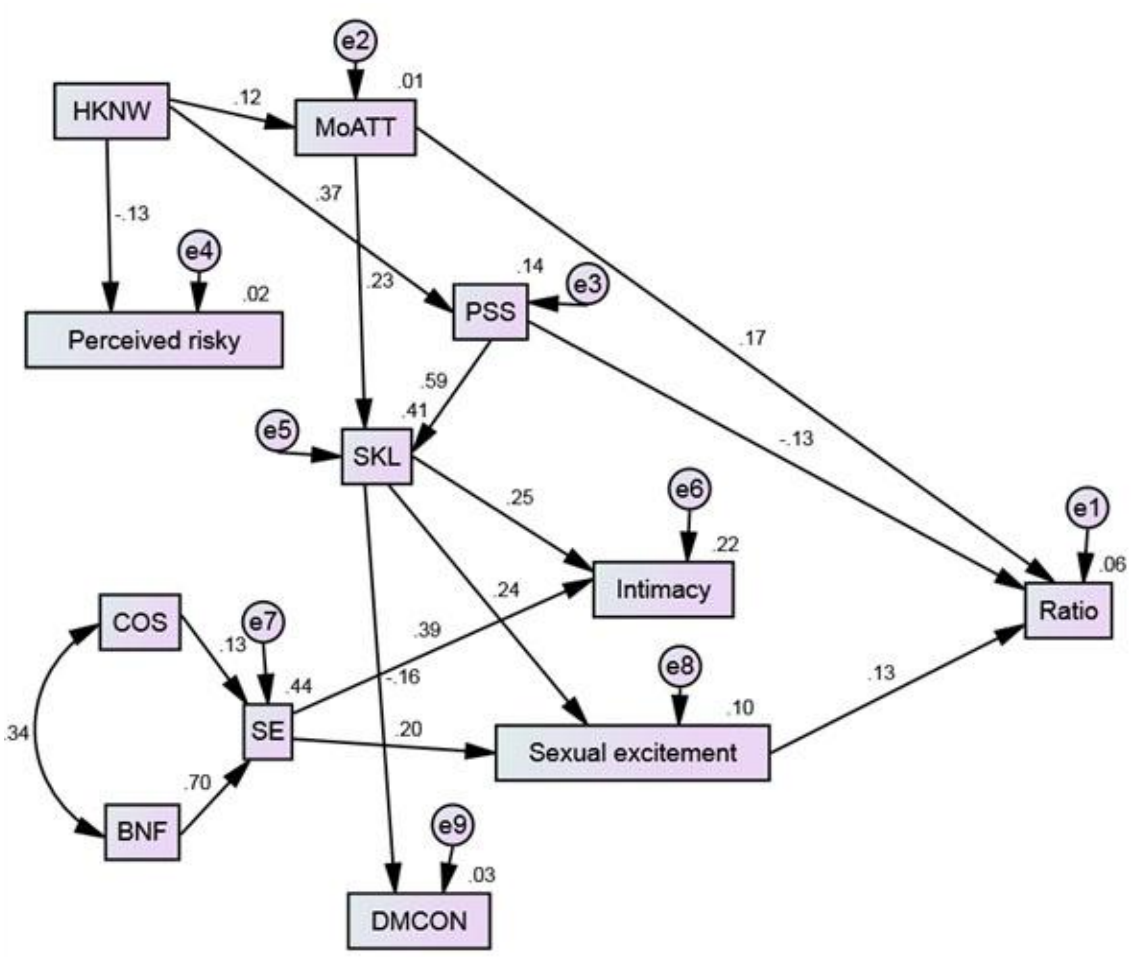

Figure 4.5 Recursive Path Diagram: Predictor of Condom Use Ratio

Figure 4.5 above shows that attitude towards condom use (MO) had the highest power to predict condom use ratio. Sexual excitement and the perception of having peer support had the second highest power to predict condom use. However, perceived peer support had a negative direction.

Table 4.28 Direct and Indirect Effects

Variable	Casual effects		
	Direct	**Indirect**	**Total**
HKNW	-	-0.020	-0.020
MoATT	0.17	0.007	0.177
PSS	-0.130	-	-0.130
SKL	-	0.031	0.031
SE	-	0.026	0.026
COS	-	0.003	0.003
BNF	-	0.018	0.018
Sexual excitement	0.130	-	0.130

Table 4.28 above shows that attitude towards condom use (MoATT) had the highest antecedence towards condom use, followed by sexual excitement towards unprotected sexual intercourse and perceived social support (PSS); however, PSS had a negative relationship with condom use. Meanwhile, the perceived cost of condom use had the lowest antecedence towards condom use. It is quite clear then that an increase in one's attitude toward condom use is able to increase the amount of condom use. On the other hand, the MSM that expressed having a high degree of sexual excitement towards unprotected sexual intercourse were likely to increase their condom use, while those MSM that had a high score on the perception of having social support exhibited low condom use. These results will be discussed in the next chapter.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

HIV prevalence among MSM has increased significantly since 2003, particularly in the major cities throughout Thailand, such as Bangkok, Chiang Mai, and Phuket. HIV prevalence in Bangkok was 17.3% in 2003, and it increased to 30.7% in 2007, for example. By 2010, BoE, MoPH revealed that HIV prevalence in Bangkok, Chiang Mai, and Phuket was 31%, 13%, and 7% respectively, compared with HIV prevalence in the adult population at only 0.9%. Therefore, this is an urgent issue that the MoPH needs to halt.

The MoPH, DDC, has announced the Thailand NAS 2012-2016 that focuses on key populations including MSM. MSM have been prioritized as the most key driver for HIV prevalence in the country based on estimated new HIV infection (41% of 43,040 new cases) revealed by the BoE.

The Thailand NAS 2012-2016 utilizes the CPS as a framework for implementation, and the CPS model used the IMB Model in order to make behavioral changes among key populations, including MSM. The Thailand NAS 2012-2016 utilized the CPS model, underpinned on the IMB model, and aimed at achieving "Getting to Three Zeros"—zero on new infections, zero on AIDS deaths, and zero on stigma and discrimination. However, HIV prevalence among MSM has not been decreased as anticipated. This implies that the IMB model as a theoretical framework for the CPS model is insufficient to make behavioral changes among MSM, particularly regarding increasing condom use to prevent HIV transmission.

Therefore, this study aimed to explore the current NASP for 2012-2016 in terms of its characteristics, formed at the national level and applied and implemented at the provincial level. In addition, this study attempted to analyze the theoretical underpinning of the CPS model. Finally, this study aimed to propose a new robust theoretical framework to explain condom use behavior among the MSM population in Bangkok, Chiang Mai, and Phuket as the three provinces with the highest prevalence of HIV among the MSM population.

The objectives of this study are listed below:

Objective 1: Explore the current Thailand NAS 2012-2016 in terms of:

a) What the characteristics of the current of the Thailand NAS 2012-2016 are

b) How it has been formed at the national level

c) How it has been applied and implemented at the provincial level

Objective 2: Analyze the theoretical underpinning of the CPS in terms of:

a) Identifying whether the CPS model was built from a theoretical model

b) Identifying which theories have contributed to the CPS; and

c) Identifying how those theories that have contributed to the CPS are interconnected

Objective 3: Explain condom use behavior of MSM in selected provinces in the study in terms of:

a) Identifying the characteristics of MSM that use condoms; and

b) Identifying which determinant factors have influenced the condom use behavior of MSM.

Regarding all of the concepts to be used in this study, information, motivation, behavioral skills, self-efficacy, perceived cost and perceive benefits of condom use, sexual excitement, intimacy, behavioral setting, age, educational background, income, and condom use behavior were employed. All of these concepts came from the literature reviewed and were placed into a conceptual framework for this study.

In terms of the tools for the data collection, this study employed a mixed method in order to respond to all three main objectives. Objective #1 and #2 utilized semi-structured questions to interview the key informants at national and provincial levels. This semi-structured questionnaire consisted of eight dimensions, including structure and process, partnership and networking, project management, monitoring and evaluation, technical capacity building, financial management, and human resource management. Objective #3 on the other hand utilized a structured-questionnaire to collect the data from MSM, which consisted of seven sections based on the reviewed factors. The structured questionnaire consisted of demographic data and condom use behavior, HIV-related information, motivation, behavioral skills,

self-efficacy, perceived costs and benefits of condom use, contextual situation-sexual excitement, intimacy, and behavioral setting.

The sample this study was divided into three parts in order to respond to each objective:

Objective 1: Explore the current Thailand NAS 2012-2016 for key populations including MSM in terms of:

a) What the characteristics of the current of the Thailand NAS 2012-2016 are like

b) How it has been formed at the national level

c) How it has been applied and implemented at the provincial level

Two key informants among the sample from the national level responded to this objective; one was a senior government officer that took a lead in the development of the Thailand NAS 2012-2016 and the other was a representative of an MSM CBO that had been engaging in the whole process of the development of the Thailand NAS 2012-2016, particularly regarding the MSM component. At the provincial level there were three key informants; one was the chairperson of the PCM, and the other key were representatives from the MSM CBOs that served as PCM members.

Objective 2: Analyze the theory underlying the comprehensive package of services in terms of:

a) Identifying which theories have contributed to the comprehensive package of services; and

b) Identifying how those theories that have contributed towards the comprehensive package of services are interconnected.

The sample of this study in order for responding this objective was documents/papers and research related that were reviewed over a literature review chapter.

Objective 3: Explain the extent of condom use of MSM in selected provinces in the study in terms of:

a) Identifying the characteristics of MSM that use condoms; and

b) Identifying which determinant factors have influenced the condom use behavioral of MSM.

The sample of this study was MSM that have lived in Bangkok or Chiang Mai or Phuket for more than 6 months and voluntarily participated in this study and responded to sensitive questions about their sexual behavioral in the past three months. Purposive sampling was used to collect the data in these three provinces. The total number of respondents was 301.

