

The role of Traditional Thai Medicine (TTM) in Thailand

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Abstract

Thailand's National Health Policy set a minimum target of 5% for the use of TTM in 2011, but after concerted efforts from the government and commercial interests this target has not yet been reached. The literature suggests that TTM adoption in Thailand has not been as successful as expected due to Thai citizens' low degree of recognition regarding TTM's benefits and usage. It is clear that the understanding of and beliefs about TTM have not yet been systematically investigated in existing health-based research, which has focused on simple measures of consumption and access. Furthermore, what TTM means in both the public healthcare system and marketplace has not been investigated. There is also an absence of research investigating the role of communication in the adoption of TTM. Consequently, the knowledge and beliefs of Thai citizens in relation to TTM need to be explored within a societal framework, in which social relationships, culture, lifestyles and healthcare in Thailand are all inter-related.

This qualitative study explores the roles and meanings of TTM for Thai citizens in their lives, to assist in the government's promotion in Thailand. The research comprised 57 consumer participants in focus groups and 14 in-depth interviews with representatives of the health professions across the public and private sectors. It draws upon the Knowledge, Attitude, and Practice (KAP) framework in order to investigate these aspects based on the informants' experiences in order to ensure that the overarching themes, evidenced across all groups, can be identified.

The findings indicated a diversity of understanding about TTM, which will have a significant bearing on how the government can effectively promote its use. TTM meanings included household treatments, holistic treatments, and medicinal pots; as well as its representation as Thai wisdom, traditions, and culture including individual beliefs, which incorporate knowledge from both China and India that has been combined with established moral and ethical Buddhist principles.

Consumers demonstrated a high level of awareness of TTM in its 'traditional form', a low level of awareness of the availability of TTM in its 'finished form' (tablets, capsules, etc.) in the marketplace, and a low level of usage. The findings also indicated that consumers had only a superficial knowledge of both forms of TTM, and that their current beliefs about

TTM's 'traditional form' were that it has become obsolete, devalued, and is no longer proper to use. Conversely, the 'finished form' competes with Western-style medicines, but it cannot show 'relative advantages' equal to conventional medicine in terms of quality, efficacy, and accessibility.

Whether the consumer participants had used both forms of TTM depended on six important influential factors: 1) traditional and individual beliefs, culture, and history; 2) individual knowledge, attitudes, and perceptions; 3) social factors; 4) accessibility and convenience; 5) the consumers' demographics; and 6) the promotion of TTM and drug advertisements. It appears that all of these factors have led to either success or difficulties for TTM adoption, for progress in the marketplace, and in Thailand's public healthcare system.

Findings also showed that conventional doctors had experienced the following: 1) a lack of awareness about the body of TTM knowledge and wisdom; 2) a lack of skills in carrying out TTM treatments, and 3) a lack of understanding about TTM products. Furthermore, the biases against TTM by medical doctors had caused TTM products to be overlooked and to only be used as 'a massage treatment'. These factors have caused TTM to fall short of its national target for TTM usage by a wide margin.

This thesis suggests that TTM is faced with 'a cultural and national identity conflict of TTM', resulting from: 1) an Intergenerational knowledge and attitude conflict, 2) a Socio-economic conflict, and 3) a Communication conflict. These conflicts represent potential obstacles to adopting TTM in Thailand, which has led to the anti-consumption of TTM by both consumers and medical professionals.

The practical implications of these three conflicts are that the awareness and availability of TTM for consumers are largely constrained based on a lack of TTM knowledge by medical professionals and poor-quality information that circulates via commercial advertising and poorly targeted official communications from the MoPH. An appendix to this thesis includes recommendations derived from the findings and a discussion of how the MoPH can develop an appropriate strategic communication plan.

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The inspiration for this thesis came from the philosophy of King Bhumibhol Adulyadej's 'Sufficiency Economy'. His intention was to improve the quality of life for his citizenry, and I feel that following his footsteps is, and will continue to be, the best direction for my life. Therefore, I have accordingly chosen a topic for my thesis that can benefit Thailand and its economy.

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Table of Contents

Abstract.....	i
Acknowledgements.....	v
Abbreviations	xiii
CHAPTER 1 INTRODUCTION.....	1
1.1 BACKGROUND TO THE STUDY	1
1.1.1 Historical context	1
1.1.2 Communications campaigns supporting TTM	3
1.2 THE RESEARCH GAP: KNOWLEDGE, ATTITUDES AND PRACTICE OF TTM	5
1.3 AIMS.....	8
1.4 RESEARCH QUESTIONS	8
1.5 APPROACH AND PARADIGM.....	8
1.5.1 Theoretical frame: KAP	10
1.5.2 Methods.....	11
1.5.3 The positioning of the researcher	11
1.6 SCOPES AND KEY ASSUMPTIONS OF THIS STUDY	13
1.7 ORIGINAL CONTRIBUTION.....	14
1.8 STRUCTURE.....	15
CHAPTER 2 DEFINING TRADITIONAL MEDICINE (TM) AND TRADITIONAL THAI MEDICINE (TTM).....	17
2.1 DEFINING TRADITIONAL MEDICINE (TM).....	17
2.1.1 Definitions	17
2.1.2 History and revival	18
2.1.3 Patterns of use	20
2.1.4 Cultural and health significance.....	21
2.1.5 The integration of TM into national policies.....	23
2.2 TRADITIONAL THAI MEDICINE (TTM).....	25
2.2.1 Policy context.....	26
2.2.2 Regulatory context	29
2.2.3 Research and education context	29
2.2.4 TTM in healthcare	30
2.2.5 TTM communication and media framing.....	32
CONCLUSION	43
CHAPTER 3 PUBLIC UNDERSTANDING AND BELIEFS ABOUT TM AND TTM IN HEALTHCARE.....	45
3.1 GLOBAL USAGE OF TM	45
3.2 FACTORS INFLUENCING TM USAGE	48

3.3 MEDICAL INFORMATION AND THE PROBLEM OF TTM IN HEALTHCARE	55
3.4 RESEARCH STUDIES RELATING TO TTM IN THAILAND	60
3.4.1 The medical understanding and beliefs about TTM by healthcare professionals.....	60
3.4.2 The medical understanding and beliefs about TTM by consumers	61
3.5 FACTORS INFLUENCING TTM USAGE	66
3.5.1 Consumers’ knowledge of and attitude towards TTM	66
3.5.2 Consumer demographics	67
3.5.3 Marketing factors (product, place, price and promotion)	67
3.5.4 Social factors (family members, medical doctors, culture and beliefs).....	69
3.6 THE MAJOR BARRIERS INHIBITING USE OF TTM IN THAILAND	70
3.6.1 Major barriers: Health industry	70
3.6.2 Major barriers: Consumers and marketplace.....	71
3.6.3 Summary of the major barriers.....	73
CONCLUSION	75
CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY	77
4.1 RESEARCH QUESTIONS.....	77
4.2 CLAIMS.....	77
4.3 THE PHILOSOPHICAL DIMENSIONS OF QUALITATIVE RESEARCH.....	77
4.3.1 Justification for the research design of this study.....	78
4.3.2 Quality in qualitative approaches	79
4.4 CONCEPTUAL FRAMEWORK.....	81
4.4.1 History of KAP research and its applications.....	81
4.4.2 KAP in healthcare research and its applications	83
4.4.3 KAP as a conceptual framework	89
4.4.4 Justification of the theoretical framework to the study	91
4.5 METHODS.....	94
4.6 DATA COLLECTION AND CODING.....	95
4.6.1 Phase 1. Focus groups	98
4.6.2 Phase 2. In-depth interviews.....	101
4.6.3 The process of data analysis: Thematic analysis	104
CONCLUSION	110
CHAPTER 5 FINDINGS.....	113
5.1 FOCUS GROUP FINDINGS	113
5.1.1 Results from thematic analysis.....	113
5.1.2 THEME 1 Knowledge of TTM: A superficial knowledge of TTM	115
5.1.3 THEME 2 Attitudes towards TTM: TTM is inferior to conventional medicine	123

5.1.4 THEME 3 The practice of TTM: TTM is a second choice and only for the treatment of minor illness	130
5.1.5 THEME 4 Communication and media of TTM: Insufficient promotion of TTM	143
5.2 IN-DEPTH INTERVIEW FINDINGS.....	147
5.2.1 Results from thematic analysis.....	147
5.2.2 THEME 1 Knowledge of TTM: The discontinuation and disappearance of Thailand’s TTM knowledge	150
5.2.3 THEME 2 Practice of TTM in public healthcare by medical doctors: TTM treatment only for massage.....	154
5.2.4 THEME 3 Practice of TTM by consumers: TTM is an alternative choice	160
5.2.5 THEME 4 Communication and media of TTM: an unsuitable and inaccurate promotion of TTM	171
CONCLUSION	176
CHAPTER 6 DISCUSSION AND IMPLICATIONS	179
THE ROLE AND MEANING OF TTM FOR THAI PEOPLE IN THEIR LIVES BASED ON THE KAP FRAMEWORK	179
6.1 The understanding of definitions and meaning of TTM.....	179
6.2 Cultural and national identity conflicts of TTM to negotiate health choices	184
6.2.1. Intergenerational knowledge and attitude conflict	188
6.2.2 Socio-economic conflict.....	206
6.2.3 Communication conflict.....	214
CHAPTER 7 CONCLUSION	229
7.1 CONCLUSION	229
7.2 THE LIMITATIONS OF THE STUDY	232
7.3 SUGGESTIONS FOR FURTHER RESEARCH.....	234
REFERENCES.....	237
Appendix 1: Developing a Communication Framework for Promoting TTM Use in Thailand	257
Appendix 2: The Focus group participants’ demographic Data	267
Appendix 3: The In-depth interview participants’ demographic data	271
Appendix 4: Participant information form.....	275
Appendix 5: Invitation to participate in research focus group.....	277
Appendix 6: Invitation to participate in in-depth interview.....	279
Appendix 7: Participant consent form.....	281
Appendix 8: The questions for the research interview	283

List of tables and figures

Table 2.1 A summary of the five hierarchical categories of communication methods for TTM in Thailand

Table 3.1 The use of TTM based on regions including Bangkok (N= 62,869)

Table 3.2 The use of TTM based on the living areas including Bangkok (N= 62,869)

Table 3.3 Individual healthcare behaviours related to use and knowledge of TTM (National Bureau of Statistics, 2013)

Table 3.4 Views regarding government TTM policies (National Bureau of Statistics, 2013)

Table 4.1 Total participants per group

Table 5.1 The emerging themes and sub-themes from Thematic Analysis

Table 5.2 The emerging themes and sub-themes from Thematic Analysis

Table 6.1 Summarizes the main themes and components found in this study

Figure 4.1 The process of collecting data

Figure 4.2 Example of a ‘finished form’ of TTM product

Figure 6.2 The current understanding and belief of TTM based on the KAP framework and Thematic Analysis

Abbreviations

CM	Complementary Medicine
DTAM	Department for Development of Traditional and Alternative Medicines, Ministry of Public Health, Thailand
FDA	Food and Drug Administration, Thailand
IMC	Integrated Marketing Communication
KAP	Knowledge, Attitude, and Practice
MoPH	Ministry of Public Health, Thailand
NBTC	National Broadcasting and Telecommunications Commission, Thailand
NGO	Non-governmental organization
OMDs	Oriental Medicine–trained Doctors
PHC	Public Health Care
PHV	Public Health Volunteers
R&D	Research and Development
TCM	Traditional Chinese Medicine
TKM	Traditional Korean Medicine
TM	Traditional Medicine
TTM	Traditional Thai Medicine
USD	United States Dollar
WHO	World Health Organization
WMDs	Western Medicine–Trained Doctors

CHAPTER 1 INTRODUCTION

This dissertation explores the roles and meaning of Traditional Thai Medicine (TTM) for Thai people, as it relates to their healthcare, culture and lifestyles. This initial chapter draws attention to the background to the study in order to provide the significant rationale and gap necessary for the study. It then presents the aims of this research and questions that have arisen from the gap, including the approach and paradigm required to carry out the research, in order to answer these questions. Finally, this chapter presents the original contribution of the study, and outlines the thesis structure.

1.1 BACKGROUND TO THE STUDY

1.1.1 Historical context

For almost 800 years—from the Sukhothai period (1238–1377) until today—Traditional Thai Medicine (TTM) has been used in Thailand (Chokevivat & Chuthaputti, 2005; World Health Organization, 2009). Despite this fact, only one out of five (20%) Thai citizens were aware of TTM, according to a 2013 survey by the National Statistical Office of Thailand, on individual healthcare behaviours, conducted on 5,800 Thai people over the age of 18 (Ganghair, 2014).

In truth, the development of TTM in Thailand was prevented by government policy that suspended its growth and impeded further development, between 1916 and 1978 (Kudngaongarm, 2011), and which caused the status of TTM in the country's healthcare system to decline (Chokevivat & Chuthaputti, 2005; World Health Organization, 2009). This phenomenon led to modern medicine becoming the main public healthcare delivery system of Thailand (Chokevivat & Chuthaputti, 2005; Thongruang, 2014). Consequently, the role of TTM was denigrated and only utilised for the healthcare of poor Thai people living in rural areas, where there was little access to modern medicines (Addis et al., 2002; Chokevivat & Chuthaputti, 2005; Payyappallimana, 2010; UNESCO, 2013).

During the period of TTM denigration, the Thai Government lost control of its national spending on healthcare. In 1978, spending for healthcare was 15,167.9 million Thai Baht (approx. USD433.36 million); 10 years later, in 1988, the amount had increased almost five-fold to 78,423.1 million Thai Baht (approx. USD2,240.66 million) (Chokevivat & Chuthaputti, 2005).

The revival of TTM began around 1978 when the World Health Organization (WHO) issued the Alma-Ata Declaration, which focused on the need to integrate Traditional Medicine (TM) into the national healthcare system (Chokevivat & Chuthaputti, 2005). The declaration was marked as a milestone for global healthcare (Hixon & Maskarinec, 2008). Thus, the WHO urged member countries to include TM and medicinal plants in their primary healthcare (PHC) programs by formulating national policies, strategies and plans of action to launch and sustain PHC, in order to attain the target of ‘Health for All by the Year 2000’ (Chokevivat & Chuthaputti, 2005, p. 7).

Since healthcare costs rose drastically in the years preceding 2013, the Thai Government limited the budget for its medical insurance schemes in the future, as nearly 200 billion Thai Baht (approx. USD5.71 billion) were spent operating the national healthcare system during that year (Saengpassa & Sarnsamak, 2013). It was found that imported drugs accounted for two-thirds of the expenses. As a result, the government began questioning conventional medicines with regard to their high prices, quality, and side-effects due to patents, as well as marketing tricks to exploit consumers/patients (Mahidol University, 2012, p. 70). These challenges have forced Thailand to try to reduce the cost of health services and products, and to promote primary healthcare facilities for greater access to healthcare within the country’s limitations. Therefore, TTM is considered to be an option for this situation (Thongruang, 2014). Since then, Thailand has integrated TTM at the national level, with the creation of the 4th National Economic and Social Development Plan (1977–1981) until the present (Chokevivat & Chuthaputti, 2005).