In terms of data analysis, it was divided into 4 parts based on the objectives as follows:

5.1) Objective 1: the data were analyzed through seeking the difference and similarity between two key informants for each item in semi-structured questionnaire in order to obtain a comprehensive understanding of how the Thailand NAS 2012-2016 has been formed at the national level.

In terms of the provincial level, the data from the three key informants were analyzed through seeking the difference and similarity for each item in semi-structured questionnaire in order to obtain a comprehensive understanding of how the Thailand NAS 2012-2016 has been applied and implemented at the provincial level.

5.2) Objective 2: the data were analyzed by seeking the relationship between the CPS model and the reviewed seven theoretical models and identifying whether it was built from those theoretical models, and how it was interconnected in the CPS model.

5.3) Objective 3: this study used various statistics for data analysis, which was divided into 4 main parts as listed below:

1) Using frequency tables in order to explain what the characteristics of the sample for this study were like

2) Using frequency tables in order to see what the pattern of condom use behavior of the MSM that were the sample of this study was

3) Using path analysis statistics in order to test the hypotheses in order to ascertain the relationship between the independent variables and condom use as the dependent variable of this study

5.4) Discussion of the results

5.5) Recommendations

5.1 Exploring the Current Thailand NAS 2012-2016

The results for objective #1: exploring the current Thailand NAS 2012 for key populations including MSM in terms of what the characteristics of the current Thailand NAS 2012-2016 are; how it has been formed at the national level, and how has it been applied and implemented at the provincial level—all of these responses are presented as follows.

In terms of what the characteristic of the current Thailand NAS 2012-2016 are like, it was concluded that it was obvious that the key populations, particularly MSM, who would be the most newly-infected persons with HIV by 2016 (41% from 43,040 newly-infected cases), were prioritized at the Thailand NAS 2012-2016. This significant data led the country to call for an urgently-needed reduction of HIV prevalence among MSM.

In order to achieve the nation's ultimate goals called the three zeros, as mentioned above, the Thailand NAS 2012-2016 employed two directions and five strategies in order to halt the situation in key populations, including MSM. These directions and strategies are briefly illustrated below:

Strategic direction 1: Innovation for Change that consists of four strategies as listed below:

Strategy 1: Expand the rights-based approach and gender-sensitivity for comprehensive prevention services for populations with the highest number of HIV transmissions

Strategy 2: Expand the protective social, legal, and gender-sensitivity environment essential for HIV prevention and care

Strategy 3: Increase involvement and a sense of ownership at national, provincial and local levels in the expansion of the prevention and control of AIDS:

Strategy 4: Develop a strategic information system to increase the efficiency of prevention and control of AIDS at all levels

Strategic Direction 2: Optimization and Consolidation

Strategy 5: Improve quality standards and existing programs so that they are more intensive and integrated in the following areas:

1) Prevention of mother-to-child HIV transmission
2) Prevention among youth
3) Comprehensive condom programming
4) Blood safety
5) Treatment and care of people living with HIV/AIDS
6) Care and support of children affected by AIDS
7) Reduction of stigma and discrimination
8) Public communication

Finally, the estimated required budget, indicators, and national HIV prevention, care and support, and treatment targets were presented at the end of the document as well.

Regarding how the Thailand NAS 2012-2016 has been formed at the national level, it can be concluded that both key informants agreed that the NAMc as secretariat of the NAC actually took a lead in the development of the Thailand NAS 2012-2016. However, the unique aspects of the Thailand NAS 2012-2016 was that key populations, particularly MSM, were prioritized as the targeted population that needed to be tackled urgently in order to reduce the HIV prevalence among MSM.

In addition, both key informants stated clearly that the Thailand NAS 2012-2016 utilized all related HIV information, such as the projection of HIV newly-infected cases from the Asia Epidemic Model-statistically modeling, HIV sentinel surveillance data from the BoE, etc. in order to develop the Thailand NAS 2012-2016. Moreover, the CPS, which consists of five components; behavioral change communication through peer and outreach communication and target media, condom and lubricant distribution, HIV counseling and testing services, sexually-transmitted infection treatment services, and linkages to care and treatment for those who live with positive, was introduced into the Thailand NAS 2012-2016 in order to increase the effectiveness of HIV prevention, care and support, and treatment for key populations, including MSM interventions.

Both of them also mentioned positively the issue of partnership and networking with CBOs that worked with MSM. They also mentioned that rather than developing the Thailand NAS 2012-2016 by inviting governmental organization only, the NAMc as secretariat of the Thailand NAS 2012-2016 has involved CBOs that

have worked directly with key populations as beneficiaries mentioned on the Thailand NAS 2012-2016 in order for drawing their meaningful participation that aimed for having a comprehensive strategy of the Thailand NAS 2012-2016 ensuring that it was able to achieve ultimate goals of the country called "Getting to Zero." Beyond inviting the CBOs, representatives of international aid agencies such as the WHO, UN agencies, and the USAID were also invited to be members of several the Thailand NAS 2012-2016 technical work groups to provide technical assistance from international perspectives for the development of the Thailand NAS 2012-2016.

In addition involving all stakeholders ensured that the Thailand NAS 2012-2016 would be a comprehensive strategy that had both technical and managerial components Moreover, the NAMc has facilitated and coordinated with all stakeholders in order to create an open environment for dialogue and discussion among the stakeholders, including governmental organizations, CBOs, and international aid agencies that have had experience in the implementation of HIV prevention, care and support, and treatment projects with key populations, including MSM throughout the country, ensuring that the Thailand NAS 2012-2016 would be developed effectively as anticipated.

The NAMc has even attempted to involve all stakeholders in the process of the development of the Thailand NAS 2012-2016 by inviting representatives from all stakeholders to be member of various the Thailand NAS 2012-2016 technical work groups in order to contribute to the development of the Thailand NAS 2012-2016. However, there still was a discrepancy in separating the roles and responsibilities between the governmental organizations and CBOs. This led to a lack of the fully understanding the whole process of the development of the Thailand NAS 2012-2016 such as the monitoring and evaluation system, financial management, etc. where it was perceived that governmental organizations should take care of these two components. Then, the representatives of CBOs were left out or had only a small role in the development of these two components. Therefore, it was found that the representatives from the CBOs could not provide full information on these two components compared with receiving information from the representatives of the governmental organizations. This implies that full participation did not happen as anticipated because the governmental organizations still perceived that these two

components were related to the government side. In the meantime, the CBO itself perceived that they did not have much knowledge on these components, even though the CBOs helped to collect data based on the monitoring and evaluation form at the provincial level or had real experiences with the required resources to be able to implement effectively the HIV prevention, care and support. and treatment for key populations, particularly MSM. Thus, the CBOs were left out of the whole process of development regarding these two components.

In terms of ensuring that the Thailand NAS 2012-2016 was applied and implemented at the provincial level as anticipated by the NAMc, one of the key informants was a senior government officer providing a clear line of connection from the NAC to the provincial level. She illustrated that the NAC through the NAMc established a formal structure to ensure that the PCM would utilize the Thailand NAS 2012-2016 at the provincial level. Indicators and targets were set at national level and the PCM was required to report those indicators and targets. This led to the national level being able to monitor the progress of HIV prevention, care and support, and treatment interventions for key populations, particularly MSM, as anticipated.

However, the Thailand NAS 2012-2016 set clear indicators and targets needed to be achieved, what was found in the present study was that applying and implementing the Thailand NAS 2012-2016 at the provincial level did not take place as much as anticipated since the PCM did not take care of MSM-related HIV issues only at the provincial level but they also take care all HIV related issues for all populations. In addition, the PCM has had different experiences working with key populations, including MSM issues; thus, this led to an ineffective design for HIV prevention, care and support, and treatment interventions for key populations, including MSM. Furthermore, the key informants from the CBOs were not able to explain clearly how the Thailand NAS 2012-2016 was implemented at the provincial level. This is related to what was discussed previously about lacking meaningful participation of CBOs. However they served as members of the technical work group developing the Thailand NAS 2012-2016; they did not have much of a chance to become involved in monitoring the structure implemented.

To ensure that the PCM applied and implemented the Thailand NAS 2012-2016 effectively, both of them provided similarly responses on monitoring and

evaluation components. They stated that most of the information in terms of how it has been applied and implemented coming from representatives from governmental organizations. They also stated that the Thailand NAS 2012-2016 introduced the RHIS in order to monitor the progress of HIV prevention, care and support, and treatment interventions for key populations, including MSM. All of the data were collected from the PCM, sent back to the national level, and aggregated for the Thailand HIV and AIDS annual report.

Moreover, the Thailand NAS 2012-2016 invested in the AIDS zero portal as a pilot real-time monitor, which was able to obtain real time data on HIV prevention, care and support, and treatment intervention for key populations including MSM, such as new HIV cases occurring at the provincial level, the number of those MSM accessing VCT services, the number of those MSM accessing care and treatment when having positive results, etc. at specific periods of time. As discussed above, one of the key informants from a governmental organization was able to elaborate in greater detail about how the RHIS was developed and how it was linked with the real time monitoring data, whereas a key informant from CBOs was not able to provide comprehensive information on monitoring.

Even though the CBOs did not explain sufficiently how the RHIS was developed and the real time monitoring data were invested, representatives from the CBOs could provide an angle of information in terms of how the CBOs utilized it while they helped to collect data based on the monitoring tools. This kind of different angle of information could provide information comprehensively on the rationality of why the country developed RHIS and real time monitoring data and how it was utilized at the provincial level by the CBOs.

In addition both of them agreed that Thailand NAS 2012-2026 leveraged technical resource persons from various stakeholders, such as UN agencies, the WHO and USAID, and governmental organizations and CBOs as well. All of these technical resources persons served under technical work groups based on their expertise.

Regarding capacity building, a key informant, who was a representative of a CBO, mentioned that the NAMc as secretariat for the Thailand NAS 2012-2016 did not set aside a budget for the capacity building of CBOs, either technical or

managerial skills so that this component was not as successful as anticipated since it relied on whether each PCM had paid attention and wanted to build capacity either technical or managerial skill for CBO staffs.

As discussed earlier regarding the financial management components related with governmental organizations, rather than key informants from CBOs, key information persons from governmental organizations could provide insightful information in terms of how the budget was allocated strategically to respond to the prevalence of HIV among MSM in order to halt the HIV situation at the national level, while the key information persons from the CBOs could not mention this. This implies that even though the MSM CBOs served as members of the development of the Thailand NAS 2012-2016, and they had direct experience in ensuring that a sufficient budget allocation was gone into provincial level in order halt the HIV situation in the targeted provinces, they did not have a chance to engage much in the budget allocation discussion at the national level, which was strictly attached with governmental organizations.

Finally, both of them stated clearly that the Thailand NAS 2012-2016 through the NAMs did not assign a person to take care of HIV prevention, care and support, or treatment interventions for key populations, including MSM, which led to a lack of persons that could be a point of contact in order to respond whenever the PCM needed help. The reason that was received from a key informant, who was a senior government officer, was that the Thailand NAS 2012-2016 did not assign a full-time person to be a point of contact for HIV prevention, care and support, and treatment for the MSM project because they led representatives from the CBOs to manage themselves to share and collect the concerns from their community that could be discussed at meetings, while a key informant, who was a representative of a CBO, mentioned that this was a weak point—that the Thailand NAS 2012-2016 did not assign a point of contact to be the main person in order to retain the momentum of the intervention of HIV prevention, care and support, and treatment for MSM projects at the national level.

In terms of the provincial level, all three key informants explained how the Thailand NAS 2012-2016 had been applied and implemented at the provincial level by the PCM. It was concluded that all three key informants provided the same

direction concerning how the PCM had been applied and implemented at the provincial.

All of them mentioned why and how the PCM emerged. It was established in 2009 based on the GFATM proposal in order to be a main coordinator to HIV projects funded by the GFATM round 8.

They also mentioned that the selection process for PCM members was inviting those CBOs that had been working with key populations, particularly MSM, in order to select their representatives as PCM members. In total, they had 16 representatives serving as PCM members who came from CBOs and the provincial health office as chairpersons of the PCM.

An interesting issue provided by a key informant person, who was a chairperson of the PCM, was that there was still a linkage between the PCM and the current PAC. Whenever the PCM would like to advocate policy change at the provincial level, P the CM's chairperson and selected PCM members mobilized the PAC structure to advocate for policy change since almost all of the representatives of PAC came from ministries at the provincial level such education, public health, labor and welfare, etc. Moreover, the PAC chairperson was the provincial governor, who has authorization to facilitate the process of change for improving the quality of HIV prevention, care and support, and treatment implementations for key populations, including MSM. This was an example of utilizing strategically an existing structure which had some overlapping with the roles and responsibilities for improving and enhancing the quality of HIV prevention, care and support, and treatment services for key populations, including MSM.

All three key informant persons illustrated that the PCM as a coordinating mechanism body applied and implemented the Thailand NAS 2012-2016 at the provincial level by utilizing two directions and five strategies and all HIV-related information regarding the HIV prevalence data from the BoE, such as the integrated bio-behavioral survey data. All of them also mentioned clearly that key populations, particularly MSM, were the main drivers of HIV prevalence in their province. Moreover, the PCM played a critical role in ensuring that the design of HIV prevention, care and support, and treatment for MSM projects fit with the Thailand NAS 2012-2016.

In addition, all of them also illustrated a positive attitude working with CBOs as partnership and network as one of main contributors to the success of HIV prevention, care and support, and treatment for MSM projects because all CBOs have brought experiences working with key populations particularly MSM that government officers from public health office did not have it. This was a complement roles between both of them.

Obviously, the PCM's main responsibility was not managing the project; its main responsibilities focused on ensuring that the Thailand NAS 2012-2016 would be applied and implemented effectively on current projects funded by various donors at the provincial level. To ensure that all current projects funded by various donors utilize the Thailand NAS 2012-2016 as a framework for implementation, the provincial HIV strategic plan and the provincial HIV operationalize plan were developed and documented as a referenced framework for all projects that would implement HIV prevention, care and support, and treatment for key populations, particularly MSM in the province.

In terms of monitoring and evaluation, only key information persons that were chairpersons of the PCM were able to explain how the PCM monitored and evaluated all of the current HIV projects implemented at the provincial level by utilizing the RHIS and progress report meetings. While the two other of key informant persons who were representatives of CBOs were not able to explain on how the PCM monitored and evaluated HIV prevention, care and support, and treatment for MSM projects. What two of them explained was that the PCM mentioned HIV prevention, care and support, and treatment projects by only using several meetings to update the projects' progress. This implied that even all of them served as PCM members, and the CBO representative were not aware of an existing monitoring and evaluation system invested by the Thailand NAS 2012-2016 through the NAMc in order to support national-level data collection. The unawareness of an existing monitoring and evaluation system might have been because most of data were collected at facility-based rather than community-based sites. This implies that even all of them served as PCM members, they still divided roles and responsibilities between governmental organizations and CBO representatives rather than working as a PCM team that had an unique goal. Thus, sharing information transparency still did not take place between the representatives of governmental organization and the CBOs.

The capacity building component was a good example of the clearly divided roles and responsibilities between the CBOs and governmental organization representatives, where capacity-building information did not flow as much as it should have among all PCM members. Only one key information person, who was a chairperson of a PCM, was able to elaborate on the capacity building component that was planned for capacity development for PCM members who would manage HIV/AIDS projects at the provincial level; on the other hand, two of the key information persons from CBOs did not recognize whether they would have the capacity to be able to have better management skills for HIVAIDS projects for MSM even if they attended the trainings.

Regarding the financial management components, all of them had clear roles and responsibilities for financial management. All of them stated clearly that it did not a mandate for PCM. What they could do was ensure that the budget allocation from existing HIV prevention, care and support, and treatment for MSM projects funded by various donors at their province was allocated strategically to be able to reduce the HIV prevalence among MSM. This could help the provincial level meet the indicators and targets that needed to report back to the national level accordingly.

Likewise, at the national level, the PCM did not assign a full-time person to serve as a PCM member to be a point of contact as a main channel for monitoring, following up, corresponding on all issues related with HIV prevention, care and support, and treatment intervention for MSM projects. This led for a discontinuation of effectively implementation as anticipated at both national and provincial levels.

5.2 Analyzing the Theoretical Underpinning of the Comprehensive Package of Services in Terms of:

1) Identifying whether the CPS model was built upon the reviewed theories; namely, the HBM, the ARRM, the TM, the SCT, the TRA, the TPB, and the IMB model

2) Identifying which theories have contributed to the CPS model

3) Analyzing how those contributed theories are interconnected in the CPS model

According to the analysis by looking at the similarity between the CPS model and these seven reviewed theories, it was found that the main objective of the CPS model aligned with those seven reviewed theories. Since the main objective of all reviewed theories was to explain how people change and maintain their preventive behavior, while the ultimate goal of the CPS model was to ensure that key populations particularly MSM were able to change their risky behavior and to prevent HIV infection. At this stage, it is possible to conclude that the CPS model had a similarity and alignment with the main objective of these seven reviewed theories mentioned in the literature review chapter.

In addition, the CPS model actually is an operationalized model, which utilizes these seven reviewed theories in order to catalyze the behavioral change of people to the anticipated behavioral stage, such as having and maintaining HIV preventive action by using condoms to protect against HIV acquisition. Therefore, a further conclusion at this stage was that the CPS model was built upon the review theories.

It was possible to identify which of seven reviewed theories based on the literature reviewed were major contributors to the CPS model by looking at its assumption. What was found was that the Health Belief Model and the Information, Motivation, and Behavioral skills model were the two main contributors to the CPS model, because if we look at an explanation of how the CPS model was delivered to MSM as clients of interventions, it is clear that the CPS model utilized peer educators and volunteer outreach workers in order to provided HIV information, the benefits of HIV counseling and testing services and sexually transmitted infection screening and treatment; then, MSM as clients of these interventions who were aware of their risky behavior, were encouraged by those peer education and volunteer outreach workers in order to access voluntary counseling and testing services and STI screening services. That was the way in which the CPS model changed people's behavior in order to bring about preventive action, which seemed to be a linear explanation from one step to other steps until having preventive action as a satisficed stage. The explanation above is also aligned with the HBM and IMB models explaining behavioral change among people, which is a linear explanation. The HBM assumption, for example, is that if individuals are susceptible to disease, they are likely to take action they believe

will reduce their risk; while the IMB model's assumption states clearly that if an individual is well-informed, is motivated to act, and has appropriate behavior skills, he or she will be likely to initiate and maintain the pattern of preventive behavior.

In conclusion, the CPS model as a explanation model of behavioral change at individual level is based on a systematic explanation, usually utilizing the five reviewed theories, which are similar in explaining the behavioral change among people based on a systematic explanation. These five theories included the HBM the SCT, the TRA, and TPB, and IMB model; however, the main contributing theories to the CPS model fall under the HBM and IMB model, as discussed above, based on the two assumptions of these theories that fit the CPS model.

Since it was recognized that the CPS model utilized all five theories that explained behavioral change among people step by step, except the ARRM and the TM, which explained behavioral change among people as procedural, it can be seen in detail how these five theories were interconnected into the CPS model. What was found was that they were interconnected through having overlapping key critical concepts among the five theories used for explaining HIV preventive behavior, such as attitude, subjective norms, intention, HIV information, motivation, and behavior skills, and self- efficacy. Therefore, the conclusion was also arrived at at this stage that the five theories were interconnected by having overlapping key critical concepts in order to increase the power of the CPS model as an operational model to able to achieve behavioral change among key populations, particularly MSM, to a satisfactory stage; that is, taking HIV preventive actions such as condom use when they have sexual activity.