The notion of sustainability that was mobilised in King Bhumibhol Adulyadej’s ‘Sufficiency Economy’ is not only concerned with the natural environment, but is one that encompasses ideas of social and political sustainability (McGregor, 2008). Thus, under the umbrella of the 10th National Economic and Social Development Plan and the 10th National Health Development Plan (2007–2011), the ‘Sufficiency Health System’ Strategic Plan was formulated to achieve good health and good service, as well as helping to develop the country’s macro-economic ability (World Health Organization, 2009, p. 100).

In 1977, the Ministry of Public Health (MoPH) announced a policy to integrate TTM into the national health system (Vadhnapijyakul & Suttipanta, 2014). The revival of TTM’s policy occurred in the new environment of Thailand’s public healthcare system and represents new ideas of healthcare practice (Thongruang, 2014). The Thai Government has broadly stated the

importance of supporting research and developing medicinal plants in order to increase their usage in the healthcare system, reduce the importation of modern medicines, and to help their economy (World Health Organization, 2009). A national target usage for TTM was set at a minimum level of 5% of the total value of all medicines used per year at all levels of public health service facilities (Vadhnapijyakul & Suttipanta, 2014), and 25% of the overall total medicine usage in Thailand by 2011 (Ministry of Public Health of Thailand, 2008).

Despite the Thai Government's strong support of TTM development and the MoPH's implementation of several policies to promote the integration of TTM into the healthcare system, the results were not as successful as expected (Vadhnapijyakul & Suttipanta, 2014). Based on the data collected by the Bureau of Health, it was found that in the fiscal year 2009, the value of TTM products used at all levels of public health service facilities was only 1.57% (World Health Organization, 2009). In 2010, TTM use grew by 0.21% to about 1.78% (Manager Online Thailand, 2010) and rose to 3.50% in 2011 (Thungkhampien, 2012).

As recently as 2015, a systematic review of published and unpublished research was carried out to investigate the prevalence of Traditional, Complementary and Alternative Medicines (TCAM) in the general and clinical populations in the Association of Southeast Asian Nations (ASEAN), consisting of the following 10 countries: Brunei Darussalam; Cambodia; Indonesia; Laos PDR; Malaysia; Myanmar; Philippines; Singapore; Thailand; and Vietnam. The results found that the use of TCAM in Thailand was just 2.6% (Peltzer & Pengpid, 2015). Consequently, in Thailand, the lack of uptake of TTM calls into question: *What is the role and meaning of TTM for Thai people?*

1.1.2 Communications campaigns supporting TTM

In 2013, reports from the National Statistical Office found that the majority of participants (86.3%) believed the Thai Government has few programs to promote TTM, resulting in little public recognition and awareness of its uses (Ganghair, 2014). In regard to the advertising of TTM by private sectors, recently the National Broadcasting and Telecommunications Commission (NBTC) of Thailand and the Foundation for Consumers randomly checked radio stations throughout Thailand. Their investigation revealed that of the 103 products being advertised, 35 TTM/modern drug item advertisements were guilty of making misleading claims (National Broadcasting and Telecommunications Commission of Thailand, 2014). Some were presented without government permission (Lomas & Chanthapasa, 2012). As a

result, these companies were in violation of the drug laws (National Broadcasting and Telecommunications Commission of Thailand, 2014). Consequently, inadequate knowledge about TTM, as well as inappropriate information about some TTM items obtained by Thai consumers, indicated that the media had not been used effectively to provide accurate and appropriate information to consumers (Satyapan, et al., 2010); consequently, TTM's image was tarnished (Wongyai, 2004). Thus, several studies on the attitudes of medical doctors and TTM users towards TTM in Thailand have suggested ideas to develop TTM services and products (Pettrakard, et al., 2007).

Currently, the MoPH has created a slogan that invites Thai citizens to use herbal medicines for minor illnesses, before going to see their doctors (Sompopcharoen & Sresumatchai, 2015). To encourage TTM usage for the prevention of illnesses within the primary healthcare system (Sumngern, 2011), the innovation of TTM products in their finished forms is being widely promoted by the MoPH, especially in the area of self-care at the family level (Thongruang, 2014).

It has been found that 'culture' plays a vital role in the manner in which people use herbs, traditional treatments, and medicines (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Sumngern, 2011; Taubman, 2010; Torri, 2012; UNESCO, 2013; WHO, 2004b). Moreover, consumers' proper usage of these remedies primarily depends upon the individual's knowledge and his/her ability to maximise the benefits and risks of their use (World Health Organization, 2004b). In order to improve the health of Thai citizens, 'communication' (Corcoran, 2007, p. 5) and 'media' play central roles in fostering development, as well as in empowering people with knowledge on health issues in order to achieve their greater health (Diedong, 2013, p. 46). However, the strategies employed in health promotion and, in particular, communication, require that the gap in knowledge of health problem be closed (Ministry of Health, Rwanda & UNICEF Rwanda, 2014). This includes an adequate understanding of the socio-cultural and economic aspects of the context in which public health programs are implemented (Launiala, 2009, p. 1).

Accordingly, communication has an essential role in any action that aims to improve health (Corcoran, 2007). In order to improve TTM usage, there should be more publicity about TTM. The proper communication for the promotion and use of TTM should be expanded into the Thai public's beliefs in TTM. A public communication strategy is needed to develop and improve TTM knowledge and services (Yothavijit et al., 2013), in order to complete the cycle

of development of TTM (Prasansuk, 1996). Meanwhile, closing the gap in knowledge and the misconceptions about TTM also requires an increase in knowledge and positive attitudes of the Thai people towards TTM (Sompopcharoen & Sresumatchai, 2015).

All of this could be achieved by good administration and an information system on TTM (Chokevivat & Chuthaputti, 2005; World Health Organization, 2005a), and, in particular, a greater commitment from the government (Chokevivat & Chuthaputti, 2005). If TTM usage can be increased, the healthcare system could possibly be improved, which could lead to a higher level of physical wellbeing for the Thai people.

1.2 THE RESEARCH GAP: KNOWLEDGE, ATTITUDES AND PRACTICE OF TTM

A knowledge, attitude and practice (KAP) framework identifies what people know (knowledge), how they feel (attitudes), and how they behave (practices) related to a certain topic (Haloi, Ingle, & Kaur, 2014; Kaliyaperumal, 2004; Vandamme, 2009). In healthcare research, the KAP framework is a useful tool to gain information when people are affected by a health problem or disease (Rav-Marathe, Wan, & Marathe, 2016, p. 4).

The KAP framework includes a component for communicating behavioural changes and/or developing health information, education and related activities (Gumucio, 2011). Thus, data from KAP studies are an important resource for promoting health policies (Green, 2001; Tamir et al., 2001), including the implementation of health promotion and communication campaigns to increase the rate of behavioural change, by changing knowledge and attitudes, and directly encouraging people to adopt healthy behaviours, irrespective of the behavioural change sequence (Haloi, Ingle, & Kaur, 2014, p. 100).

In Thailand, current understanding and beliefs about TTM usage and their causes has not yet been systematically investigated using multilevel samples. There are no clear explanations of poor usage and what it means for the adoption of TTM (Thongruang, 2014). In previous studies, there have been few assessments of the possible reasons for this lack of adoption of TTM in Thailand, as well as the current level of understanding of TTM for Thai people, in both the public healthcare system and marketplace.

Tien-ngarm et al. (2010) cited that between 2000 and 2009 there were 1,476 relevant studies on Thai traditional, Indigenous, alternative, and herbal medicines in Thailand and that these had been conducted based on the existence of Thai wisdom and traditional healthcare. The

topics associated with TTM research can be broken down into six groups of studies: 1) the history and status of TTM textbooks; 2) TTM theory; 3) the knowledge and efficiency of Thai traditional massage; 4) TM services; 5) studies related to research and development; and 6) laws and protection for Thai traditional medical wisdom. Nonetheless, it was found that TTM had been the least common topic studied (12.7%).

Sompopcharoen and Sresumatchai (2015) also mentioned that when they conducted an Internet search using the keywords ‘herbal marketing communication’ they found ‘no results’. My enquiry also revealed that there were no topics on the communication of TTM. Therefore, it is significant to note that no studies regarding communication of the benefits of TTM have been provided, particularly by the Thai Government. Even though Thailand does have knowledge about TTM, this is not yet well organised (Wongyai, 2004). For each population group, correct information about TTM should be promoted through the proper media channels in order to enhance knowledge, positive attitudes and to empower Thai consumers in both the public health system and marketplace.

Increasingly within the international aid community, people are becoming more aware that enhancing the quality of the health of poor people is dependent upon adequately comprehending the contexts of their socio-cultural and the economic conditions, in which the various public health programs are being executed (Launiala, 2009, p. 1). According to Greenberg (2006): ‘This information can tell us how we are dealing with the diversity of norms, values, laws, religions, ideologies, and political issues that can influence the adoption of innovations and the long-term prognosis of related to public health’ (pp. 1–2).

Culture plays a vital role in the manner in which people use TM (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Sumngern, 2011; Taubman, 2010; Torri, 2012; UNESCO, 2013; WHO, 2004b, 2013); while communication has a vital role in any action that aims to improve health (Corcoran, 2007). The effects arising from culture help to provide the context for communication campaigns (i.e. ideologies, approaches, strategies, and procedures). Moreover, culture measures each campaign’s effectiveness in order to solicit attitudinal and/or behavioural changes within a community of people (Wang 2004). According to Wang (2004):

The cultural environment is a key factor in the creation and sharing of meaning in campaigns with other members of their societies; if not taken

into consideration a campaign becomes a 'senseless occurrence' Therefore, culture is more important to the communication campaign's implementation (p. 28).

Knowing how people perceive TTM, its uses, and the local culture surrounding it can help practising health professionals (Sumngern et al., 2011).

With respect to specific local circumstances and the cultural factors that influence them, the KAP framework can suggest intervention strategies to assist in planning activities that are appropriate to the target populations involved (Gumucio, 2011; Haloi, Ingle, & Kaur, 2014). In addition, it allows for further exploration of situations or problems. It potentially highlights aspects that are not yet known, helps to deepen the topics being addressed (Monde, 2011), and within specific contexts the KAP framework is used to study health-seeking behaviours (Launiala, 2009; Vandamme, 2009). As a result, in order to gain this information, it is necessary to assess the environment in which the process of creating awareness of TTM will take place for the Thai community (Kaliyaperumal, 2004).

Given that the current understanding and beliefs about TTM and their causes have not yet been systematically investigated (Thongruang, 2014), TTM's current predicament should be of serious concern to the Thai Government and its citizens. Therefore, an analysis of TTM should be made that includes the following: 1) a study of TTM's current trends and associated problems; 2) Thai consumers' and medical doctors' understanding and belief towards TTM; 3) how these citizens form their attitudes and practices; 4) communication about TTM and the media's representation of it within the context of the marketplace, trends and government regulations; and, 5) factors that can promote changes in attitudes and behaviours with respect to TTM. All of these need to be further explored within a societal framework because social relationships, culture, lifestyles and healthcare in Thailand are all interrelated and, from these, a strategic communication plan for the promotion of TTM can be formed (Corcoran, 2007, p. 6).

Given that communication (Corcoran, 2007, p. 5) and media play a central role in fostering development (Diedong, 2013) in order to improve health (Corcoran, 2007), it is expected that the findings of this study will be used as guidelines to promote the appropriate usage of TTM and the purchasing of them. Thai citizens will be able to receive empowerment through knowledge on health issues in order to achieve greater health (Diedong, 2013).

1.3 AIMS

Attempts to raise awareness of TTM within a group of targeted market users are extremely important (Sukhabot, 2013). Enhancing knowledge of TTM consumption, and the pathways of influencing factors to promote this, may initially serve to create the interventions and strategies for promoting healthy lifestyle behaviours, which are appropriate for cultural and individual characteristics (Sumngern, 2011). The following four aims were developed to uncover these circumstances:

1. To explain the current knowledge, understanding and beliefs about TTM by both Thai consumers and Thai medical doctors.
2. To identify gaps in knowledge, understanding and beliefs about TTM in Thailand.
3. To uncover the factors influencing the use of TTM in Thailand.
4. To enhance communication for the promotion of TTM in Thailand.

By understanding the current knowledge, understanding and beliefs about TTM, I am better able to comprehend the factors that motivate Thai citizens' understanding of TTM, in order to create a communication plan for its promotion.

1.4 RESEARCH QUESTIONS

In this study, the central research question is: What is the role and meaning of TTM for Thai people in their lives? Related to this question are three major queries:

1. How do Thai people view TTM as it relates to their consumption?
2. What is the current understanding of TTM by Thai consumers?
3. What is the current awareness of TTM by Thai medical doctors?

1.5 APPROACH AND PARADIGM

The purpose of this research is to understand the phenomena of TTM and to contribute insights to the current knowledge, understanding and beliefs about TTM by both health professionals and users. This study is not intended to test the hypothesis with respect to TTM

usages or to predict the behaviours of Thai people regarding TTM. The aim is to contribute to effective strategic promotion of TTM in Thailand by the Thai Government.

In order to accomplish the overall aim of the study, a qualitative approach was utilised and shaped using an inductive design (Ormston, et al., 2014), to understand and reconstruct Thai people's knowledge and beliefs in regard to TTM. This due to the fact that building knowledge from the bottom up through observations of the world is the nature of an inductive design. In turn, what it contributes is the basis for developing theories (Ormston et al., 2014). However, the ways in which research studies are conducted vary because all researchers have different ways of viewing and interacting within their worlds and surroundings, and this includes their beliefs. Thus, it is very important to understand paradigms as important parts of research and philosophy and how research activities should be carried out, particularly in public health science (Khanal, 2012).

According to Ormston et al. (2014), understanding human behaviours within social and material contexts is essential for the development of qualitative research. Moreover, it is strongly influenced by the ideas and the meanings that people have attached to their own experiences. In this manner, 'interpretivism', being essential to the qualitative research tradition, is seen to overcome some of the obvious disadvantages associated with 'positivism', the tradition which is most often associated with statistical social enquiry (Ormston et al., 2014). Being reflected in the practices that highlight the necessity of understanding the perspectives of individuals within the framework of the conditions and circumstances of their lives, 'interpretivism' and the acceptance of it as naturalistic offers a deeper understanding of meanings/phenomena of an individual's place in society and the world (Snape & Spencer, 2003). Thus, explanations were offered at the level of meaning rather than cause (Ormston et al., 2014, p. 24). Furthermore, it implies a subjective epistemology and an ontological belief that people have their own differing knowledge, perceptions, needs and experiences (Thomas, 2010). Hence, a social researcher has to explore and understand the social world through the participants' perspectives and their own (Ormston et al., 2014).

For this study, I believe that knowledge of reality is gained only through social construction, such as language, consciousness, shared meanings, tools, documents and other artifacts (Klein & Myers, 1999, p. 69). Thus, I have pursued the concept that TTM has been conceived within the context of Thai society and argue that, 'different people may construct meaning in different ways, even in relation to the same phenomenon of TTM' (Crotty, 1998, p. 9).

Understanding the role of TTM in Thailand must include the meanings that Thai people give to their deeds (performances/actions) (Macome, 2002, p. 81). This means that Thai citizens may describe TTM and understand the different meanings that it has for their lifestyles, culture and healthcare from within the context of Thai society. Therefore, the philosophical paradigm underlying this research arises from the interpretivist paradigm, which means that ‘the social world is not governed by regularities that hold law-like properties’ (Ormston et al., 2014, p. 24).

The research approach in this study reflects important themes in the literature, and has been designed to understand the roles and meanings of TTM for Thai people in their everyday lives. This understanding can provide a powerful methodological framework and essential tools for the Thai Government to gain access to vital information with respect to TTM. Finally, as a result of the study, a communication plan for the promotion of TTM can be formulated, offering new strategies for the generation of further sociological theories.

1.5.1 Theoretical frame: KAP

This study uses a conceptual framework, as KAP studies have been used as an evaluation tool to evaluate changes in human behaviour in specific interventions (Haloi, Ingle, & Kaur, 2014, p. 99). The questions from the KAP framework can assist in gathering and identifying current key knowledge about TTM, and reveal important information that relates the social skills of Thai citizens (both consumers and providers) (Gumucio, 2011; Haloi, Ingle, & Kaur, 2014) in their everyday lives, as relevant to their culture, lifestyle and modes of health, as well as the problems associated with TTM.

The KAP framework reveals characteristic traits about health and TTM, and influences of TTM usage, which are related to the religious, social and traditional factors of each Thai person (Gumucio, 2011; Haloi, Ingle, & Kaur, 2014). This includes their motivation (Wan et al., 2017), beliefs and religion (Haasnoot, et al., 2010), facilities and infrastructure (Paramasivam, et al., 2010; United States Agency of International Development, 2008), socio-economic status (Addis et al., 2002; Agbaje & Babatunde, 2005; Wassie, et al., 2015), economic situation of Thai people (United States Agency of International Development, 2008), communication of TTM (Hilal & Hilal, 2017; Suleiman, 2014), and behavioural patterns that may facilitate the understanding and practice of Thai people towards TTM (DaBreo & Inniss-Springer, 2016). These factors are often sources of misconceptions or

misunderstandings that can represent barriers to engagement in TTM activities, which we would like to see implemented, and/or may represent potential obstacles to Thai behavioural changes (Gumucio, 2011; Haloï, Ingle, & Kaur, 2014).

Thus, the KAP framework can provide reliable data that can be used to gain a better understanding of Thai people's behaviour towards TTM (Ministry of Health, Rwanda & UNICEF Rwanda, 2014). This data can identify what is known and what needs to be done about TTM in Thailand (Gumucio, 2011), as well as inform the program/activities to promote TTM within the Thailand context (Ministry of Health, Rwanda & UNICEF Rwanda, 2014).

1.5.2 Methods

Methods are the step-by-step techniques that researchers adopt in a systematic process (Daymon & Holloway, 2011, p. 100). For this study, there were systematic procedures and tools used in order to gather and analyse the data related to the research questions. These were accomplished by utilising focus groups and in-depth interviews, respectively.

In this study, the use of focus groups aimed to learn how Thai people make sense of their experience and act on TTM. In-depth interviews were used to understand the role of the promoters, their needs and problems, as well as the vision and mission from the governmental and private sectors.

1.5.3 The positioning of the researcher

This qualitative research study has sought to provide an understanding of TTM through the experiences of individual Thai citizens, and in particular provide details of their real-life experiences as related to their healthcare, culture and lifestyles. The interpretivist approach is based on perceptions rather than on objective truths. Therefore, the conclusions of this study have been derived from the interpretations of the participants rather than from the abstract theories of the researcher (Vanson, 2014, p. 3). Consequently, the cogency of the research process arises from the relationship that exists between the research instrument (the researcher) and the participants (Bourke, 2014, p. 3).

The inspiration for this research was based upon my own experiences of first using the finished form of TTM to cure a medical condition, after feeling dissatisfied with the outcomes of the medical health system. Despite the fact that I have a fairly positive attitude towards TTM, I have little knowledge of it.

According to Bourke (2014, p. 1), the identities of both researcher and participants have the potential to impact the research process. In fact, identities come into play via our perceptions, not only the perceptions of others, but of the ways in which we expect others will perceive us. In particular, a researcher's positionality can have an impact on all aspects and stages of the research process (Holmes, 2014, p. 4). Qualitative researchers generally begin their work by recognising that their position (or world view) of themselves may exert an enormous influence on the entire research enterprise (Austin, 2014, p. 2).

For this study, I, the researcher, was 'an insider' with all of my participants. I and the social world have had an impact on each other (Snape & Spencer, 2003). Thus, the positioning of myself was that of an active, yet subjective, participant in data generation along with the participants. My own biases have shaped the research process and have served as checkpoints along the way. By acknowledging my biases, I have taken into consideration the process of gaining insights into how I might approach a research setting or the members of particular groups. Moreover, in order to gain a better understanding of TTM from their life experiences, I have experimented with various methods to further engage with participants (Bourke, 2014). Thus, as a qualitative researcher, I needed to carefully consider the potential risks to participants when conducting insider research (Moore, 2012), because reflexivity involves a degree of self-scrutiny on the part of researchers (Bourke, 2014, p. 1).

According to Austin (2014, p. 3), applications of reflexivity may include participant-observer research, in which the researcher is actually one of the participants in the process or situation being researched. As a result, the situation must examine from these divergent perspectives. If the researcher does not acknowledge his/her inherent biases when the interpretive studies are being conducted (Dowd, 2014), disturbances to the research questions will be created (Daymon & Holloway, 2011). In order to reduce possible biases in each researcher, a good level of self-awareness is necessary and important (Al-Busaidi, 2008). Acknowledging this influence and the potential effects it can have on personal behaviour will facilitate greater self-scrutiny throughout the research process. These begin with self-reflection and an articulation of positionality by the researcher (Austin, 2014).

Throughout the process of reflexivity, I was cognizant that my positionality is never fixed and is always situational and context-dependent (Holmes, 2014). I had to be mindful of the influence that my positionality may have had on the process, but I had to be forthright in communicating this to the participants (Bourke, 2014). This forthrightness was necessary

because I am part of a complex social and interpersonal world in which external influences can shape my views and expectations of my work (Austin, 2014).

Therefore, in order to uncover the meanings of TTM for the Thai people from their own experiences, and to avoid biased data, I began with a completely open mind without having any preconceived ideas of what I might find. While conducting the interviews, I acted as a co-participant as we sought to discover and understand the realities in light of gaining insights from Thai citizens, through the process of discovering the meanings of TTM within the social context of Thailand.

1.6 SCOPES AND KEY ASSUMPTIONS OF THIS STUDY

In order to identify the role of TTM in Thailand, this study has solely focused upon ‘the policies of The Thai government’, which have sought to formalize and implement TTM into the public healthcare system in Thailand. Explored in this study are the participants’ key behaviours with respect to their knowledge of TTM, their attitudes towards them, and their practices related to TTM consumption with respect to their culture, healthcare, and lifestyles. Primarily, this study has focused upon both types of participants (users and healthcare professionals) and their levels of understanding and the spectrum of beliefs they hold about TTM. In addition, this study has also examined how these factors have affected the consumption of TTM. Comparing and contrasting each form of TTM (the traditional form and the finished form consisting of tablets, capsules, etc.) has not been the specific intention of this study. Specifically, the findings from the consumer participants and healthcare professionals were used for the purposes of comparing and contrasting. In alignment with one of the aims of the study, gaps in the levels of knowledge, attitudes, and practices by both types of participants were able to be identified through this process.

The participants’ knowledge, attitudes, and practice towards TTM have been investigated through the personal experiences and perceptions of the 57 consumer participants and the 14 healthcare professionals, all of whom live in Thailand. The goal of this study was to understand TTM phenomena and to provide insights regarding the Thai consumers’ and the healthcare professionals’ current levels of knowledge, understanding, and beliefs about TTM. This includes the identification of a number of factors, which are relevant to the use of TTM and which can be utilized to enhance the communication for the promotion of TTM in Thailand. Therefore, let it be noted herein that neither the evaluation of the rationale to

integrate TTM into public healthcare system nor the determination of whether the policy has achieved its targets or has performed in accordance with policy implementation carried out by the Thai government are encompassed within the scope or framework of this study.

In terms of research methodology, this study has applied a qualitative approach and has used focus groups and in-depth interviews to collect the required data. Thematic analysis using NVivo software and the manual method were the analytical techniques used. The data, which was obtained during June-September 2015, was collected from people in three of the four different regions of Thailand (Northeastern, Northern, and Central Thailand, including Bangkok). No interviews were conducted in Southern Thailand. Therefore, with respect to Thailand's larger population, the findings from this study are limited and have been generalized. Therefore, the findings herein may not reflect the experiences and opinions of consumers and health professionals in other regions or in the country as a whole.

The key assumptions made in this study were as follows: 1) the questions were accurately translated from English to Thai, and 2) the data was transcribed and translated from Thai into English without any errors. Furthermore, in this study, it has also been assumed that the data from all participants was valid and reliable, and that the interview questions asked for no commercial, in-confidence, or sensitive data to be divulged. In this way, it was possible to avoid collecting data, which contained the individual biases of the participants.

1.7 ORIGINAL CONTRIBUTION

My impetus to conduct this research sprang from a desire to explore the current understanding and beliefs held about TTM, and the degree to which Thai citizens and medical professionals understand TTM at the individual and societal levels. I also wanted to uncover the roles and meanings of TTM for Thai citizens so that a communication plan for its promotion could be formed by the government to facilitate its awareness.

The newly derived knowledge will apply to Thailand in both theory and application. At the individual and societal levels, this will shape how and what we, as humans, know about TTM. As mentioned, at the theoretical level the current understanding and beliefs about TTM and their causes have not yet been systematically investigated using multilevel samples (Thongruang, 2014). There has been little research of the current understanding of TTM for Thai people in both the public health system and marketplace. Moreover, it is significant to claim that no studies in communication of TTM promotion have been provided by the

government. Thus, this study makes a significant contribution in identifying how our own TTM identities are currently created in relation to social reality, culture and healthcare. It contributes to the body of knowledge about the factors influencing the adoption and/or rejection of TTM in Thailand. The novel and specific recommendations that emerged from multilevel informants will allow the development of more relevant TTM policies and products, including ways to promote TTM in Thailand that can lead to greater understanding, more sustainable adoption, and effective means for the Thai Government to implement its promotion.

As a result of this study, Thailand's economy could be successfully improved by supporting the following areas: 1) the intention of King Bhumibhol Adulyadej's 'Sufficiency Economy' and 2) and the 'Sufficiency Health System' Strategic Plan, which aims to achieve good health and good service, and to help develop Thailand's macro-economics (World Health Organization, 2009, p. 100).

1.8 STRUCTURE

The structural outline of the thesis is divided into seven chapters:

Chapter 1: The introduction highlights and gives an overview of the study.

Chapter 2: The background presents the history of TM/TTM and their roles in the worldwide public health system and service. This includes communication and promotion campaigns to promote TTM in Thailand by both government and private sectors. It aims to provide a better understanding of the reality, awareness and perceptions, including context, surrounding the adoption of TTM into Thailand's healthcare system.

Chapter 3: The literature review provides an overview of global awareness of TM and TTM in Thailand, as well as the major barriers to its adoption. It serves as a basis for the development of an argument about the current knowledge, understanding and beliefs about TTM within the context of Thai society.

Chapter 4: The design of the research study: 1) develops an argument regarding the absence of research and focuses on the need for the current research; 2) describes the theoretical framework and justifies the research methodology that underpins this study in order to

understand the ‘How? and Why?’ that the research utilises; and 3) outlines the two methods for data collection, including the procedures in data analysis.

Chapter 5: Research findings present an analysis of all responses using thematic analysis, including the NVivo software package. This chapter illustrates the following: 1) key themes, several sub-themes and concepts regarding the current knowledge, understanding and beliefs about TTM, including the factors influencing the use of TTM in Thailand; and 2) key themes, several sub-themes and concepts regarding current communication and media to promote TTM in Thailand by both government and private sectors, which were found to be significant from both data collection methods.

Chapter 6: Discussion and implications presents and discusses the results from Chapter 5, including: 1) details of the knowledge, understanding and beliefs of both users and health professionals, as well as the factors that influenced the adoption of TTM in the public healthcare system and marketplace, as suggested by the data; 2) significant causes and impacts, including arguments found in the study regarding their relevance to the literature and implications for practice.

Chapter 7: The conclusion provides detailed remarks about the research and its contribution to a greater understanding of the roles and meaning of TTM for Thai citizens. The final chapter identifies issues that have arisen in this research to invite further investigation and to review the research in this area in terms of its goals.

In the following chapter (Chapter 2), the history of TM will be presented, including current trends and how it is used around the world. The history of TTM in Thailand will then be explained and its use in the PHC system will be outlined, highlighting the current problems and challenges in Thailand. Included are the media’s representations of TTM from within the context of Thai society.

CHAPTER 2 DEFINING TRADITIONAL MEDICINE (TM) AND TRADITIONAL THAI MEDICINE (TTM)

This chapter presents the views of TM in different national contexts and its background in Thailand, including: the history and revival of TTM; relevant policies, laws and regulations; research and education; and the Thai healthcare system. The promotion of TTM by the government and private sectors is discussed in order to provide an understanding of the current media framework. This provides an important context surrounding the adoption of TTM into Thailand's healthcare system and the various issues it has encountered.

2.1 DEFINING TRADITIONAL MEDICINE (TM)

Long before recorded history, herbs have been generally used for medicine (Ehrlich, 2011) by crushing the leaves or the bark of plants and trees (Shetty, 2010). Over time, there has been a tremendous expansion of their use as TM worldwide (Qi, 2000), and TM represents the fundamental method that humans have used to preserve their health and prevent diseases since the dawn of time (Firenzuoli & Gori, 2007). TM plays a significant role in providing nutrient compositions in order to avoid and/or treat the illness of people (Beyene, Beyene, & Deribe, 2016).

2.1.1 Definitions

The WHO defines TM as:

The sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, and used in the maintenance of health, as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness (Qi, 2000, p. 1).