5.3 Explaining the Condom Use of MSM in Selected Provinces in the Study in Terms of:

1) Identifying the characteristics of MSM that use condoms; and

2) Identifying which determinant factors have an influence on the condom use of MSM

In terms of the demographic data of the respondents, it was found that most of the respondents were aged 26 and up and 21 and below. In terms of educational

background and source of income, most of the respondents had not completed a bachelor degree and were employed. Almost all of the respondents had an average monthly income of 11,000 baht and above.

Regarding sexual relationship status, most of the respondents were still single, followed by being in the process of developing a relationship with only one person. However, for those MSM that identified themselves as not being single, the majority of respondents mentioned that they had had a relationship with their partner for more than 2 months. In addition, most of the respondents were quite equal in terms of sexual preference roles, which included active and passive roles.

Most of the respondents received free condoms from distribution that came from peer educators or volunteer outreach workers or other condom outlet settings. The majority felt confident in being able to access condoms whenever they needed them. In addition, the price of condoms was not a barrier to accessing them.

In terms of engaging in anal sexual intercourse within the last three months, almost all of the respondents had done so. In terms of detailed information, most of them had engaged in anal sexual intercourse approximately 3 to 4 times during the previous two weeks, and almost all of them used condoms at least once with their partner within the last two weeks.

However, the number of condom uses with their partners within the last two weeks whenever they had anal sexual intercourse showed that approximately15% still did not use them with their partners every time they had anal sexual intercourse. This means this 15% of the respondents had low condom use, which led to having a high chance of transmitting the HIV virus to their partner if one of them was living with HIV.

The majority of respondents had good HIV-related information since the three provinces had been introduced to HIV interventions for a long time. However, there were still misunderstandings about HIV-related information that needed to be corrected, for example with the following statement: “Vaseline or baby oil could be used with condoms.”

Given the fact that the sample of present study in these three provinces has been explored for a long time in HIV interventions, the majority of respondents have a positive attitude towards condom use; and they also perceived having social support

when they needed it, but they were not sure whether they were vulnerable to getting HIV infection. This implies that even if they had good HIV-related information and had a positive attitude towards condom use, the assessment of risky behavioral needs to be promoted to ensure that MSM are able to assess their risky behavior to identify whether they are vulnerable to getting HIV infection. In terms of behavioral skills, most of the respondents felt that it was easy to protect themselves from HIV acquisition.

Given the results above, what was found was that MSM had good HIV information; however, this information could not lead them to assess whether they were vulnerable to getting HIV infection. Since the MSM in this study felt that it was easy to properly protect themselves from HIV infection, if the intervention could go beyond HIV information provision to increase their risk assessment skills, then the amount of condom use among the MSM population with their partners could be increased whenever they engaged in anal sexual intercourse.

There was an interesting issue on the perceived cost of condom use for HIV prevention. Most of the respondents placed themselves in the middle of the degree of the three statements, such as using condoms reduces their sexual pressure. This implies that they might not use condoms every time they have an opportunity to avoid it since they thought that condom use as a preventive tool cost them both money and sexual pressure issues. Consequently, this led to low condom use and was definitely able to increase their risk of acquiring HIV or transmitting the virus to their partner.

According to the results on the perceive benefit of condom use, the MSM had a high score on the perceived benefit of condom use; meanwhile, most of the respondents had a middle score on the perceived cost of condom use in terms of reducing their sexual pressure, creating trouble when they wanted to use it with their partner. This result, comparing the perceived cost and benefit of condom use among the MSM population, may affect their decision to use a condom with their partner.

In addition, self-efficacy supported the idea that MSM are able to decide what they want to do or do not want to do in terms of having sex with their partner, so there may be other factors to predict whether they would use condoms with their partners. What was found was that comparing the cost and benefits of condom among the MSM population may affect their decision making.

Likewise, with the general population couple, whenever the MSM identified their current partner as a regular partner, mostly around 2 months, the condom use between both of them may be stopped in order to avoid trouble from the lack of trust between both of them; however, this may increase sexual excitement between both of them. This may support the idea that 15% of the respondents still have low condom use with their partner. This kind of situation leads to an increase in the chance of getting HIV infection in MSM that contribute for increasing HIV prevalence in MSM significantly.

In terms of the context affecting condom use, the study found that the respondents had the tendency to engage in unprotected anal sexual intercourse. In addition, they also had high emotional involvement with their latest partner with whom they had sexual activity. These two factors led to dropping their use of condoms. Current situation, MSM met their latest partners through internet/website even educational settings they study which was totally difference scenario in the past that they met each other at bar, sauna and public parks.

Finally, given the recursive path diagram model, it showed that attitude towards condom use as one of three key concepts under the motivation factor was the highest antecedent in condom use, followed by sexual excitement regarding unprotected anal sexual intercourse and perceived social support (PSS), which had an equal power of explanation; however, the PSS had a negative relationship with condom use ratio.

In terms of the perceived cost and benefits of condom use, it had not been a power of explanation directly towards condom use ratio, rather than through self-efficacy and sexual excitement as contextual factors.

Given the results of the study, it was quite clear that increasing one’s attitude towards condom use was able to increase condom use ratio, whereas the MSM that had a low score on sexual excitement towards unprotected anal sexual intercourse were likely to exhibit high condom use ratio. However, those MSM that had a high score on perceived social support exhibited low condom use ratio, different from what was reviewed.

In terms of the hypothesis testing results, the significant hypotheses of this study are summarized in the table below.

Table 5.1 Hypotheses Testing Results

	Hypotheses	Results
1.	MSM that have a high score on HIV related information are more likely to exhibit a high condom use ratio.	Not significant
2.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use.	*Significant*
3.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having social support.	*Significant*
4.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection.	Not significant
5.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use and behavioral skills.	Not significant
6.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having social support and behavioral skills.	Not significant
7.	MSM that have high score on HIV related information are more likely to exhibit a high condom use moderated by a high score on high score on perception of vulnerability of HIV infection and behavioral skills.	Not significant
8.	MSM that have high score on attitude towards condom use are more like to exhibit a high condom use ratio.	*Significant*
9	MSM that have high score on perceived having social support are more like to exhibit a high condom use ratio.	*Significant*

Table 5.1 (Continued)

	Hypotheses	Results
10	MSM that have high score on perception of vulnerability of HIV infection are more like to exhibit a high condom use ratio.	Not significant
11.	MSM that have high score on attitude towards condom use are more like to exhibit a high condom use ratio moderated by a high score on behavioral skills.	Not significant
12.	MSM that have high score on perceived having social support are more like to exhibit a high condom use ratio moderated by a high score on behavioral skills.	Not significant
13.	MSM that have high score on perception of vulnerability of HIV infection are more like to exhibit a high condom use ratio moderated by a high score on behavioral skills.	Not significant
14.	MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio.	Not significant
15.	MSM that have high score on behavioral skill are more likely to exhibit a high condom use ratio moderated by a low score sexual excitement.	*Significant*
16.	MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with latest partner.	Not significant
17.	MSM that have high score on behavioral skills are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.	*Not significant*
18.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skill and a low score on sexual excitement.	*Significant*
19.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills and a low score on sexual excitement.	*Significant*

Table 5.1 (Continued)

Hypotheses	Results
20. MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills and a low score on sexual excitement.	Not significant
21. MSM that have high score on HIV related information are more likely to have high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skill and a high score on feeling intimacy with latest partner.	Not significant
22. MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills and a high score on feeling intimacy with latest partner.	Not significant
23. MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills and a high score on feeling intimacy with latest partner.	Not significant
24. MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on attitude towards condom use, a high score on behavioral skills and a high score on perceived behavioral setting.	Not significant
25. MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perceived having a social support, a high score on behavioral skills and a high score on perceived behavioral setting.	Not significant

Table 5.1 (Continued)

	Hypotheses	Results
26.	MSM that have high score on HIV related information are more likely to exhibit a high condom use ratio moderated by a high score on perception of vulnerability of HIV infection, a high score on behavioral skills and a high score on perceived behavioral setting.	Not significant
27.	MSM that have high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.	*Significant*
28.	MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.	*Significant*
29.	MSM that have high score on perception of vulnerability of HIV infection are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a low score on sexual excitement.	Not significant
30.	MSM that have high score on attitude towards condom use are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on feeling intimacy with the latest partner.	Not significant
31.	MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on feeling intimacy with the latest partner.	Not significant
32.	MSM that have high score on perception of vulnerability of HIV infection are more likely to exhibit a have high condom use ratio moderated by a high score on behavioral skills and a high score on feeling intimacy with the latest partner.	Not significant

Table 5.1 (Continued)

	Hypotheses	Results
33.	MSM that have high score on attitude towards condom use are more likely to exhibit a high condom use ratio through moderated by a high score on behavioral skills and a high score on perceived behavioral setting	Not significant
34.	MSM that have high score on perceived having a social support are more likely to exhibit a high condom use ratio moderated by a high score on behavioral skills and a high score on perceived behavioral setting.	Not significant
35.	MSM that have high score on perception of vulnerability of HIV infection are more likely to exhibit a have high condom use ratio moderated by a high score on behavioral skill and high score on perceived behavioral setting	Not significant
36.	MSM that have high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement	*Significant*
37.	MSM that have high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with latest partner	Not significant
38.	MSM that have high score on behavior skills are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting	Not significant
39.	MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio.	Not significant
40.	MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a low score on sexual excitement.	*Significant*
41.	MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on feeling intimacy with latest partner.	Not significant

Table 5.1 (Continued)

Hypotheses	Results
42. MSM that have high score on self-efficacy are more likely to exhibit a high condom use ratio moderated by a high score on perceived behavioral setting.	Not significant
43. MSM that have high score on perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self –efficacy.	Not significant
44. MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self –efficacy.	Not significant
45. MSM that have high score on perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a high score sexual excitement.	*Significant*
46. MSM that have high score on perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a high score on feeling intimacy with latest partner.	Not significant
47. MSM that have high score on perceived cost of condom use are more likely to exhibit a low condom use ratio moderated by a low score on self-efficacy and a low score on perceived behavioral setting.	Not significant
48. MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and low score on sexual excitement.	*Significant*
49. MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a low score on feeling intimacy with latest partner	Not significant

Table 5.1 (Continued)

Hypotheses	Results
50. MSM that have high score on perceived benefit of condom use are more likely to exhibit a high condom use ratio moderated by a high score on self-efficacy and a high score on perceived behavioral setting.	Not significant
51. MSM that have low score on sexual excitement are more likely to exhibit a high condom use ratio.	*Significant*
52. MSM that have low score on feeling intimacy with latest partner are more like to exhibit a high condom use ratio.	Not significant
53. MSM that have high score on perceived behavioral setting are more likely to exhibit a high condom use ratio.	Not significant
54. MSM that are older are more likely to exhibit a high condom use ratio.	Not significant
55. MSM that have high educational background are more likely to exhibit a high condom use ratio.	Not significant
56. MSM that have high monthly income are more likely to exhibit a high condom use ratio.	Not significant

5.4 Discussion

According to information received from key informants at both national and provincial levels, it was found that the Thailand NAS 2012-2016 focusing on key populations, particularly MSM, has been formulated from evidenced-based data. Also, it was implemented at the provincial level through managing and coordinating the PCM structure as anticipated originally. However, there were some discrepant points of view regarding roles and responsibilities toward each organizational capacity development dimension such as project management, monitoring and evaluation, technical capacity building, and financial management between the GO and CBO representatives.

Actually, the discrepant points of view towards roles and responsibilities on those dimensions above between the GO and CBO representatives could affect the

implementation at provincial level. Given that fact that the CBO representatives did not recognize on their roles and responsibilities towards those discrepant dimensions, therefore, they did not actively participation when they participated in the Thailand NAS 2012-2016 committee meetings. In the meantime, GO representatives did not also expect much from CBO representatives when they convened the meetings to discuss on those discrepant dimensions, such as financial management, project management etc. For instance, when the Thailand NAS 2012-2016 development committee discussed about financial management in terms of budget allocation, GO representatives took a lead on this issue, while CBO representatives did not play an active role to provide feedback on whether the budget allocation fits with the needs and HIV situation on each province to implement HIV interventions. Consequently, it was insufficient budget allocation to implement HIV interventions at provincial level that affected CBOs who were a forefront to handle the HIV situation at each province.

Regarding utilization of the organizational capacity development aspect, there were six areas where both representatives from the national and provincial levels had common points of view, including organizational structure, strategic and planning, partnership and networking, monitoring and evaluation, technical capacity building, and financial management. This means that these six areas, both governmental organizations' and community-based organizations' representatives have similar visions concerning their roles, responsibilities, and contribution in relation to the NASP 2012-2016 for key affected populations, including MSM, in terms of formulating, applying, and implementing the Thailand NAS 2012-2016.

At the provincial level, however, in terms of the roles and responsibilities between P the CM members, what was found was that there was not good coordination in terms of sharing information between community-based and governmental-based organizations' representatives who served as PCM members because not all of the information flowed as much as anticipated among them. For example, regarding the monitoring and evaluation areas, none of the community representatives from the provincial levels knew much in detail about what the current monitoring and evaluation system under the PCM supervision looked like and how this monitoring and evaluation system was functioning at the provincial level. On the other hand, the representatives from the governmental organizations were able to

elaborate in greater this dimension. The main reason came from the fact that the monitoring and evaluation system was developed to serve national indicators and targets; therefore, the perception of the CBO representatives of these systems was that only government-based organizations were responsible for taking care of this part, particularly for the provincial health office which needed to report back to the national level in terms of how much progress they had made. It seemed to be that the CBO representatives were left out unintentionally based on their perception of the separate roles and responsibilities between the CBO and governmental organization, even if all of the achievements that came from the CBO applied and implemented the Thailand NAS 2012-2016 at the community level.

Consequently, once the CBO representative felt that this task was not under his responsibility, a sense of ownership, even attempting to understand the existing monitoring and evaluation system, would not happen on the CBO representative's side, and then they could not even share how the monitoring and evaluation system worked or what the challenges and barriers were at the community level in terms of applying the monitoring and evaluation system.

In addition, it was found that neither national nor provincial levels assigned a person to take on the MSM project in coordinating and providing technical assistance to those provinces that needed help. This might be one of the barriers whenever the provincial level has a query, including how to apply and implement effectively the Thailand NAS 2012-2016 for key affected populations, including MSM, in terms of the design the HIV prevention, care and support, and treatment projects at the provincial level. This situation weakened the application and integration between NASP for 2012-2016 and HIV prevention, care and support, and treatment projects at the provincial level, as anticipated.

What has been seen is that the traditional perception of the roles and responsibilities of who does what between community-based and government-based organizations still prevails. This could be a barrier in utilizing the competency of each stakeholder to accelerate the achievement of the goals of NASP 2012-2016 for key affected populations, including MSM. This means that for macro-level tasks such as financial management, technical capacity development, and monitoring and evaluation, government-based organizations did not engage much with community-

based organizations even if all of the impacts or consequences happened at the community level for those that applied and implemented the Thailand NAS 2012-2016 for key affected populations, including MSM. Meanwhile, the CBO representatives have the perception that they do not have the capacity or knowledge to be able to contribute to those macro-level tasks even if they impacted themselves. This mindset needs to be adjusted.

Enhancing the engagement of the community-based organization for the macro-level tasks of government-based organizations could benefit the application and implementation of the Thailand NAS 2012-2016 focusing on key population including MSM at the provincial level. The success of applying and implementing this public policy could help the Thai MoPH achieve the "three zero target: zero on new HIV infections, zero on AIDS-related deaths and zero on stigma and discrimination", as anticipated.

In terms of predicting condom use ratio, the results showed that if we could increase the positive attitude towards condom use among MSM, it could increase the condom use ratio in this population. This would contribute to the reduction of new HIV-infected persons across the country.

According to the results, it can be concluded that the IMB model still had the power of explanation on condom use ratio in the MSM population in the selected provinces for this study.

In addition, this study attempted to explore whether the perceived costs and benefits of condom use affected condom use. The results showed that MSM were not concerned much these. However, those MSM that perceived the benefit of condom use were more likely to use condoms than those that had a high score on self-efficacy and a low score sexual excitement. This finding supports the rational choice assumption where people will do something whenever they think that that action could bring them a benefit.

It was also interesting that the contextual/situation factors, particularly sexual excitement on the part of the MSM population, determined condom use significantly. Given that result, it was found that MSM that had low scores on sexual excitement were more likely to use condoms. This finding aligned with what was reviewed in the literature about the contextual factor playing a critical role as a moderating factor in condom use.

Another interesting fact that came up with this study was that MSM that perceive social support whenever they needed have a negative associated with condom use ratio. This implies that the MSM in this study perceived that whether they were doing something that deviated from expected social norms, not to use condoms for example, they still perceived having social support. Therefore, condom use for those MSM that perceived having social support had a negative association in this study.

Finally, it was found that the IMB model was still an important model, particularly regarding having a positive attitude toward condom use and explaining condom use on the part of the MSM in the selected three provinces in this study. Given the results of this study, sexual excitement as one of the contextual factors was the strongest determinant factor in condom use; therefore, it should be taken in consideration and added to the model in order to increase the power of explanation of the IMB model.

According the results of the study, a few surprising findings were also found that merit further discussion. The first one was that even the NAC developed the comprehensive Thailand NAS 201-2016 focusing key populations including MSM through involving all of the stakeholders among non-governmental organizations, governmental organizations, and international aid agencies, including UN agencies, and establishing a coordinating mechanism to implement the Thailand NAS 2012-2016, what the study found was that there was a variety of levels of understanding between the representatives from non-governmental and governmental organizations in terms of the roles and responsibility of the PCM that did not align with the NAC anticipated at the first time. This surprising finding implies, that even NAC has a well-structured organization to develop and implement the Thailand NAS 2012-2016 that stated clearly on which sub-committee do what including line of authority and communication, the representatives of both the CBO and GO that serve and carry out this structure, particularly at the PCM level, needs to enhance their understanding of the PCM's roles and responsibilities in order to exercise their roles and responsibilities effectively.

The second surprising finding from this study was that explaining a condom use utilizes the psychological theoretical framework to predict behavioral change at

the individual level, which was a necessary but not a sufficient condition to explain and predict condom use among the MSM population in this study. The contextual or situational context could enhance the power of explanation, particularly for the IMB model, which was used as a theoretical framework to explain and predict condom use through the comprehensive package of services as its operationalized model. This finding could draw the attention of future study on the contextual or situational factors that MSM confront that influence their decision- making regarding the use of condoms whenever they have anal sexual intercourse.

The third surprising finding was that the MSM in the study were not concerned much about the cost or benefits of condom use compared to the findings from the literature review from western study. Rather than being concerned about the long-term cost and benefits in using condoms to protect themselves, the MSM in this study looked at only the current situation and their present satisfaction; that is, not to use condoms consistently depending on context or situation they confronted. This finding contrasted with other studies conducted in western society. This implies that cultural beliefs affect the daily life of people in society even in private issues such as having anal sexual intercourse among the MSM population. Therefore, whenever the government proposes a public policy, cultural factors need to be paid attention to equally with other factors.