TM additionally includes a diverse range of health practices which include the fusion of plant, animal, and/or mineral-based medicines, spiritual therapies, manual techniques, and exercises, which in order to maintain well-being can be combined or applied singularly (Peltzer, 2009, p. 1).

Waldram (2000) reported that the definition of TM remains problematic in some countries, as it includes religious, ritual healing and various techniques of manipulation. Therefore, in the field of TM, there is no singular way to examine the efficacy and to restrict definitions. Similarly, Shetty (2010) reviewed the WHO survey report in 2005 and stated that, the definition of TM often means different things to different people, a single medicinal plant may be classified as a food, a dietary supplement, or as an herbal medicine depending on each country (p. 6).

Traditional Medicine is called by various names, such as complementary medicine (CM), natural medicine, herbal medicine, phyto-medicine, non-conventional medicine, Indigenous medicine, folk medicine and ethno-medicine etc. (Payyappallimana, 2010, p. 58). The term, TM, is often referred to as ‘complementary’, ‘alternative’, or ‘non-conventional’ medicine in countries where allopathic medicine is the focus of the dominant healthcare system, or in situations where TM has not been included the national healthcare system (World Health Organization, 2000). It is also a comprehensive term used to refer to the TM systems, such as Traditional Chinese Medicine (TCM), Indian Ayurveda and Arabic Unani medicine, and it refers to various forms of Indigenous medicine (Peltzer, 2009, p. 1). Across the world, it either serves as the mainstay of a healthcare delivery system or serves as a complement (World Health Organization, 2013).

2.1.2 History and revival

Before manufactured drugs came into widespread use, TM played an important role in human health (World Health Organization, 2005b). People around the world have healed the sick with herbs or with animal-derived remedies that have been handed down through the generations (Shetty, 2010). It has been found that people in different parts of the world have tended to use the same or similar plants to treat their illnesses (Ehrlich, 2011). For instance, garlic has been used in the Middle East, Eastern Asia and Nepal to treat illnesses such as hypertension (high blood pressure), tuberculosis, liver disorders, diabetes and fevers (Nordqvist, 2015). The arrival of missionaries and colonialists in Asia, Africa and America brought modern scientific techniques and medicines that were used to serve the colonial imperative of promoting Christianity, commerce, and civilisation. Colonial powers promoted the value of their medicines over local, traditional practices and remedies, which gave modern medicine its official standing and led to the downgrade of TM (Lewis & Dickson, 2010).

However, conventional healthcare is costly both monetarily and in many, a depressed quality of life results due to its side-effects (Dennis, 2012, p. 1). This statement outlines the two major reasons for the increased drug resistance that some microbes have exhibited for several antibiotics and life-saving drugs (Shetty, 2010). The development of these drugs requires intensive resources and, in particular, the final clinical trials are expensive to conduct. These factors make synthetic drugs costlier to produce. Moreover, from the initial discovery stage until when the product reaches the market can typically take 12 years (Thomas, 2016), which contributes to high manufacturing costs (Shetty, 2010; Thomas, 2016).

Given that healthcare costs are continuing to increase, decision-makers must allocate their increasingly scarce resources towards therapies that can offer the most benefit per unit of cost (Herman, Craig, & Caspi, 2005). For instance, in the US, the number of uninsured Americans continues to rise. In contrast, healthcare costs continue to outpace incomes (Tu & Hargraves, 2004). During the past 20 years there has been a growing sense of public dissatisfaction with the cost of prescription medications in the US (Ehrlich, 2011). Moreover, they are not satisfied with conventional medicines and treatment (Lu & Lu, 2014). Therefore, in light of an increasing awareness about returning to natural or organic remedies (Ehrlich, 2011; Lu & Lu, 2014), many US citizens are likely to begin using herbal medicines/TM (Ehrlich, 2011; Lu & Lu, 2014; Tu & Hargraves, 2004) including TCM, because they lack access to affordable conventional medical care (Tu & Hargraves, 2004).

Nonetheless, the costs are not just monetary (Dennis, 2012, p. 1). Synthetic drugs have more side-effects and the potential to make us physically ill, such as headaches, abdominal pain, weight loss or weight gain, nervousness and, sometimes, life-shortening adverse effects (Muench & Hame, 2010). As a result, some people try to avoid the consumption of synthetic drugs (Khothammthat, 2004; Shetty, 2010). However, there is another reason for dissatisfaction with conventional drugs. It has been found that they can be ineffective in the treatment of certain diseases, such as in the advanced stages of cancer and in the face of new infectious diseases (Wachtel-Galor & Benzie, 2011).

Unlike conventional medicines, TM can more closely correspond to a patient's ideology because it is more affordable and satisfies the desire for a more personalised approach to healthcare, which allows greater public access to health information. Therefore, people have used herbal medicines for: 1) health promotion; 2) therapeutic treatment of chronic diseases (Wachtel-Galor & Benzie, 2011); and 3) adjunct treatments for debilitating or incurable

diseases (UNESCO, 2013). In addition, there is the perception that TMs are more natural and friendly to the metabolism of the human body (Mohamed, 2004). In some developed countries people are convinced that this type of treatment is more ‘natural’ and ‘risk-free’ (UNESCO, 2013, pp. 3-4) and is, therefore, always safe and/or harmless (Akram, et al., 2015; Mahady, 1998; UNESCO, 2013; Wachtel-Galor & Benzie, 2011; WHO 2004c, 2013). As a result, the usage of traditional remedies continues to increase (Lu & Lu, 2014; Shetty, 2010; Wachtel-Galor & Benzie, 2011), whereas in some cases, conventional medicines have been rendered useless (Shetty, 2010).

Traditional Medicine is now making a comeback for a number of reasons. First, there has been renewed interest due to the increasing drug resistance of some microbes, causing several antibiotics and life-saving drugs to be rendered useless (Shetty, 2010, p. 1). The value of TM as a source of potential new drugs and as an alternative provider of primary healthcare is being increasingly recognised (Lewis & Dickson, 2010). Second, TM is not considered as ‘alternative’ or ‘complementary’ in some countries, because of its accessibility and ability for those who live far from medical facilities, with no physicians, or where both the care given by physicians and drugs are too expensive (Addis et al., 2002; Akram et al., 2015; Baniya, 2014; Payyappallimana, 2010; Torri, 2012; Wassie et al, 2015). Relatedly, even where there are good physicians and where therapies are inexpensive, people still choose to take the lead in their own healthcare (Firenzuoli & Gori, 2007). Last, an herbal renaissance has been fuelled by the following: 1) a strong consumer interest in preventative medicine; 2) a disappointment with allopathic medicine (Mahady, 1998); and, 3) the perception that botanicals are safe and free from side-effects (Akram et al., 2015; Mahady, 1998; UNESCO, 2013; Wachtel-Galor & Benzie, 2011; World Health Organization, 2004c, 2013). Consequently, TM has been used to some degree in all human communities and cultures (World Health Organization, 2000) in both developed and developing countries (World Health Organization, 2005b).

2.1.3 Patterns of use

Over the last decade there has been an increased use of TM (World Health Organization, 2005b). Various patterns of use of TM have been reported by the WHO among and within member states. These variances have been found to depend upon a number of factors, such as culture, historical significance, and regulations. Given that there is no systematic method, which can be employed to examine patterns of use, it important to determine the ways in which people use TM in terms of three general patterns:

1. The use in global regions and countries in which TM is one of the primary healthcare sources: Speaking holistically, in these countries it is commonly found that the availability and/or accessibility of conventional medicine-based health services is, in fact, limited. The fact that TM is present and is readily affordable in Africa and in other developing countries has contributed to its widespread use;
2. The use of TM due to cultural and historical influences: Although the conventional healthcare systems in some countries are sophisticated and well-developed, in nations, such as Singapore and the Republic of Korea, TM is a part of the ancient culture and history of these countries. Therefore, TM continues to be used today;
3. The use of TM as complementary therapies: TM is commonly utilized in developed countries in which the structure of the healthcare system is typically well-formed (e.g., North America and many European countries) (World Health Organization, 2013, p. 27).

2.1.4 Cultural and health significance

Alternative or complementary medicines are also considered ‘holistic treatments’ (Chilson, 2014, p. 1) that uses natural remedies to treat and prevent illnesses and diseases of multiple health conditions and has been the standard of care for centuries (Chilson, 2014; Rivera, Loya, & Ceballos, 2013) for almost every known culture (Rivera, Loya, & Ceballos, 2013, p. 1). However, in every country, natural treatments/TM have had their foundations in magical or religious beliefs, or in popular experience (Firenzuoli & Gori, 2007). For example, TCM is based on keeping the body’s yin (cold) and yang (hot) energies in harmonious balance through diet, lifestyle, acupuncture and herbal regimens (e.g. cold air and water are considered unhealthy). In fact, Asian and Latino cultures believe that a ‘hot-cold’ balance is necessary for health (Juckett, 2005). In Indian Ayurvedic medicine, the key concepts include universal interconnectedness (among people, their health, and the universe), the body’s constitution (prakriti), and the life forces (doshas). These concepts have been compared to the biologic humours in the ancient medical system of the Greeks (Chilson, 2014, p. 3).

Accordingly, culture is the shared beliefs and attitudes of a group, and thus, culture shapes ideas of what constitutes illness and acceptable treatment (Juckett, 2005, p. 2267). It is known that culture plays a vital role in how a given people use herbs, traditional treatments and medicines (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Taubman, 2010; Torri, 2012; UNESCO, 2013; World Health Organization, 2004b). In fact, UNESCO

reported that if people in developing countries are turning to this type of medicine for their primary healthcare, it is mainly because: 1) there are no alternatives because other types of treatment (generally more expensive ones) are not readily available, whereas traditional remedies are readily available and affordable, or 2) of their cultural traditions (UNESCO, 2013).

Despite the fact that cultural diversity is increasing worldwide as immigration, travel and the global economy expands, Anel and Westers (2010) found that the Surinamese migrants living in The Netherlands were more likely to use TM when they believed in the existence of spirits, when they had been ill in the past year, and/or when they had frequently paid visits to their motherland. Their main personal motivation for using TM was that it was a part of their culture. For the Surinamese migrants, Anel and Westers concluded that if certain beliefs and health concepts, which bound them to their culture and to their home country, prevailed and if their strong ties persisted, they would continue to use the TM herbs, which originated in their country.

‘Cultural competency’ refers to possessing knowledge, awareness and respect for other cultures (Juckett, 2005, p. 2267); therefore, the preservation of ancient knowledge of TM is important to a culture (Chilson, 2014, p. 2). Because TM is used by many people to manage numerous conditions, it plays a significant role in reducing the life-threatening ailments of humanity and ultimately aims to restore the physical, mental and social wellbeing of people. Moreover, TM reflects the socio-religious structure of the Indigenous societies from which it has developed, together with the values, behaviours and practices within their communities (Gyasi et al., 2011), and the traditional knowledge of treatment and medicine has been freely handed down through the generations (Shetty, 2010). For instance, it has been found that even today in the Maori culture in New Zealand, traditional Maori healing, which takes a holistic approach, is still being used and passed down by medical practitioners from generation to generation (Chilson, 2014).

Traditional Medicine is often an underestimated part of healthcare (World Health Organization, 2013), and its loss would directly affect the healthcare of communities, as well as their cultural identities (Taubman, 2010). This is particularly true for the people who live in rural areas and for whom it is hard to access modern medicines (World Health Organization, 2009).

2.1.5 The integration of TM into national policies

Most countries in the world have two systems of healthcare: traditional practice and medicine; and conventional medicine (Tomar, 2016). Studies have shown that developing countries have many examples to prove this, such as Chinese hospitals that provide herbal therapy alongside conventional medicine, Ecuadorian clinics in which modern general practitioners work alongside traditional ‘yachaks’ (Lewis & Dickson, 2010, p. 2), and many traditional remedies have been used as a basis for modern Western drugs ("Traditional medicine," 2011).

Thus, it is one of WHO’s policies to encourage countries to use TM as they see fit, particularly in the area of primary healthcare (World Health Organization, 2004a). The aspects of TM practices and practitioners are now being examined by many governments and consumers, who are interested in TM. Presently, the beginning phases of the process of determining whether or not they should be integrated into health service delivery are being carried out. Based on the fact that the quality, safety, and efficacy of TM can be proven, using them can help to reach the goal of ensuring that all people have access to care (World Health Organization, 2013).

In order to integrate TM into the ‘national policy’, the WHO has defined three types of health systems to describe the degree to which TM is officially recognised as part of the national health system:

1. Integrative Systems: TM is officially recognised and incorporated into all areas of healthcare provision;
2. Inclusive Systems: TM has been recognised, but has not yet been fully integrated into all aspects of healthcare;
3. Tolerant Systems: A nation’s healthcare system is based entirely on biomedicine, but some TM practices are tolerated by law (World Health Organization, 2002, pp. 8-9).

The integration of herbal medicine and/or other forms of TM with conventional medicine can be accomplished in one of three ways. Firstly, it can be incorporated as an integral part of a country’s formal healthcare system, with each being separately recognised as a legitimate form of healthcare within the same framework. Secondly, individual healthcare practitioners can integrate TM practices with modern medicines. Thirdly, traditional and modern practices can be integrated as two branches of medical science, with the ultimate incorporation of elements from both forming a new branch (World Health Organization, 2000). However, in

order to integrate TM into modern clinical practice the integration must be based on an evidence-based medicine (EBM) approach (Zhang, Xue, & Fong, 2011).

The incorporation of traditional and modern EBM as an integral part of a country's formal healthcare system is more likely to be achieved (World Health Organization, 2001) than the other methods mentioned above, for scientific, cultural, educational and legal reasons (Zhang, Xue, & Fong, 2011, p. 1). It has been demonstrated that integrating TM into the formal healthcare system can be practicable in many countries, especially in Asian countries, such as China, Korea, Japan and India (World Health Organization, 2001). In particular, China and India are the leaders in this field. In these countries, TCM and Indian Ayurveda are being practised as official systems of medicine and are flourishing. Through a wide range of research and development activities, China and India are powerfully extending significant healthcare coverage to the population, especially to those in rural areas (Tomar, 2016).

Recently, the WHO launched strategic action plans for TM guidelines for the period 2014–2023 and has specified the following actions to help member states integrate TM into their national healthcare:

- 1) To develop mechanisms/guidelines for consumer education and protection, to create channels to handle complaints, and to foster the proper use of TM products, practitioners, and services including their promotion and advertising;
- 2) To strengthen interdisciplinary education and collaborative practices between conventional medical practitioners and TM practitioners with a people-centred emphasis;
- 3) To foster partnerships and dialogues about self-healthcare among all stakeholders;
- 4) To encourage member states to take steps to ensure that consumers can make informed choices (World Health Organization, 2013, p. 56).

Consequently, TM has contributed in many ways to the development and dissemination of good practice. However, it requires many organisations to play a significant role in order to integrate TM into national healthcare systems (UNESCO, 2013).

2.2 TRADITIONAL THAI MEDICINE (TTM)

Historical evidence shows that before the Sukhothai period (1238 AD), early Thai citizens had begun to use herbal medicine for health promotion and for the treatment of various symptoms and diseases (Chokevivat & Chuthaputti, 2005; World Health Organization, 2009). A stone inscription from the reign of King Chaivoraman of the Khmer Kingdom indicates that 102 hospitals, called ‘Arogaya Sala’, were built to serve people throughout that Kingdom, especially in the region known today as north-eastern Thailand (Chokevivat & Chuthaputti, 2005).

In Thai culture, health has often been said to include religion, traditional beliefs (Chokevivat & Chuthaputti, 2005; Sumngern, 2011), cuisine and TTM (Sumngern, 2011). Therefore, the Thai lifestyle, which is related to a system of health based on TTM, is regarded as comprising the traditional philosophies, bodies of knowledge and modes of practice to care for the health of Thai people (Chokevivat & Chuthaputti, 2005) that are congruent with Thai culture, the principles of Buddhism (Chokevivat & Chuthaputti, 2005; Sumngern, 2011), and other rituals that depend upon beliefs in a supernatural power or in the power of the universe (Chokevivat & Chuthaputti, 2005).

In order to suit the Thai way of life, the traditional knowledge of TTM has also been built through the processes of ‘selection’, ‘adoption’, ‘adaption’, and ‘utilisation’ of traditional medicines that have been used in countries with which Thailand has had contact in the past, especially India and China (Chokevivat & Chuthaputti, 2005, p. 2). Therefore, TTM has mostly been derived from TCM and Indian Ayurvedic therapy (Wongyai, 2004, p. 1).

Traditional Thai Medicine has long been a part of Thailand’s healing culture. However, when Westerners brought their goods, medicine, values, culture and their cannon-mounted caravels to Thailand about a hundred years ago (Mahidol University, 2012), it caused the status of TTM in the healthcare system to decline (Chokevivat & Chuthaputti, 2005; World Health Organization, 2009). In particular, a 1913 law abolished TTM and prohibited traditional doctors from treating patients. This was followed by other punitive laws, which denigrated the status of TTM practitioners in the country’s healthcare system by making it illegal for TTM doctors to treat patients (Kongrerk, 2013). TM/TTM textbooks were either lost, burned in fires, or stolen to be sold to other countries (Mahidol University, 2012, p. 68). Between 1916 and 1978, TTM was withdrawn from the official public healthcare system in Thailand

(Kudngaongarm, 2011), and thus the abandonment of the systematic teaching of TTM in medical schools sparked the decline in TTM acceptance, especially among people in urban areas, and almost made it extinct (Chokevivat & Chuthaputti, 2005; Kongrerak, 2013).

In 1978, TTM came back to Thailand after the proclamation of the Alma-Ata Declaration, in which the WHO urged its member countries to include TM and medicinal plants in their PHC programs. Moreover, the Thai Government has realised that the limitations of modern medicines that have serious side-effects, and the technology to produce them, is costly. Despite these sophisticated medicines, several lifestyle-related chronic diseases are unable to be cured by them (Chokevivat & Chuthaputti, 2005). Therefore, the Thai Government recognises the importance of herbal products for the health of the Thai people, and for the economy, due to increasing demand from domestic and global markets (Vadhnapijyakul & Suttipanta, 2014). Since 1994, the Dietary Supplement Health and Education Act (DSHEA) in the United States—a ‘health conscious’ movement towards exercise, eating well, and the use of dietary supplements for promoting health—has spread all over the world. The booming Western botanical dietary supplements market is worth USD10 billion. To satisfy this global demand, the Thai Government has fully supported the research and development (R&D) of new herbal products and their production, including TTM (Chokevivat & Chuthaputti, 2005).

In addition, the Thai Government has emphasised the importance of reducing the importation of modern medicine in order to help the country’s economy (World Health Organization, 2009), because during the period of TTM denigration, the government lost its ability to control its national spending on healthcare (Chokevivat & Chuthaputti, 2005). In the years preceding 2013, healthcare costs had risen drastically, the Thai Government spending nearly 200 billion Thai Baht (approx. USD5.71 billion) to operate the national healthcare system (Saengpassa & Sarnsamak, 2013); in particular imported drugs accounted for two-thirds of the expense (Mahidol University, 2012). Consequently, the government would likely limit the budget for its medical insurance schemes in the future (Saengpassa & Sarnsamak, 2013), and TTM is considered to be a solution to overcome the healthcare costs in Thailand (Thongruang, 2014).

2.2.1 Policy context

According to the government policies presented to parliament on 23 March 2005, the guidelines stated that TTM would still be a part of the national health policy, as the

government would develop, transfer, and protect the wisdom of TTM, indigenous medicine, alternative medicine and medicinal plants (Chokevivat & Chuthaputti, 2005, p. 11). Thus, based on the philosophy of King Bhumibhol Adulyadej's 'Sufficiency Economy', the 'Sufficiency Health System' Strategic Plan was formulated. Their framework and direction aimed to achieve good health and good service, as well as help to develop the country's macro-economics (World Health Organization 2009, p. 100).

The MoPH has become the authorised governmental agency responsible for developing, promoting and protecting TTM in Thailand, and in that capacity has been given the following three main tasks to implement: 1. To strengthen the knowledge of TTM, Indigenous medicines, and complementary and alternative medicines through research and development; 2. To transfer the selected knowledge of TTM, Indigenous medicines, and complementary and alternative medicines to the public and to healthcare personnel through training, demonstrations, exhibitions, printed materials, and through various other media channels; 3. To develop herbal products and TTM, Indigenous medicine and complementary and alternative medicine services to meet international standards (Kudngaongarm, 2011, p.12).

In August 2009, Thailand officially launched its 'Creative Thailand Policy', which sent a clear message to the country's industries, governmental agencies and educational institutions that the Thai Government sought their support for reform of TTM in key economic sectors (Kongrerak, 2013). The MoPH announced a policy to integrate TTM into the national health system. A national target usage for TTM was set at a minimum level of 5% of the total value of all medicines used (modern and herbal medicines combined) per year at all levels of public health service facilities (Vadhnapijyakul & Suttipanta, 2014), and 25% of the total medicine use overall by 2011 (Ministry of Public Health of Thailand, 2008).

In order to achieve the target, the national plan focused on integrating TTM and alternative medicines into the national health system. Therefore, the participation of various sectors, such as the MoPH and Faculty of Medicine of Mahidol University, would be required to implement the plan. This strategic program was composed of the following five strategies related to Indigenous medicine, TTM, and to alternative medicine: 1) knowledge development and management; 2) development of the health service system; 3) human resources development; 4) development of TTM and herbal medicines; and 5) protection of Thai traditional knowledge, TTM, and Thai herbs (World Health Organization, 2009, p. 101).

Appropriately using technology by placing a focus on the use of Thai traditional medical knowledge and becoming self-reliant is one of the desired characteristics of a sufficiency health system. The government's 11th National Economic and Social Development Plan of 2012–2016 helped the process of using greater quantities of TTM to gain further momentum. The plan, which seeks to develop Thailand into a creative economic hub in the ASEAN region, focuses on giving priority to traditional knowledge. This is of particular importance in the area of TTM, which uses the knowledge of local herbs, plus science and technology, technical standards, qualification requirements, certification, and marketing to generate income. In recognition of the importance of establishing creative economies, which are integral to advancing future growth and boosting international competitiveness, Thailand's National Social and Economic Development Board has included the concept in its 11th Economic and Social Development Plan, which came into effect in 2012. In an effort to build a creative economy, TTM was one of fifteen industrial groups, which have been singled out as targets (Kongrerak, 2013).

Presently, to improve the use of TTM, the MoPH has created a slogan that invites Thais to use herbal medicines for minor illnesses before seeing a doctor (Sompopcharoen & Sresumatchai, 2015). The current Prime Minister, General Prayut Chan-o-cha, in his national address, recently stated that the government is giving a major boost to the use of medicinal plants and TTM in medical treatment, with an aim to reduce the medical expenses of the Thai people. Many Thai herbal plants have been developed to higher standards and have been integrated into primary healthcare (The Government Public Relations Department: Office of The Prime Minister of Thailand, 2016).

In terms of the government's role, the public sector has clearly formulated policies on product development, which include increasing the number of TTM medical professionals and pharmacists, providing persuasive information to medicine users, and solving problems regarding the confidence to adopt Thai herbal products, in alignment with a face-to-face health campaign intervention (Sompopcharoen & Sresumatchai, 2015). For a national policy to integrate TTM into the mainstream healthcare system, the process requires a strengthening of the body of knowledge of TTM, development of human resources, development of quality herbal medicinal products, and the government's commitment and financial support. All of these could be achieved by good administration, an information system on TTM, research and development, a certified educational system and training curricula, and good collaboration

among concerned institutions/organisations at both national and international levels (World Health Organization, 2005a, p. 13).

2.2.2 Regulatory context

Thailand has already established strict laws with respect to handling these kinds of medicines, including: manufacturing process, purification of ingredients, distribution, and prescription and observation by a doctor; consequently, drug abuse and negative side-effects could be reduced (Sumngern, 2011, p. 3). National laws and regulations on TM/TTM were issued in 1967 under the *Drug Act B.E.2510*, which is divided into two parts covering modern medicines and TM/TTM, and amended in 1975, 1979, 1984 and 1987 (World Health Organization, 2005b).

There are national expert committees on TTM that oversee the registration of their different types. Certain aspects of the law and regulation of TTM are similar to those for conventional medicines. For instance, the licensing of manufacturers, vendors, and importers of TM/TTM. Registered TTM can be divided into prescription medicines or over-the-counter medicines (household TTMs). Medical and health claims, as well as structural/functional claims, may be made about TTM. Pharmacies sell general TTM as over-the-counter drugs. Moreover, licensed practitioners are allowed to make their own herbal preparations and sell them to patients. There are, however, no restrictions on the sale of registered household herbal medicines (World Health Organization, 2005).

2.2.3 Research and education context

Since Thailand responded to the WHO's policy on indigenous medicine and primary healthcare (Chokevivat & Chuthaputti, 2005), the government has broadly stated the importance of supporting research and developing medicinal plants, to increase their use in the healthcare system in order to reduce the importation of modern medicines and help the country's economy (World Health Organization, 2009). The MoPH has taken a leading role in protecting and developing this valuable national resource (Kongrerk, 2013), including implementing key policies to integrate TTM into the treatment of diseases, by placing certain scientifically proven TTMs on the National List of Essential Drugs. This has been accomplished to promote their use in public health facilities so that doctors can have more TTMs to choose from, so that they can be used to replace modern medicines (World Health Organization, 2009).

An increased interest in TTM and alternative medicines by the Thai people has prompted many universities and academic institutions to offer Bachelor's Degrees in TTM Education. The early practices of TTM in Thailand have provided an excellent foundation for the recognition of profound knowledge of, and Indigenous wisdom regarding, alternative medicine (Kongrer, 2013).

2.2.4 TTM in healthcare

The Thailand public healthcare service is divided into primary, secondary, and tertiary healthcare. The Thai Government has specified that these systems must follow the rights of its citizens, which states that the Thai people must have the right of equal access to standard public healthcare services and must receive free medical treatment from public health centres (Sumngern, 2011). With respect to medicines, TTM is one of the two legally-recognised systems of medicine practised in the public health system: the particular form of TTM being practised is known as the royal tradition, having evolved at court; the other one is Western medicine (Sompopcharoen & Sresumatchai, 2015).

Despite the Thai Government strongly supporting TTM development and that the MoPH had previously implemented several policies to promote its integration into the healthcare system, the results are not as successful as had been expected. By 2011, the figures had not met the national target for TTM use (5%) (Vadhnapijyakul & Suttipanta, 2014), and 25% of the total medicine use overall in Thailand as outlined by the sufficiency health policy (Ministry of Public Health of Thailand, 2008).

Based on data collected by the Bureau of Health, it has been found that in the fiscal year 2009, the value of TTM products used in all levels of public health service facilities was only 1.57%. It was found that the percentages of the value of TTM products used, as compared to the value of total medicinal products used (modern and herbal medicines combined), at each level of public health service facilities, were as follows: regional/general hospitals (0.2%), and community hospitals/health centres (2.3%) (World Health Organization, 2009). In 2010, TTM use grew 0.21% to about 1.78% (Manager Online Thailand, 2010) and rose to 3.5% in 2011 (Thungkhampien, 2012). In 2013, the use of TTM rose to about 0.53% in regional/general hospitals and to 2.78% in community hospitals/health centres (Chungsomjatepaisarn, 2013). The overall usage of TTM was approximately 21.9% of total medicine used in Thailand, according to reports from the National Statistical Office (Ganghair, 2014). A 2015 survey

conducted in south-east Asia found that the use of TTM in Thailand was just 2.6% (Peltzer & Pengpid, 2015). Thus, it can be noted that the integration of TTM in the Thai healthcare system has not been as successful as expected (Vadhnapiyakul & Suttipanta, 2014).

Khaphol et al. (2011) noted that the national targets were difficult to accomplish, especially in tertiary care hospitals, because there are no practice guidelines and/or clear strategic plans to support the policy. Vadhnapiyakul (2011) explained that this happened because TTM policy had been imposed to justify the state's image in response to WHO policy, instead of issuing policies that supported TTM's development. Regardless, it can be noted that TTM usage has not yet reached the minimum national target set (5%) (Vadhnapiyakul & Suttipanta, 2014).

In regard to TTM usages, it is found that the provision of TTM in hospitals is related to the rationales and policies of the government (Aphisamacharayothin, 2014). Hence, it is clear that government policy and financial support are the main driving forces that have brought TTM services to the public and helped increase people's awareness about its role in health promotion (Chokevivat & Chuthaputti, 2005).

However, the healthcare system in Thailand is presently becoming more complex due to a range of social and environmental factors (Chinnawong, 2007). It is significant to note how different degrees of knowledge influence power differently. The power of TTM in hospitals is related to the knowledge of health promotion, which has led to the acceptance of and need for TTM (Aphisamacharayothin, 2014). The acceptance by medical doctors has emerged from the scientific basis of this service, which is congruent with the principles of modern medicine (Thongruang, 2014). TTM are prescribed mainly by conventional doctors (Aphisamacharayothin, 2014; Vadhnapiyakul & Suttipanta, 2014); Vadhnapiyakul and Suttipanta (2014) noted that medical doctors seldom refer patients to TTM doctors for further treatment. Thongruang (2014) concluded that medical doctors obstruct the delivery of TTM services in hospitals and negatively influence the popularity of TTM practices among patients. These actions make the implementation of TTM practices in hospitals more difficult.