5.5 Recommendations

According to the results from this study, the following is recommended for future study and its practical application:

5.5.1 Policy Implications

The IMB model as a framework for the comprehensive package of services mentioned for the Thailand NAS 2012-2016 has proved that it still has the power of explanation to predict condom use among the MSM population. Rather than focusing on HIV-related information and behavioral skills as in the past, new intervention needs to be emphasized in terms of increasing a positive attitude towards condom use as one of the key critical factors of motivational concepts that has been seen to be the highest antecedent of condom use.

In addition, sexual excitement was the second strongest determining factor in predicting condom use among MSM, and it should be taken into consideration whenever developing new designs or interventions.

Having a well-structured organization at provincial levels dealing with HIV prevention, care and support, and treatment projects is a good starting point for enabling the environment for bringing both community-based and government-based organizations' representative together in order to increase the effectiveness of HIV prevention, care and support, and treatment projects; however, encouraging all individuals serving as PCM members both that came from community and governmental organizations' representative to have a clear understanding of what the main roles and responsibilities of the PCM are, rather than focusing on the main roles and responsibilities attached to their organization, should be taken into consideration.

In order to increase the effectiveness of HIV prevention, care and support, and treatment projects at both national and provincial levels, managing the project as programmatic work, rather than routine work, needs to be considered. This means the following: 1). the target and goals of the project needed to be achieved have to be set up and shared among members, ensuring that they know what the project aims to achieve; 2). the roles and responsibilities of the members of both community- and government-based organizations need to be clear and communicated regularly among all members so that they are able to identify themselves concerning how they could contribute to the whole project; and 3). routine reporting monitoring and an evaluation system need to be set up and shared among members so that all members understand what and how they could contribute to the project progress.

5.5.2 Policy Suggestions

This study showed that even if the MSM, who participated in this study, are well equipped with HIV-related information, they still felt that they were vulnerable to HIV infection. This implies that having good HIV-related information did not guarantee the use of a condom whenever they had anal sexual intercourse.

In addition, the study also showed that most of the respondents had a monthly income below the average wage income and this led to perceiving the cost of condoms as a barrier to their access. This implies that MSM that have a monthly income below the average but are well equipped with HIV-related information still

felt vulnerable since they may not use condoms consistently whenever they have anal sexual intercourse since the price of condom was a barrier to their access.

Therefore, the Ministry of Public Health, the Department of Disease Control, should provide sufficient condoms for MSM; MSM that have a monthly income below the average and that perceive that the cost of condoms is a barrier to accessing them need to be assured that then can whenever they need them.

Rather than ascertaining the number of condoms distributed to MSM under the routine monitoring system at the national level, if it is possible, a tracking system for those MSM that receive free condoms from distribution and use them consistently needs to be developed as an indicator under the routine monitoring system. This system could help the country halt HIV transmission among the MSM population, including sexually-transmitted infection that is currently a severe issue for MSM in Thailand.

5.5.3 Theoretical Perspective

Though IMB model has shown that it still has still a power of explanation regarding condom use among MSM, according the results of this study, sexual excitement, as one of the contextual factors, was one of the strongest determining factors regarding condom use; therefore, it should be taken into consideration by being added to a new, robust information, motivation, and behavioral skill model in order to increase its power of explanation.

In addition, it was found that the CPS model was built upon the five theories discussed above, the CPS itself has not been proved yet by rigorous scientific study that identifies whether the CPS model employed by peer educators and volunteer outreach workers has the power to bring about behavioral change in the MSM population, particularly regarding risky behavior, as anticipated. Therefore, this is an interesting topic for future study.

5.5.4 Methodology

Since this study heavily relied on a quantitative method, which provide “one side of the coin” regarding condom use among MSM, particularly in identifying the factors that have influenced condom use, studying the process of behavioral change of MSM regarding condom use through employing qualitative study would be of benefit in terms of providing a comprehensive understanding of MSM condom use behavior.

BIBLIOGRAPHY

Cassel, Michael (2012, October). Comprehensive Prevention Package: Outline of the Comprehensive Package of Services. *In XIX International AIDS Conference Hub.* Ministry of Public Health, Thailand and United States Agency for International Development, Bangkok, Thailand.

Catherine Lee, & colleagues (2014). *Situational Analysis of Young People at High Risk of HIV Exposure in Thailand*. Retrieved from http://www.unicef.org/thailand/UNICEF_study_on_HIV_infection_among_young_peole_FINAL_ENGLISH.pdf

Coates, T. J., Richer, L., & Caceres, C. (2008). Behavioral Strategies to reduce HIV transmission: how to make them work better. *The Lancet, 372*(9639), 669-684.

Cornman, Deborah, H., Schmiege, S. J., Bryan, A., Joseph Benzinger, T. Fisher, J. D. (2007). An information-motivation-behavioral skills (IMB) model-based HIV prevention interventions for truck drivers in India. *Social Science and Medicine, 64*(8), 1572-1584.

Davidovich, U., De Wit, J. B. F. & Stroebe, W. (2004). Behavioral and cognitive barriers to safe sex between men in steady relationship: Implications for prevention strategies. *AIDS Education and Prevention, 16*(4), 304-314.

David, J. Dobrowolski, Pakprime Oranop na Ayuthaya, Shirley Lin, Siddhi Aryal, Kipp Efinger. (2012). *Pact's Community REACH-GMR project: Final Report 2008-2012.* Retrieved from http://pdf.usaid.gov/pdf_docs/pdacy361.pdf

Dobrowolski, D. J., Pakprime Oranop na Ayuthaya, Lin, Shirley, Siddhi Aryal, and Efinger, Kipp. (2012). *Pact's community REACH-GMR project: Final report 2008-2012.* Retrieved from http://pdf.usaid.gov/pdf_docs/pdacy361.pdf

Fishbein, M. (Ed). (1967). Readings in attitude theory and measurement. New York. Wiley. In Daniel E. Montano and Danuta Kasprzyk "Theory of reasoned action, theory of planned behavior, and the integrated behavioral model" In Karen. Glanz, Barbara K. Rimmer, K. Viswanath, and C. Tracy Orleans (eds.), *Health Behavior and Heath Education: Theory, Research, and Practice*, (4th ed.). San-Francisco: Jossey-Bass.

Fisher, Colleen M. (2011). Are information, motivation, and behavior skills linked with HIV-related sexual risk among young men who have sex with men? *Journal of HIV/AIDS Social Service, 10*(1), 5-21.

Fisher, Jeffery D. & Fisher, William A. (2000). *Theoretical approaches to individual-level change in HIV risk behavior.* Retrieved from http://digitalcommons.uconn.edu/cgi/viewcontent.cgi?article=1003&context=chip_docs

Fisher, W. A., Williams, S. S., Fisher J. D., & Malloy T. E. (1999). Understanding AIDS risk behavior among sexually active urban adolescents: An empirical test of the information-motivation-behavior skills model. *AIDS and Behavior, 3*(1), 14.

Gerrard, M., Gibbons, F. X., & Bushman, B. J. (1996). Relation between perceived vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin, 19*(3), 390-409.

Glanz, K., Rimer, B.K, and Viswanath, K. (Eds.) (2008). *Health behavior and Health Education: Theory, Research, and Practice. San Francisco*, CA: Jossey-Bass.

Kasen S., Vaughan R. D., Walter H. J. (1982). Self-efficacy for AIDS preventive behaviors among tenth grade students. *Health Education Quarterly*, *19*(2), 187-202.

Kraft, M. E., and Furlong, S. R. (2013). *Public policy: Politics, analysis and alternatives* (4th ed.). London: Sage.

Latkin, C. A., and Knowlton, A. R. (2005). Micro-social structural approaches to HIV prevention: a social ecological perspective. *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV, 17*(Sup.1), 102-113.

Li, A., Anchalee Varangrat, Wipas Wimonsate, Tarecrat Chemnasiri, Chalinthorn Lee, Catherine. (2014). Situational analysis of young people at high risk of HIV Exposure in Thailand. Retrieved from *http://www.unicef.org/thailand/UNICEF_study_on_HIV_infection_among_young_peole_FINAL_ENGLISH.pdf*

Li, A., Anchalee Varangrat, Wipas Wimonsate, Tareerat Chemnasiri, Sinthuwattanawibool, Praphan Phanuphak, …Van Griensven, F. (2009). Sexual behavioral and risk factors for hiv infection among homosexual and bisexual men in Thailand. *AIDS Behavior, 13*(2), 318-327.

Mansergh, G., Sathapana Naorat, Rapeepun Jommaroeng, Jenkins, R. A., Stall, R., Supaporn Jeeyapant, … Van Griensven, F. (2006). Inconsistent condom use with steady and casual partners and associated factors among sexually-active men who have sex with men in Bangkok, Thailand. *AIDS Behavior, 10(*6), 747-751.

Mclean, J., Boulton, M., Brooks, M. Lakthani, D., Fitzpatrick, R., Dawson, J., … Hart, G. (1994). Regular partners and risky behavior: Why do gay men have unprotected intercourse?. *AIDS Care, 6*(3), 331-341.

Ministry of Public Health, Bureau of Epidemiology, Thailand. Integrated bio-behavioral survey among MSM population and TG, 2003-2010.

The National AIDS Committee. (2012). *Thailand National AIDS Strategy for 2012-2016, The Agriculture Co-Operative Federation of Thailand.* Bangkok, Thailand.

Phuengjan Somporn. (2009). *Public policy: Theory and practice.* Bangkok: On Art Creation.

Raynold, Jack, Pick., Billy, Karen Kroeger., et al. (2009). *Review of the Minimum Packages of Services for Most A-Risk Populations*. USAID/Regional Development Mission Asia (USAID/RDMA).

Rimer, Barbara K. (2008). Models of Individual Health Behavior. In K. Glanz, Barbara K. Rimmer, K. Viswanath, and C. Tracy Orleans (eds.), *Health behavior and heath education: Theory, research, and practice* (4th ed.). San-Francisco: Jossey-Bass.