Therefore, the following conclusions can be made: 1) TTM's dispensation is solely in the hands of medical doctors; and 2) these doctors have neither an adequate knowledge of TTM, nor have a proper understanding of it. As a result, TTM is being dispensed less frequently, and does not meet the national target usage as expected (Vadhnapiyakul & Suttipanta, 2014).

Yet, TTM is not in congruence, and the problem of integrating TTMs into the public healthcare system of Thailand does, therefore, exist (Aphisamacharayothin, 2014).

2.2.5 TTM communication and media framing

This section provides a comprehensive overview of the communication and media of TTM in Thailand, from both government and private sectors, in order to provide an understanding of the current media framework of TTM and comparative communication and media between both sectors. It also aims to review the gap surrounding the communication and campaign to support TTM in Thailand.

2.2.5.1 Communication and media framing of TTM by the government sectors

With respect to the promotion of TTM, the Thai Government has sought to develop, transfer, and protect the wisdom of TTM, indigenous medicine, alternative medicine, and medicinal plants by strengthening knowledge through research and development, by transferring the selected knowledge of TTM to the public and to healthcare personnel through training, demonstrations, exhibitions, printed materials, and by publicising to various other media channels (Chokevivat & Chuthaputti, 2005, p.11).

The MoPH has been disseminating ‘the ancient wisdom and local knowledge of TTM’ by utilising many media forms (Chokevivat & Chuthaputti, 2005, p.7). For instance, information has been dispersed via radio, television, newspapers, websites, the Internet, books, videos, posters and pamphlets, etc. These have been directly distributed to the public at all levels of hospitals and by health service centres all over the country. The purpose of these media has been to empower people to use TTM to promote better health. Through such a framework of medical intervention, readers/audiences have been encouraged to adopt certain attitudes. These attitudes represent the ways that they can use TTM preventatively in order to keep themselves from acquiring certain ailments. Such forms of community outreach have been accomplished in order to increase the public’s awareness of the health benefits of TTM and to promote TTM practices and good health (Chokevivat & Chuthaputti, 2005, p.19).

In order to achieve the national health policy’s target, the national plan focused on integrating TTM and alternative medicines into the health system. Therefore, the involvement and participation of various sectors, such as the MoPH and the Faculty of Medicine of Mahidol University, would be required to implement the plan (World Health Organization, 2009). ‘The

Medicinal Plants for Self-reliance Project was one of the Siriraj Hospital projects (Mahidol University) that has played a role in promoting the use of TTM for PHC. The project's activities were focused on educating the Thai people about the health benefits of medicinal plants by: 1) providing trainings, 2) issuing tri-monthly journals, 3) publishing books on medicinal plants, and 4) serving as a medium for users to share their experiences about using medicinal plants. Combined with the trend of going back to nature, public awareness of the health benefits of Thai herbs has been expanding through the dissemination of the benefits of TTM for PHC. (Chokevivat & Chuthaputti, 2005, p.12), the phenomena have made healthcare concerns fashionable (Maneerat, 2009).

In 2015, the MoPH released a new program, 'Promoting Thai Herbal Medicine and Health Behavior Change Program', in which it reported that the government has a policy to support the R&D of herbal plants so that they can be processed into high-quality goods. It would add value to Thai herbal products and expand their reach to the world market. Consequently, expediting the development of Thai herbal medicines to elevate their standards to international standards is the monumental task that the Department of Thai Traditional and Complementary Medicine of the MoPH has been given. Dr. Piyasakol Sakolsatyadorn, a Public Health Minister and a Clinical Professor stated, that the factor, which is leading Thai herbs to become a popular choice for medical treatments, is the growth of alternative medicine, especially traditional treatments and medicines. Presently, there has been an increase in the quantity of Thai medicinal plants being used by the pharmaceutical industry. He noted that behavioural change becomes a central objective of public health interventions worldwide because the influence of prevention within the health services has been increasing. Accordingly, the use of Thai herbs for treatments has been promoted in various hospitals. Many general and community hospitals have used both traditional and modern medical systems to provide healthcare services. This reduces the heavy dependence on costly Western medicines (The Government Public Relations Department: Office of The Prime Minister of Thailand, 2015).

Chiang Mai University has supported this herbal trend by joining the Thai Traditional Healers Community Network to open an herbal shop. Its mission is: 1) to produce TTM under strict quality control conditions; 2) to improve the knowledge of TTM; 3) to increase understanding about TTM; and 4) to change attitudes among members of the community. This mission was created because many gaps were found to exist with regard to Thai people's knowledge and

understanding of TTM. For instance, people who have chronic illnesses may take TTM with modern medicines, which can cause side-effects. In order to spread knowledge about TTM and to promote understanding, advertisements have been presented in many forms in the media. To bridge the gap, Chiang Mai University provides knowledge based on scientific fact and local wisdom, so that it can be applied in order to improve all aspects of TTM (Sutheepornviroj, 2010).

Chao Phraya Abhaibhubejhr Hospital is a government hospital and non-profit organisation (Krungthepturakij Online Thailand, 2006; Maneerat 2009), which is under the Royal Patronage of Princess Bejaratana (The Government Public Relations Department: Office of The Prime Minister of Thailand, 2009). Established in 1983, it was the first official TTM hospital located in the Prachinburi Province in eastern Thailand, with a TTM pharmacy department and offering diagnostic, therapeutic treatments of modern medicine (Western). It also performs TTM R&D for the purpose of conserving and maintaining knowledge from traditional healers, manuscripts and traditional textbooks (Chao Phraya Abhaibhubejhr Hospital, n.d).

Due to Thailand's 1997 economic crisis, Abhaibhubejhr developed TTM products in order to promote the healthcare of the Thai people so that they could rely on reasonably priced TTM, could use it in their everyday lives, and could receive treatments from traditional Thai healers (Krungthepturakij Online Thailand, 2006). The organisation has used 'social marketing' to promote and support TTM and to foster local knowledge that is in line with technology that the hospital currently has, including long-standing sustainable development (Bhokanandh, 2001). The five channels to communicate with consumers were: 1) the press (Maneerat, 2009); 2) specialised media (Bhokanandh, 2001; Maneerat, 2009), particularly local broadcasting (Jakraphong radio station), where information about Abhaibhubejhr's products was featured and promoted to the masses (Bhokanandh, 2001); 3) events; 4) a website (Krungthepturakij Online Thailand, 2006); and 5) human media, (Bhokanandh, 2001; Krungthepturakij Online Thailand, 2006; Maneerat, 2009). Word-of-mouth is the most effective communication tool (Bhokanandh, 2001). However, Abhaibhubejhr is a not-for-profit organisation (Krungthepturakij Online Thailand, 2006; Maneerat 2009), and thus they have a limited budget for promotion, especially in terms of public relations and advertising (Bhokanandh, 2001).

Despite the fact that the Thai Government strongly supported TTM development and the MoPH implemented several policies to promote integration of TTM into the healthcare system, the results have not been as successful as expected (Vadhnapijyakul & Suttipanta, 2014). In a national survey regarding governmental TTM policy conducted in 2013, it was reported by 86.3% of the respondents that few programs are being implemented by the Thai Government to promote TTM. Moreover, it was found that 88.8% stated that the government should be supporting herb farming to help the agricultural economy, and 84.8% stated that the government should further support the use of TTM in government hospitals. This percentage was larger than numbers previously reported (Ganghair, 2014).

Jehso (2015) proposed that integrating TTM into the practices of medical doctors would require: 1) communication (presenting, meeting, sharing, and distributing) so that after comprehending the TTM information they may recognise its benefits, gain knowledge, possess positive attitudes, and gain understanding and trust, so that they may be led to integrate TTM into their practices; 2) training or coaching strategies to educate healthcare personnel on TTM knowledge and skills, as well as hands-on or direct experience with TTM treatment, which could be influential in changing one's perspective; and 3) gaining experience, such as personal experiences with TTM services and becoming acquainted with them, and indirect experience by learning about the various aspects of TTM from others. Jehso also claimed that gaining good experiences with TTM treatments would create positive attitudes and develop trust in TTM, which would lead to acceptance and a change in perspectives. In turn, it could raise consciousness among physicians regarding the integration of TTM into their practices and their hospitals.

Similarly, Khaphol et al. (2011) determined that the key facilitating factors to promote TTM in the public health system were: 1) the existence of a key person in hospitals; 2) substitution of TTM products for conventional drugs; 3) provision of information on TTM products to new physicians in the hospitals; and 4) provision of free TTM product samples for physicians to use. Thus, the following are recommendations for healthcare facilities: 1) organise training of physicians and key personnel about TTM in hospitals; 2) compliance with GMP standards for production, including control of the quality of raw materials and finished products; and 3) strategies for the promotion of TTM products in the hospitals, as follows: a) substitution of Western medicines for TTM products; and b) provision for education regarding various

strategies, such as academic, and promotion of the use of TTM via traditional health professionals (Khaphol et al., 2011).

With respect to the policy, Vadhnapijyakul and Suttipanta (2014) noted that during the development of TTM's policy, many healthcare professionals should participate equally and be involved in the process of developing TTM and determining its policies. By accomplishing this, the monopoly of power among some healthcare professionals could be reduced. Khaphol et al. (2011) proposed the following recommendations for policymakers: 1) promotion and R&D of TTM products should be accomplished in terms of analysing active ingredients, updating manufacturing technology, and performing clinical research for TTM products; 2) a central authority should be assigned for the systematic and comprehensive management of a national database on TTM products and for the promotion of an easy-to-access database; 3) knowledge of TTM products should be included in the medical curricula at universities; 4) the number of TTM products on the National List of Essential Drugs should be increased and in order to improve the reimbursement system for TTM products, coordination with health insurance plans should be implemented; and 5) target usage goals should be set for the use of TTM products, mainly in primary and secondary healthcare settings (Khaphol et al., 2011).

Accordingly, TTM is not congruent with the public healthcare system of Thailand and the problem of integrating TTM still exists (Aphisamacharayothin, 2014). Therefore, the Thai Government still has a lot of work to do in order to improve TTM adoption (Chokevivat & Chuthaputti, 2005; Wongyai, 2004). Even though economic situations have unfortunately made TTM difficult to put into practice, the Thai Government must be complimented on their efforts to fulfil their mandate (Sumngern, 2011).

2.2.5.2 Communication and media framing of TTM by the private sectors

The following section provides an overview of the media framework of TTM by the 'private sectors' based on the research studies that have been conducted throughout Thailand. The understanding of current advertisement of TTM provided by the private sectors has been highlighted and is presented in order to compare and contrast with the media framework provided by the government sectors.

1. Exaggerated claims advertisements on the radio

The Thai Food and Drug Administration (FDA) is responsible for monitoring drug advertisements in the metropolitan Bangkok area and has decentralised its monitoring authority to each provincial health office (Manager Online Thailand, 2013). General principles exist that control the advertisements for drugs, including TTM, and all advertising and promotional materials must meet the established requirements. In addition, the Thai FDA must approve the text, auditory, or visual content (Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

However, during 1999–2000, 50% (40 out of 81) of complaints about drug advertisements by private sectors were for TTM (Kittisopee, Anantachoti, & Tangcharoensathien, 2005). Based upon a review of the literature, previous data has indicated that there have been many illegal TTM drug advertisements. For instance, the studies of Kittisopee, Anantachoti, and Tangcharoensathien (2005), and Lomas and Chanthapasa (2012), found that the percentage of advertisements of TTM with false information or exaggerated descriptions was 50%.

The TTM products most touting their exaggerated claims have been found advertised on the radio by companies in the private sector (Chandrawongse, 2011; Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012; Ministry of Public Health of Thailand, 2007; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003). Recently, when the NBTC of Thailand and the Foundation for Consumers randomly checked radio stations throughout Thailand, it was revealed that of the 103 products being advertised, 35 TTM/modern drug items were guilty of making claims that were misleading and, as a result, were in violation of the drug laws (National Broadcasting and Telecommunications Commission of Thailand, 2014). Such circumstances happened because radio is a medium that can easily reach many people both in urban and rural areas (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003), where there is usually an imbalance of information due to socio-economic situations and the educational system (Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

2. Content of the exaggerated claims advertisements

Two studies, of Kittisopee, Anantachoti, and Tangcharoensathien (2005) and Lomas and Chanthapasa (2012), found that half of TTM advertisements contained false information or exaggerated descriptions, and some of these advertisements were presented with misleading

content claiming inaccurate pharmaceutical properties of the drugs, without permission from the government and that the claims were inaccurate (Lomas & Chanthapasa, 2012). The Thai FDA has also reported that some consumers filed a petition with the local radio station, primarily regarding the exaggerated claims in TTM advertisements that had stated TTM can cure cancer and end paralysis (Ministry of Public Health of Thailand, 2007).

A literature review found illegitimate health products advertisements as: 1) displaying false or exaggerated properties of the products; 2) displaying drug properties to relieve, cure, or prevent symptoms/disease, which had been banned by the MoPH (Chandrawongse, 2011), particularly cancer (Ministry of Public Health of Thailand, 2007; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003); 3) using methods, such as giving the drug as an off label award (Chandrawongse, 2011); and 4) persuading consumers to use a drug unnecessarily, which influenced the 'over-consumption' of drugs (Chandrawongse, 2011; Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

3. Effect of exaggerated claims advertisements

According to Chandrawongse (2011), it is reported that some consumers could not correctly identify whether the herbal product was a food, cosmetic or drug. This was because several food advertisements had been claiming to have therapeutic properties. Nonetheless, the impact of misleading advertisements on consumers' perceptions have made the majority of consumers believe that the products would be beneficial for their health problems. In addition, they believe that only safe products, which had undergone a preliminary review by government regulators, could be advertised on the radio. Thus, the majority of consumers believed in the drug's efficiency as the advertisements had claimed.

However, when some people in rural areas were convinced by the advertisements and bought TTM products, such as steroids, they had adverse side-effects (Ruenkon, Likitkeithajorn, & Siththeimthong, 2003). Such circumstances occurred due to manpower limitations of the FDA; consequently, consumer protection seems to be poor (Kittisopee, Anantachoti, & Tangcharoensathien, 2005), resulting in tarnishing the reputation of TTM (Wongyai, 2004).