Sombat Thomrongthayawong. (2009). *Public policy: concept, analysis, and process* (20th ed.). Bangkok: Samatham. (In Thai)

Spratt, Kai and Maria Claudia Escobar. (2011). *Increasing access and uptake of HIV testing and counseling among men who have sex with men in Thailand.* Arlington, VA: USAID's AIDS Support and Technical Assistance.

Tareerat Chemnasiri, Taweesak Netwong, Surasing Visarutratana, Anchalee Varangrat, Li, A., Praphan Phanuphak, … Van Griensven F. (2010). Inconsistent condom use among young men who have sex with men, male sex workers, and transgenders in Thailand. *AIDS Education Prevention, 22*(2), 100-9. doi: 10.1521/aeap.2010.22.2.100.

UNAIDS. (2013). *Global report: UNAIDS report on the global AIDS epidemic 2012.* Geneva, Switzerland: UNAIDS.

UNGASS. (2008). *Thailand UNGASS country progress report: Reporting period: january 2006–december 2007.* Bangkok, Thailand: UNGASS.

Van Griensven, F., Anchalee Varangrat, Wipas Wimonsate, Suvimon Tanpradech, Keratikarn Kladsanad, Tareerat Chemnasiri, …Tanarak Plipat. (2010). Trends in HIV prevalence, estimated HIV incidence, and risk behavior among men who have sex with me in Bangkok, Thailand, 2003-2007. *Journal of Acquired Immune Deficiency Syndromes, 53*(2), 234-239.

Van Griensven F, Sombat Thanprasertsuk, Rapeepun Jommaroeng, Mansergh, G., Sathapana Naorat, Jenkins, R. A., … Tappero, J. W. (2005). Evidence of a previously undocumented epidemic of HIV infection among men who have sex with men in Bangkok, Thailand. *AIDS, 19*(5), 521-526.

Van Griensven, F., Anchalee Varangrat, Wipas Wimonsate, Suvimon Tanpadech, Keratikarn Kladsawad, Tareerat Chemnasiri, … Tanarak Plipat. (2010). Trends in HIV prevalence, estimated HIV incidence, and risk behavior among men who have sex with men in Bangkok, Thailand, 2003-2007. *JAIDS, 53*(2), 234-239.

What is behaviorism?. (n.d.). Retrieved from http://psychology.about.com/od/behavioralpsychology/f/behaviorism.htm

Wipas Wimonsate, Sathapana Naorat, Anchalee Varangrat, Praphan Phanuphak, Kamolset Kanggarnrua, McNicholl, J., … Passakorn Akarasewi. (2010). Factor Associated with HIV testing History and Returning for HIV test results Among Men who have Sex with Men in Thailand. *AIDS and Behavior, 15(4), 693-701.*

Wulfert, E., Wan. C.K., & Backus, C.A. 1996. Gay Men's safer Sex Behavior: An integration of Three models. Journal of Behavioral Medicine, 19(4), 345-366. In Karen Glanz, Barbara K. Rimmer, Frances Marcus Lewis, editor; foreword by Noreen M. Cleark.-3rd ed. (2002). *Health behavior and health education: theory, research, and practice.* San-Francisco: Jossey-Bass.

Ybarra, M. L., Korchmaros, J., Kiwanuka, J., Bangsberg, D. R., & Bull., S. (2013). Examining the application of the IMB model in predicting condom use among sexual active secondary school students in Mbarara, Uganda. *AIDS Behavior*, *17*(3), 1116-1128.

Zea, M., Reisen, C., Poppen, P., & Bianchi, F. (2009). Unprotected anal intercourse among immigrant Latino MSM: The role of characteristics of the person and the sexual encounter. *AIDS Behavior,13*(4), 700-715.

Zhang et al. (2011). Predictors of consistent condom use based on information-Motivation-Behavioral skills (IMB) model among female sex works in Jinan, China. *BMC Public Health,11*(1), *113.*

APPENDICES

APPENDIX A

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

My name is Panus Rattakitvijun Na Nakorn, PhD international student of Development Administration batch 18, faculty of Public Administration from The National Institute of Development Administration (NIDA).

I am collecting data for my dissertation entitled of ***explain condom use behavior among men who have sex with men in Bangkok, Chiang Mai, and Phuket: A contextual perspective*** in order to seek understanding how HIV/AIDS national strategic plan has been applied and implemented at provincial level under provincial coordinating mechanism management.

Because you are one of important person who is able to respond on this study, I would like to ask you to respond this questionnaire that will spend around 45-60 minutes. Your responses over this questionnaire will be kept confidentially and will not be disclosed to public as individual information. The data will be shown as group of people who have same characteristic. The results of this study will be used to enhance the provincial coordinating mechanism management

for HIV/AIDS prevention interventions among men who have sex with men who are key affected population for HIV/AIDS situation in future.

Your kindly cooperation to respond this questionnaire is voluntary You have rights to drop off yourself from responding this questionnaire whenever you want to.
If you have further query after responding this questionnaire, I am willing to answer your question anytime through pnanakorn@hotmail.com or my phone at 081-805-8334.

Thank you in advance for your cooperation

Panus Rattakitivijun Na Nakorn

Researcher

INSTRUCTION:

The semi-structured questionnaire consists of eight dimensions of organizational capacity development. In-depth interview will be used for this section.

Part I: Introduction

What is your name? ……
What is your current position in organization?
……
What is your educational background?
……
What is your current position in provincial coordinating mechanism?
……
How long have you been involvement on PCM?
……..

Part II: Organizational Capacity Development

2.1 National HIV/AIDS Strategic Plan for MSM
- How did National HIV/AIDS Strategic plan for MSM formed?
- How was committee of *National HIV/AIDS Strategic plan for MSM selected?*

2.2 Strategy and Planning
- How did the National HIV/AIDS Strategic plan for MSM committee prioritize MSM as top priority in this current strategic plan?

2.3 Partnership and Networking
- How did National HIV/AIDS Strategic plan for MSM committee engage with other stakeholder for partnership and networking to gain other perspective from them?

2.4 Project Management
- How did National HIV/AIDS Strategic plan for MSM committee play their roles to come up with national HIV/AIDS strategic plan for MSM?
- How has National HIV/AIDS Strategic plan for MSM committee ensuring that the National HIV/AIDS Strategic plan for MSM been applied and implemented at provincial level?

- How has National HIV/AIDS Strategic plan for MSM committee ensuring that the National HIV/AIDS Strategic plan for MSM improved quality of services for key affected population particular MSM?
- How has National HIV/AIDS Strategic plan for MSM committee ensuring that the National HIV/AIDS Strategic plan for MSM controlled quality of services of key affected population particular MSM?

2.5 Monitoring and Evaluation

- How can National HIV/AIDS Strategic plan for MSM committee achieve their goals and objective?
- How did National HIV/AIDS Strategic plan for MSM committee monitor and evaluation HIV/AIDS program for MSM at provincial level?

2.6 Technical capacity building

- What kind of mechanism did National HIV/AIDS Strategic plan for MSM committee receive Technical capacity building in order to provide technical assistance to other stakeholder in their province?
- What kind of mechanism did National HIV/AIDS Strategic plan for MSM committee provide capacity building to stakeholder who run HIV/AIDS program for MSM?
- How was the process of technical capacity building both receiving and providing roles?

2.7 Financial management

- How did the process of National HIV/AIDS Strategic plan for MSM committee allocate budget to respond HIV situation in province?
- What kind of mechanism did National HIV/AIDS Strategic plan for MSM committee use for financial management when they implement HIV/AIDS program for MSM?

2.8 Human Resources

- How many staff from National HIV/AIDS Strategic plan for MSM committee did assign to take care on HIV/AIDS program for MSM? Did they fully or partially responsible for HIV/AIDS program for MSM?

APPENDIX B

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

My name is Panus Rattakitvijun Na Nakorn, PhD international student of Development Administration batch 18, faculty of Public Administration from The National Institute of Development Administration (NIDA).

I am collecting data for my dissertation entitled of ***explain condom use behavior among men who have sex with men in Bangkok, Chiang Mai, and Phuket: A contextual perspective*** in order to seek understanding how HIV/AIDS national strategic plan has been applied and implemented at provincial level under provincial coordinating mechanism management.

Because you are one of important person who is able to respond on this study, I would like to ask you to respond this questionnaire that will spend around 45-60 minutes. Your responses over this questionnaire will be kept confidentially and will not be disclosed to public as individual information. The data will be shown as group of people who have same characteristic. The results of this study will be used to enhance the provincial coordinating mechanism management

for HIV/AIDS prevention interventions among men who have sex with men who are key affected population for HIV/AIDS situation in future.

Your kindly cooperation to respond this questionnaire is voluntary You have rights to drop off yourself from responding this questionnaire whenever you want to.

If you have further query after responding this questionnaire, I am willing to answer your question anytime through pnanakorn@hotmail.com or my phone at 081-805-8334.

Thank you in advance for your cooperation

Panus Rattakitivijun Na Nakorn

Researcher

INSTRUCTION:

The semi-structured questionnaire consists of eight dimensions of organizational capacity development. In-depth interview will be used for this section.

Part I: Introduction

What is your name?……

What is your current position in organization?…….

What is your educational background?.....

What is your current position in provincial coordinating mechanism?

.....

How long have you been involvement on PCM?

……..

Part II: Organizational Capacity Development

2.1 Organizational Structure and Process

- How does PCM formed and recruited member?
- How does the PCM selection process look like?
- How does the PCM's organization look like?

2.2 Strategy and Planning

- How does PCM prioritize MSM as top priority in their province?
- How does PCM plan to implement HIV/AIDS prevention program for MSM at provincial level?