Unfortunately, Thai people's common practice of self-care and first steps in seeking treatment is to buy medicines from drugstores (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lawrence, 2013; Sermsri, 2002), and thus, their purchasing behaviours are often affected by drug advertisements. For firms, advertisements serve three main functions: 1) communicating

the presence of their product; 2) informing consumers of its positive attributes; and 3) persuading consumers that their products will be of sufficient value to warrant making the purchase (Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

Thus, large-scale advertising may also lead consumers to demand drugs, including TTM that may not be of medical necessity or be appropriate for a patient's condition (Chandrawongse, 2011; Kittisopee, Anantachoti, & Tangcharoensathien, 2005). It is found that the most critical issues have been inaccurate, imbalanced and misleading information, and these are believed to be the key factors that influence the over-consumption of drugs (Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

4. Solutions for TTM development

Theoretically, drug advertisements are intended to educate consumers and should be supportive of and encourage the improvement of healthcare through the rational use of drugs (Kittisopee, Anantachoti, & Tangcharoensathien, 2005). Regarding pharmaceutical properties, the claims made in these advertising activities should be reported consistently and seriously. Both the Thai FDA and provincial health offices should enlist the cooperation of stakeholders to reduce these problems, and try to strengthen the monitoring system of the food and drug advertisements (Lomas & Chanthapasa, 2012), because the negative publicity and claims of 'fake products' can hamper market growth in the forecasted period and may hinder overall market growth (Zion Market Research, 2017). As a result, it is necessary to disseminate accurate TTM knowledge to the public (Chokevivat & Chuthaputti, 2005), and thus, the gap in knowledge may be closed (Ministry of Health, Rwanda & UNICEF Rwanda, 2014).

2.2.5.3 Summary of the communication for TTM promotion in Thailand

Based on Corcoran's research, communication methods of TTM consist of intrapersonal, interpersonal, organisational, community, and public and mass media (Corcoran, 2007). From a review of the Thai literature, it can be concluded that the communication methods from both sectors are all of the above types (see Table 2.1).

Table 2.1 *A summary of the five hierarchical categories of communication methods for TTM in Thailand*

Communication category	Example of media	TTM media framing
Intrapersonal	What we think, when we listen to an inner voice	<p>Thai people think TTM is a natural product and has fewer side effects (Bhokanandh, 2001; Chungsomjatepaisarn, 2013; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003; Putiyanan & Winijkul, 2008).</p> <p>However, the biases about TTM still exist. Currently, some Thai users think that the idea of using TTM is outdated (Muangsai et al., 2014; Wongyai, 2004) and inconvenient (Muangsai et al., 2014; Suntonvipart, Chantachon, & Koseyayothin, 2014). Specific to the efficacy of TTM, some share the belief that only some (not all) diseases can be cured with TTM (Muangsai et al., 2014).</p>
Interpersonal	<p>The activities that allow for personal listening and for responses. For example:</p> <ul style="list-style-type: none"> - One-to-one - Small groups - Emails - Telephone 	<p>Thai people rely on personal media, particularly physicians and public health service staff. Families also play a role (Prasansuk, 1996; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003; Putiyanan & Winijkul, 2008; Thongruang, 2008; Roekruangrit, Sumpaonthong, & Itharat, 2010; Khaphol et al., 2011; Rattanapikul & Fusiri, 2012; Chungsomjatepaisarn, 2013).</p>
Organisational	<p>The activities that allow personal listening and response. For example:</p> <ul style="list-style-type: none"> - Lectures - Seminars - Workshop - Newsletters 	<p>The NGO ‘Medicinal Plants for Self-reliance Project’ played a role in the promotion of the use of TTM for PHC. The activities of the project were to educate Thai people about the health benefits of medicinal plants by providing training, issuing tri-monthly journals, publishing books on medicinal plants, and serving as a medium to share experiences among users of medicinal plants (Chokevivat & Chuthaputti, 2005).</p> <p>In contrast, private sectors tend to tout TTM’s theme as the ‘miracle drug’ that can cure all symptoms, in particular this happens in the rural</p>

Communication category	Example of media	TTM media framing
		<p>areas (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003).</p> <p>Half of the TTM advertising by the private sector had misleading content and exaggerated claims (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012). Some were presented without permission from the government (Lomas & Chanthapasa, 2012), and were in violation of the drug laws (National Broadcasting and Telecommunications Commission of Thailand, 2014). As a result, TTM's image was tarnished (Wongyai, 2004).</p>
Community	<p>The activities that allow for personal listening and responses. For example:</p> <ul style="list-style-type: none"> - Local radio - Talks - Local newspapers - Billboards - Health fairs 	<p>Local radio was most effective in the hospital, including the community (Bhokanandh, 2001; Kittisopee, Anantachoti, & Tangcharoensathien, 2005).</p>
Public and mass media	<p>The activities that allow personal listening and response. For example:</p> <ul style="list-style-type: none"> - Newspapers - Television - National radio - Internet - Mobile phones 	<p>Presently, in order to improve the use of TTM, the MoPH has created a slogan that invites Thais to use herbal medicines for minor illnesses before going to see a doctor (Sompopcharoen & Sresumatchai, 2015). Thus, the MoPH has disseminated knowledge about TTM through various forms of media. For instance, radio, television, newspapers, websites, books, videos, posters, and pamphlets, etc. These have been directly distributed to the public at all levels of hospitals and by health service centres all over the country (World Health Organization, 2009)</p> <p>'Behavioural change' becomes a central objective of public health interventions</p>

Communication category	Example of media	TTM media framing
		worldwide, including Thailand. Accordingly, the use of Thai herbs for treatments has been promoted in various hospitals. Many general and community hospitals have used both traditional and modern medical systems to provide healthcare services for the people. This reduces the heavy dependence on costly Western medicines (The Government Public Relations Department: Office of The Prime Minister of Thailand, 2015).

Source: Based on Corcoran, N. (2007). Theories and models in communicating health messages. In *Communicating health strategies for health promotion* (1 ed.). United States: SAGE Publication Limited.

With regard to the advertisement of TTM in Thailand, it seems to be the Thai Government sectors that tend to pass on the theme of TTM as ‘Ancient and Local Wisdom with a long history of usage’ (Chokevivat & Chuthaputti, 2005, p.7), and to implement plans to improve the knowledge of TTM through R&D (World Health Organization, 2009). However, reports from the National Statistical Office in 2013 found that 86.3% of participants said that the Thai Government has few programs to promote TTM (Ganghair, 2014).

In contrast, the private sector tends to tout TTM’s theme as the ‘miracle drug’, that can cure all symptoms, such as cancer, and end paralysis (Ministry of Public Health of Thailand, 2007), particularly in the rural areas (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003).

By 2011, TTM still had not yet reached its minimum national target (Vadhnapijyakul & Suttipanta, 2014). While Thai users have inadequate knowledge about TTM, as well as inappropriate information about some items, the media has not been used effectively to provide appropriate information about TTM to Thai consumers (Satyapan et al., 2010).

Given the challenges of increasing TTM use in Thailand, there exists a need to strengthen multi-sectoral collaboration in order to disseminate the benefits of TTM to the public, as follows: 1) by a greater commitment from the government; 2) by creating better

administration; and 3) by having an excellent information system (Chokevivat & Chuthaputti, 2005). Consequently, there should be more publicity about TTM.

In the field of health promotion, there are two significant aspects: 1) communication is a planned process and 2) the effectiveness of this planned process can only be reached when the audience has achieved, acted on, or has responded to a message (Corcoran, 2007). Thus, it is necessary to place focus on the message that TTM is a source of medicinal herbs, which are (from people's viewpoints) easily accessible, and support for TTM use should be provided from within society (Chaichompoo, et al., 2012). Clearly, intervention is needed to make drug advertising more honest and to make certain that it contains clear, truthful information that can better inform the Thai people (Kittisopee, Anantachoti, & Tangcharoensathien, 2005).

CONCLUSION

Over time there has been a tremendous expansion of the use of TM worldwide (Qi, 2000). This expansion represents the fundamental method that humans have undertaken to preserve their health and to avoid diseases (Firenzuoli & Gori, 2007). Consequently, TM plays a significant role in providing nutrient compositions in order to treat the illnesses of people (Beyene, Beyene, & Deribe, 2016).

Despite over 800 years of usage, TTM still has not fully been integrated into the public healthcare system of Thailand (Aphisamacharayothin, 2014). In fact, integrating modern medicine and TTM is a major challenge, especially given the growing recognition of TTM to improve public health (Lewis & Dickson, 2010). Therefore, a lot of work still needs to be accomplished in all aspects of TTM development, by both the public and private sectors, in order to improve the TTM industry and to increase the demand for TTM products (Chokevivat & Chuthaputti, 2005).

The following chapter highlights the current realities with respect to the understanding and belief of TM, as well as TTM in Thailand. Information about the knowledge, attitudes towards, and the practices of TM has been gathered from around the globe in order to compare and contrast the current understanding and usage of TTM by Thai citizens on both sides of the issue (supporters and users). This information has also been presented to fill the gaps of knowledge, attitudes towards, and the practices of TTM from previous studies conducted in Thailand, in order to provide a framework for the researcher's ideas regarding the design of this dissertation.

CHAPTER 3 PUBLIC UNDERSTANDING AND BELIEFS ABOUT TM AND TTM IN HEALTHCARE

This chapter examines the public understanding and beliefs in relation to TM and TTM in order to compare and contrast this understanding among Thai citizens and worldwide. This includes exploring the factors—including barriers—influencing TM and TTM usage in order to suggest options for promoting TTM in Thailand. The purpose of this chapter is to gain a better understanding of the awareness, perceptions and issues surrounding TTM, among both Thai medical doctors and consumers within the context of Thai society.

3.1 GLOBAL USAGE OF TM

Antony Taubman, Director of the Intellectual Property Division of the World Trade Organization stated, *“It's time to consign to history the idea that traditional medical systems have nothing to offer modern medical science”* (Taubman, 2010, p.1), which means that often in healthcare, TM are underestimated (World Health Organization, 2013). Moreover, the communities, which maintain traditional medical systems, would be more directly impacted by their loss, not only in terms of practical healthcare, but also in terms of their cultural identities (Taubman, 2010). This is particularly true for the people who live in rural areas and for whom it is hard to gain access to modern medicines (World Health Organization, 2009).

In fact, the initiatives have shown that the modern and the traditional need not clash (Taubman, 2010). The developing world has many examples to illustrate this idea (Lewis & Dickson, 2010). For instance, China's traditional system was developed within the national healthcare system in the 1950's to marshal all healthcare resources towards the goal of meeting the national objective of achieving a comprehensive primary healthcare system (UNESCO, 2013). More than half of the population regularly uses traditional remedies, with the highest prevalence of use being in rural areas (World Health Organization, 2002a). Furthermore, China has set a TCM target for their country's healthcare system with the goal of having universal healthcare coverage by 2020 (Rickwood et al., 2013) and thus, at every level of the healthcare system, China has performed experiments to examine their own medical heritage (Shetty, 2010) in order to ensure that TCM is incorporated into the national healthcare system by providing academic trainings and by emphasizing research (UNESCO, 2013). Alongside each other, TCM and conventional medicines are practiced at every level of

the healthcare system, and both public and private insurance cover both TCM and conventional medicines (World Health Organization, 2013).

The Chinese market is the largest and one of the fastest growing emerging markets for prescription medicines (Rickwood et al., 2013), and TCM accounts for around 40% of all delivered healthcare (Peltzer, 2009). Today, TCM knowledge and principles are being taught in universities and local medical schools as part of a mixed curriculum. In TCM schools, 60% of the curriculum is devoted to TM and the remaining 40% to modern medicines (UNESCO, 2013). About 5,000 traditional remedies are available in China, accounting for approximately one fifth (20%) of China's entire pharmaceutical market (World Health Organization, 2002a).

In India, the first step towards TM recognition came with the adoption of the Indian Medicine Central Council Act in 1970, which included a mandate to standardize training, establish accredited research institutions, and to monitor standards for training and for practice in this type of medicine. The Indian Government has established the AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) Department, which has been tasked with the following: 1) developing AYUSH educational standards and research, 2) undertaking quality controls, 3) standardizing the drugs used in TM, and 4) raising public awareness about its relevance. Today, alongside modern medicine, Ayurveda is practiced in around 3,000 hospitals and in 20,000 dispensaries and has its own dedicated healthcare and research centers. It is also being taught in about 400 undergraduate and post-graduate colleges (UNESCO, 2013). Moreover, India is currently conducting clinical trials on herbal products through reverse pharmacology (Shetty, 2010).

In Japan, Kampo (or Kanpo) is the traditional Japanese therapeutic system (Tanaka, 2009). Over the years, from the time of its introduction until it was superseded by allopathic medicine in 1875, Kampo medicine was Japan's mainstream medicine (World Health Organization, 2001). The Japanese have created unique diagnostic methods, herbal formulas, and therapeutic approaches (Tanaka, 2009). Since April 2000, Kampo has gradually been re-emerging. It can be prescribed within the national health insurance system and has been included on the Japanese National Health Insurance Drug List since 1971 (Watanabe et al., 2011). In 2001, the National Health Insurance Reimbursement List included 147 prescriptions of Kampo formulae (mainly herbal extracts) and 192 herbal materials were used in the prescription Kampo formulae (World Health Organization, 2001). In addition, Kampo education for medical students has been incorporated into the model core curriculum by the

Japanese Ministry of Education, Culture, Sports, Science, and Technology. However, of the patients currently using TM, not all are exclusively human. Recently, the popularity of pet ownership has risen in Japan. Since pets are usually considered to be members of the family, the owners have become concerned that their pets receive good medical care, including TM modalities. In response to the strong desires of owners, veterinary TM treatments are on the rise, including acupuncture, aromatherapy, and herbal therapy. Of particular note is the widespread use of dietary supplements for animals. As a result, many companies are specifically researching and developing products for animals (Suzuki, 2004).

In recent years, the use of TM is becoming increasingly popular around the world (Akyol & Oz, 2011; Micke et al., 2009; World Health Organization, 2013). In Europe, it was found that three out of four Europeans currently know about homeopathy (Ullman, 2011), and so far, around 350 herbal medicines have been licensed for sale in Europe under the traditional herbal medicinal (Gilbert, 2012). Of the European people, 29% (approximately 100 million Europeans) use homeopathic medicines for their own healthcare (Ullman, 2011). For instance, the use of TM has increased in the UK (Armstrong, 2017). A related study carried out in the UK found that approximately one quarter of the adult population has purchased and used TM at least once over the last 24 months and that most of the TM had been procured from pharmacies and health food shops (Nordqvist, 2011).

Approximately one-quarter of the drugs prescribed in the US contain at least one compound derived from plants. Moreover, the National Nutritional Foods Association estimated that 100 million people in the US (more than one-third of the entire American population) had regularly used herbal dietary supplements (“Medicinal and botanical products”, 2011).

In summation, TM are important and are found within almost every country in the world (World Health Organization, 2013) and the demand for its services is increasing (Akyol & Oz, 2011; Micke et al., 2009; World Health Organization, 2013). Over the last decade, we have seen them increasingly being used in many developed and developing countries (World Health Organization, 2005b) because TM can enhance the health and well-being of individuals and the comprehensiveness of their health-care systems (World Health Organization, 2013).