2.3 Partnership and Networking

- How does PCM engage with other stakeholder for partnership and networking to achieve HIV/AIDS implementation for MSM at provincial level?

2.4 Project Management

- How does PCM play their roles to apply and implement HIV national strategic plan?

- How does PCM manage the HIV/AIDS prevention program for MSM?
- How does PCM improve quality of services for key affected population particular MSM?
- How does PCM control quality of services of key affected population particular MSM?

2.5 Monitoring and Evaluation

- How can PCM achieving their goals and objective to apply and implement HIV national strategic plan?
- How does PCM monitor and evaluation HIV/AIDS program for MSM?

2.6 Technical Capacity Building

- What kind of mechanism does PCM receive Technical capacity building in order to provide technical assistance to other stakeholder in their province?
- What kind of mechanism does PCM provide capacity building to stakeholder who run HIV/AIDS program for MSM?
- How does the process look like?

2.7 Financial Management

- How does the process of PCM allocate budget to respond HIV situation in province?
- What kind of mechanism does PCM use for financial management when they implement HIV/AIDS program for MSM?

2.8 Human Resources

- How many staff from PCM does assign to take care on HIV/AIDS program for MSM? Are they fully or partially responsible for HIV/AIDS program for MSM?

APPENDIX C

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

INTRODUCTION FOR PARTICIPANT OF THIS STUDY

My name is Panus Rattakitvijun Na Nakorn, PhD international student of Development Administration batch 18, faculty of Public Administration from The National Institute of Development Administration (NIDA).

I am collecting data for my dissertation entitled of ***explain condom use behavior among men who have sex with men in Bangkok, Chiang Mai, and Phuket: A contextual perspective*** in order to predict condom use behavior among men who have sex with men in three selected provinces who are the three of the top ten on HIV prevalence in Thailand.

Because you are one of important person who is able to respond on this study, I would like to ask you to respond this questionnaire that will spend around 30 -45 minutes. Your responses over this questionnaire will be kept confidentially and will not be disclosed to public as individual information. The data will be shown as group of people who have same characteristic. The results of this study will be used to develop the HIV/AIDS prevention interventions among men who have sex with men who are key affected population for HIV/AIDS situation in future.

Your kindly cooperation to respond this questionnaire is voluntary You have rights to drop off yourself from responding this questionnaire whenever you want to.

If you have further query during responding this questionnaire, I am willing to answer your question anytime through pnanakorn@hotmail.com or my phone at 081-805-8334.

Thank you in advance for your cooperation

Panus Rattakitivijun Na Nakorn
Researcher

PART I: GENERAL INFORMATION

Instruction: please making ✓ in the box ☐ on each item OR filling out information reflecting your thoughts on the blank space

1. How old are you?..... years……. Months
2. What is your latest degree holding?
   - ☐ Below bachelor degree or certificate
   - ☐ Bachelor degree
   - ☐ Master degree and up
3. Where is your source of income?
   - ☐ Parent
   - ☐ Employed
   - ☐ Partner
   - ☐ Self- employed
   - ☐ Other (please identify)…….
4. How much monthly income do you earn?
   Please identify……
5. What is your current relationship status?
   - ☐ Single
   - ☐ Having regular partner
   - ☐ Making relationship
   - ☐ Having causal partner
   - ☐ Other, please identify ……..
6. What is your sexual preference?
   - ☐ Active role only
   - ☐ Passive role only
   - ☐ Versatile role
   - ☐ Other, please identify……

7. Normally, how did you get condom in the last 3 months?

   ☐ Distributed

   ☐ Bought it

   ☐ Other (please identify)……..

8. Do you think you are able to acquire condom whenever you are having sexual activity?

   ☐ Yes ☐ No

9. Do you think condom price is burden for you to have it when you are having sexual activity?

   ☐ Yes ☐ No

10. Have you ever had anal sexual intercourse within past 3 months?

    ☐ Yes ☐ No

11. How many times do you have anal sexual intercourse within past 3 months?
    Please identify…….

12. How many pieces of condom do you use when you had anal sexual intercourse within past 3 months?
    Please identify…….

PART II: HIV Related Information

Please marking ✓□□on the box that reflects on your thoughts

Item	Correct	Incorrect	Do not know
1. If you have sex and have an HIV test within the next week, it can definitely tell you if you got HIV			
2. The HIV/AIDS virus can be transmitted through male sperm/semen			
3. You can safely store condom in your wallet for at least 2 months			
4. The same male condom can be use more than once			
5. Condoms from health clinics or pharmacies are better than condom from shops			
6. The HIV virus is small enough to go through condom			
7. If you know a person very well, you don't need to use condom to protect against getting HIV from them			
8. Vaseline or baby oil should never be used with condoms.			
9. MSM who are passive roles during sexual activity are more riskier to getting HIV than MSM who are active role if they do not use condom.			
10. Condom is one of the most effective available methods to protect HIV infection.			

INSTRUCTION:

In order to save your valuable time, I would like to propose how to respond over this questionnaire as follows;

Read carefully on each item

Think carefully ensuring your selected answer reflecting your thoughts

Select only one answer on each item by marking ✓ on the box that reflects on your thoughts

Example

Do you like rainbow color?

Definitely dislike Definitely like

1	2	3	4	5	6	7	8	9	10

Motivation

Attitude towards condom use

1. I am not feel embarrassing when I buy condom at convenient stores

Extreme unlikely …… Extreme likely

1	2	3	4	5	6	7	8	9	10

2. Using condom is not a barrier for me

Extreme unlikely ……Extreme likely

1	2	3	4	5	6	7	8	9	10

3. Using condom does not reduce my sexual pressure at all

Extreme unlikely ……Extreme likely

1	2	3	4	5	6	7	8	9	10

4. Carrying condom would not a problem for me

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

5. I have fine to use condom every time when I have sexual activity with my partner

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

Perceptions of social support;

1. When I compare myself to the average MSM, there is a special person who is always around when I am in need

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

2. When I compare myself to the average MSM, there is a special person with who I can share my joys and sorrows

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

3. When I compare myself to the average MSM, I have a special person who is a real source of comfort for me

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

4. When I compare myself to the average MSM, there is a special person in my life who cares about my feelings

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

Perceptions of Vulnerability to HIV Infection

When you compare yourself to the average MSM, what would you say are your chances of getting HIV infection?

Extreme unlikely …….Extreme likely

1	2	3	4	5	6	7	8	9	10

Behavior skills

1. For me, buying condom during the next two months would be …

Very difficult……..…….Very easy

1	2	3	4	5	6	7	8	9	10

2. For me, getting condom for free during the next two months would be …

Very difficult……..…….Very easy

1	2	3	4	5	6	7	8	9	10

3. During the next two months, carrying condom with me would be …

Very difficult……..…….Very easy

1	2	3	4	5	6	7	8	9	10

4. If I have sex during the next two months, using condom every time would be …

Very difficult……..…….Very easy

1	2	3	4	5	6	7	8	9	10

5. If I am to have sex during the next two months, telling my partner we have to sex use condom would be …

Very difficult……..…….Very easy

1	2	3	4	5	6	7	8	9	10

6. Talking to my partner about whether or not we should have sex would be …

Very difficult……..……Very easy

1	2	3	4	5	6	7	8	9	10

Perceived cost of condom use for HIV infection protection

1. Using condom reduces my pleasure during having sexual activity

Definitely

Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

2. Using condom brings troubles from my sexual partner

Definitely

Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

3. Accessing a condom is not easy for me

Definitely Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

Perceived Benefit of Condom Use

1. Using condom can protect me from HIV infection

Definitely Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

2. Condom is one of effective methods to protect HIV infection

Definitely Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

3. In long run, protecting HIV infection from using condom is benefit for me in terms of treatment and other relevant costs.

Definitely Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

4. Using condom every time when we have sexual activity made me safer from sexual transmitted diseases.

Definitely Untrue…….Definitely true

1	2	3	4	5	6	7	8	9	10

Self-efficacy

1. I believe I can take independent decision when in a relationship to have sex

Strongly disagree ……..…….Strongly agree

1	2	3	4	5	6	7	8	9	10

2. I believe I can make decision about what things I will and will not do when I have sex

Strongly disagree ……..…….Strongly agree

1	2	3	4	5	6	7	8	9	10

3. I am not in a sexual mood, I believe I could tell my partner I do not want to have sex

Strongly disagree ……..…….Strongly agree

1	2	3	4	5	6	7	8	9	10

4. If I am in a sexual mood, but I do not want to have sex, I believe I could tell my partner I do not want to have sex

Strongly disagree ……..…….Strongly agree

1	2	3	4	5	6	7	8	9	10

5. I do not feel I would be in control of my partner in a sexual situation.

Strongly disagree ……..……Strongly agree

1	2	3	4	5	6	7	8	9	10

Sexual excitement

How much they have anticipated sexual excitement of unprotected sexual activity?

Definitely not strong ..……Definitely strong

1	2	3	4	5	6	7	8	9	10

Intimacy

How much they have been emotional involvement towards their last partner they have sexual activity?

Strongly unemotional involvement……..Strongly emotional involvement

1	2	3	4	5	6	7	8	9	10

Behavior settings

Where did you meet your last partner?

☐ Bar ☐ Sauna

☐ Park ☐ Massage Parole

☐ Internet or website

☐ Other, please identify……

THANK YOU FOR YOUR COOPERATION

BIOGRAPHY

NAME	Mr.Panus Rattakitvijun Na Nakorn
ACADEMIC BACKGROUND	Bachelor of Arts in Sociology and Anthropology Department of Sociology, Faculty of Sociology and Anthropology Thammasat University, 1996. Master of Arts in Sociology Department of Sociology, Faculty of Sociology and Anthropology Thammasat University, 1999.
PRESENT POSITION	2015- present Policy specialist, Electronic Transactions Development Agency, Minister of Information and Communication Technology, Thailand.