3.2 FACTORS INFLUENCING TM USAGE

Throughout the 20th century, multitudes of health and lifestyle movements emerged highlighting the importance of living in harmony with nature and assessing the effects of modernization on personal and social well-being (Thompson & Troester, 2002). The transformation surrounding healthcare choices indicates a collective propensity by individuals to seek greater levels of control and empowerment (Armstrong, 2017). Harmonious balance becomes the people's consumption goal for purification, and this is carried out through the process of restoring harmony by gradually eliminating or avoiding multiple stressors found in everyday life (Thompson & Troester, 2002). Consequently, people have focused upon utilizing traditional remedies and medicines (Akyol & Oz, 2011; Micke et al., 2009), as their healthcare option (Armstrong, 2017) due to the fact that TM therapies offer treatments, which are directed towards managing symptoms and enhancing the quality of life (Micke et al., 2009).

Numerous studies have explored the factors that empower users/patients to use traditional remedies both in the general population and with oncology patients (Akyol & Oz, 2011). Based on the literature review, factors associated with the growing popularity of natural health products include: 1) **Knowledge and attitude towards TM** (Al-Omar & Al-Arifi, 2011; Adib-Hajbaghery & Hoseinian, 2014; Bharucha, Morling & Niesenbaum, 2003; Lee, et al., 2002; Simatupang, Djojoputro & Nugroho, 2012; World Health Organization, 2004b); 2) **Dissatisfaction with conventional health and medical treatments** (Akyol & Oz, 2011; Armstrong, 2017; Farooqui et al., 2012; Thomson et al., 2014; World Health Organization, 2013); 3) **a Desire for greater autonomy and empowerment in healthcare choices** (Armstrong, 2017; Loquai et al., 2017; Thompson & Troester, 2002; World Health Organization, 2013); 4) **Chronic diseases** (Armstrong, 2017; Farooqui et al., 2012; Thomson, et al., 2014; World Health Organization, 2013); 5) **Cultural influences** (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Sumngern, 2011; Taubman, 2010; Torri, 2012; UNESCO, 2013; World Health Organization, 2004b, 2013); 6) **Social factors** (Armstrong, 2017; Akyol & Oz, 2011; Farooqui et al., 2012; Loquai et al., 2017); 7) **Media** (Akyol & Oz, 2011; Farooqui et al., 2012; Rivera, Loya & Ceballos, 2013; Zion Market Research, 2017); and 8) **Demographics** (Akyol & Oz, 2011; Farooqui, et al., 2012; Micke, et al., 2009; Thompson, et al., 2014; Wassie, et al., 2015).

3.2.1 Knowledge and attitudes towards TM

With respect to Korean health professionals, findings have shown that Oriental Medicine–trained Doctors (OMDs) possess a deeper understanding of and greater experience with TM than Western Medicine–trained Doctors (WMDs), resulting in them exhibiting more favourable attitudes towards TM. The OMDs readily advocated health beliefs compatible with TM, whereas nearly half of the WMDs strongly agreed that treatments, which have not been supported by scientific proof, should be banned legally. Given this fact, Korean WMDs have taken no considerable steps to incorporate traditional remedies into Western medicine (Lee, et al., 2002).

Correspondingly, one study found that even though the Indonesian Government had endorsed TM usage, 65% of conventionally-trained doctors had failed to prescribe TM and the remaining 35% had only occasionally prescribed it. Findings from doctors, who had neither used TM in their practices nor had prescribed them, uncovered that they: 1) had never studied TM (41%); 2) doubted its efficacy, safety, and quality (41%); 3) knew nothing about TM (29%); and 4) had concerns about TM quality (18%) (Simatupang, Djojoputro & Nugroho, 2012). Moreover, Gawde, Shetty & Pawar (2013) in India determined that a lack of knowledge about and attitudes towards Ayurvedic medicine had caused a lack of practice by conventional doctors.

Various studies have suggested that when health professionals are lacking in TM knowledge, it is those individuals with more positive attitudes towards TM, who will be more likely to learn about them than those, who are biased against traditional medicines (Al-Omar & Al-Arifi, 2011; Adib-Hajbaghery & Hoseinian, 2014). Consequently, having TM therapeutic knowledge is a crucial determinant that could induce medical doctors to use TM in the future (Lee, et al., 2002).

Similarly, if users have positive attitudes, they are more likely to expand their knowledge of traditional remedies and, as a consequence, could attain a greater ability to minimise the risks and maximise the benefits of TM use (World Health Organization, 2004b, p. 6). When the attitudes of Latino and non-Latino subjects in the United States were surveyed, it was revealed that non-Latinos had shown more negative attitudes toward herbal medicines and were less likely to use them in the future (Bharucha, Morling & Niesenbaum, 2003). An Australia study (O'Connor & White, 2009), which resulted in similar findings, also revealed

that people will be more likely to use TM if they believe that they will receive some health benefits. As a result, Thomson, et al. (2014) concluded that having beliefs in natural remedies and anti-technology sentiments are significant attitudinal predictors held by individuals who consume TM (Armstrong, 2017).

Swan & Raphael (1995) noted that in order for each individual to contribute to the overall well-being of his/her community, healthcare services should strive for a state in which each person can reach his/her full human potential. In order to accomplish this, the existing gap between TM knowledge and misconceptions about them must be closed (Ministry of Health, Rwanda & UNICEF Rwanda, 2014), which will lead to individuals acquiring the knowledge and abilities to not only minimise the risks of TM use, but to also maximise the benefits (World Health Organization, 2004b).

3.2.2 Dissatisfaction with conventional health and medical treatments

Not being satisfied with conventional medicines (Akyol & Oz, 2011; Armstrong, 2017; Farooqui et al., 2012; Thomson et al., 2014; World Health Organization, 2013) is the major reason for individuals to initially consume TM due to their approaches or outcomes, services, relationships, and expertise, some individuals are prompted to collectively find alternative healthcare solutions (Armstrong, 2017). These dissatisfied consumers of conventional medicines felt that TM usage would be more effective to remedy their problems than conventional medicines (Thomson et al., 2014).

Armstrong (2017) noted that when patients use conventional medicines and treatments, they are reliant on their conventional doctors, which had left some users/patients feeling a sense of powerlessness, helplessness, and desperation, as well as feeling that they had a lack of choices. All of these conditions had led to the users/patients having a sense of vulnerability and anxiety. Yet, these conditions can also lead to individuals having a stronger desire to take control of their own health. As a consequence, many people tended to use TM therapies (Akyol & Oz, 2011; Armstrong, 2017) because they wished to more actively participate in their own health (Armstrong, 2017) by alleviating some of their physical symptoms arising from their conditions, particularly the side-effects from their medical treatments (Akyol & Oz, 2011). Therefore, it can be determined that one of the factors, which significantly influences TM usage, is a patient's dissatisfaction with conventional medicines.

3.2.3 Desire for greater autonomy and empowerment in healthcare choices

In the natural health marketplace, non-Western beliefs about wellness and healing are definitely accepted (Thompson & Troester, 2002). Individuals, who continuously choose to consume TM because they believe that TM suit their ‘holistic approach’ to healthcare, also believe that TM usage reflects the connection between ‘mind, body, and spirit’ (Armstrong, 2017, p. 30). The idea is that instead of attacking a disease with intrusive pharmaceutical and medical technologies, with TM, individuals can, by attaining a state of harmonious balance, overcome specific illnesses, withstand routine exposures to pandemic environmental pollutants, and even genetic predispositions, including strengthening their immune systems (Thompson & Troester, 2002).

Over the past decade, as consumers have chosen to take a more pro-active approach towards their own health, there has been an increase in self-care (World Health Organization, 2013). As found in research conducted on meaning-based consumption, consumers can pursue self-fulfillment in a variety of ways by compromising between their natural health ideals and their competing life demands and situational circumstances (Thompson & Troester, 2002). Finding opportunities to get involved in their own treatment regimens is what some patients look for. TM methods offer users/patients opportunities to take full responsibility for their healthcare decisions, and for this reason, TM becomes their option (Loquai et. al., 2017). Consequently, findings have shown that most TM consumers, who are seeking to be proactive in regard their healthcare, want to be responsible for their own health. Their aim is to regain control in areas in which they have previously felt powerless when using conventional medicines, which have ensued from receiving limited help or acknowledgement of their conditions (Armstrong, 2017). Moreover, they agreed that when they have an illness, it is their own behaviors that will determine how soon they get well again, and they are likely to use TM before conventional medicines (Thomson et al., 2014). Through their TM consumption, they have become empowered through their choices, which is exemplified in their narratives. Moreover, in most cases, they had been able to have their symptoms diagnosed, whereas conventional medicine had failed to do so (Armstrong, 2017).

Individuals, who had perceived that they could assume more control over their health, had tended to use TM to improve their health and well-being before turning to conventional medicines (Thomson et al., 2014). One principle reason for TM consumption was to reduce the possibility for illnesses to recur and to diminish the side-effects received from

conventional medicine treatments (Farooqui et al., 2012). Consequently, TM has become a personal preference or choice based on beliefs about the health benefits of TM (Thomson et al., 2014).

3.2.4 Chronic diseases

A high level of TM usage among patients with chronic diseases has been reported (Farooqui et al., 2012). Some people with chronic health problems have a tendency to use TM before conventional medicines (Thomson, et al., 2014). Moreover, cancer patients are likely to widely use TM (Akyol & Oz, 2011; Farooqui et al., 2012; Loquai et al., 2017; Micke et al., 2009), particularly females suffering from breast cancer (Micke et al., 2009). It is the intention of some cancer patients to restart TM after finishing chemotherapy or radiotherapy (Farooqui et al., 2012) for the purposes of restoring balance, boosting energy, and fostering wellness (Akyol & Oz, 2011), because they seek to strengthen their immune systems and their own forces/body (Loquai et al., 2017, p. 75).

Many studies have reported that people, suffering from chronic diseases, have returned to using TM after being dissatisfied with conventional medicines and treatments (Thomson et al., 2014). However, some research studies have argued that solely being dissatisfied with conventional medicines would not be sufficient enough to prompt an individual to use TM (Armstrong, 2017). Farooqui et al. (2012) reported that it was not because people, suffering chronic diseases, were dissatisfied with the modern healthcare system that had made them choose TM, but instead, they had perceived that using TM could enhance their chances for survival. However, based on a review of the literature, having a chronic disease is one of the factors for those people, which influences TM usage, as an option for their healthcare (Thompson & Troester, 2002).

3.2.5 Cultural influence

Natural health represents a market-driven construction, and its cultural meanings have been created and widely promoted by sharply contrasting natural health to conventional medicines (Thompson & Troester, 2002). It is well-known that 'Culture' plays a vital role in the ways that people choose to use TM (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Sumngern, 2011; Taubman, 2010; Torri, 2012; UNESCO, 2013; World

Health Organization, 2004b, 2013). Culturally speaking, choice options are elementally engrained in meanings and narratives. Therefore, when consumers are engaged in the situation of making choices, their perceptions are always constructed from within a cultural frame of reference (Thompson & Troester, 2002) and from their backgrounds and religious beliefs (Akyol & Oz, 2011). Consequently, during the decision-making process when the consumers are constructing the interpretive framing of making their choices, ‘the cultural meanings’, which are being utilized to structure the situation and choice options, are pivotal to the construction of choice goals (Thompson & Troester, 2002).

3.2.6 Social factors

In the literature, the sources of information pertaining to TM are mostly family and friends (Loquai et al., 2017). Similarly, Akyol & Oz (2011), Farooqui et al. (2012), and Lou, Grundling and Steynberg (2013) also reported that their respondents had received advice from their family or friends. Therefore, it is important not to minimize the roles that family members and friends play (Akyol & Oz, 2011).

Moreover, regarding TM usage, conventional doctors are important people (Armstrong, 2017; Akyol & Oz, 2011; Farooqui et al., 2012). Great emphasis placed by the patients on obtaining a positive response about their TM use from their physicians (Farooqui et al., 2012) and in encouraging TM usage, the physicians play an important role (Loquai et al., 2017).

Poor doctor and patient communication was found to be one of the factors that can influence the adoption of TM treatments and medicines (Farooqui et al., 2012). People are known to consume TM because there is an absence of two-way communication between patients and their practitioners within the conventional medicine setting (Armstrong, 2017). Therefore, when seeking to make informed decisions, it was found that it is beneficial to have open discussions with patients. Moreover, it is essential for health professionals to become familiar with available therapies, including local health practices, which can offer benefits to a patient’s physical and/or spiritual well-being (Farooqui et al., 2012). Consequently, TM usage, quality, and safety are areas in which healthcare professionals must have a significant body of knowledge (Akyol & Oz, 2011).

3.2.7 Media

With respect to TM, the media is a source of information (Akyol & Oz, 2011). All three studies from Elolemy and Albedah (2012), Albedah, El-Olemy, and Khalil (2012), and Awad and Al-Shaye (2014) reported that mass media had been instrumental in promoting TM usage. In particular, Elolemy & Albedah (2012) specifically indicated that for their consumer participants, TV, newspapers, and radio had been their main channels for receiving TM information; whereas, Akyol & Oz (2011) noted that TV and the press had been the TM information sources. Farooqui, et al. (2012) found that their respondents, suffering from cancer, had used newspapers, books, and electronic media to gain knowledge about their care and TM. Finally, Albedah, El-Olemy, and Khalil (2012) reported that for healthcare professionals, mass media had been their source for TM knowledge.

The growing development of new media channels in the pharmaceutical and retail industries is another driver (Zion Market Research, 2017). The Internet (Farooqui et al., 2012; Rivera, Loya & Ceballos, 2013) has created a global marketplace, allowing consumers to access herbal products from around the world, leading to increased sales (Rivera, Loya & Ceballos, 2013).

Having been identified as a common source for information, the media may choose to sensationalize the stories of users/patients without presenting balanced information (Akyol & Oz, 2011). When purchasing herbal medicines over the Internet, there are many causes for concern. No current system exists to verify the legitimacy of sites, which sells these products (Rivera, Loya & Ceballos, 2013), and more than public safety, profits are the primary concern of many companies (Rivera, Loya & Ceballos, 2013; Gunjan, et al., 2015). Even with many sites proclaiming that their products are safe, effective, standardised, and pure, such claims cannot be verified (Rivera, Loya & Ceballos, 2013). Moreover, aggressive advertising campaigns have led to increasing numbers of consumers, who are using TM without first consulting a doctor, which has resulted in problems (Suleiman, 2014). In order to improve safety standards, evidence-based information on TM must be included within the communication for the promotion of TM (Loquai et al., 2017).

3.2.8 Demographics

The personal characteristics of the individuals consisted of gender (Akyol & Oz, 2011; Micke et al., 2009), age (Akyol & Oz, 2011; Micke et al., 2009; Thomson, et al., 2014), education,

income (Akyol & Oz, 2011; Thomson et al., 2014), location (Nzuki, 2016), and health insurance related to TM usage (Akyol & Oz, 2011; Thompson & Troester, 2002).

Thomson, et al. (2014) reported that middle-aged females with higher levels of education were more likely to use TM than any other group. Despite the fact that Nzuki (2016) studied the use of TM by children under 5 years old, it was found that the educational level, occupation, monthly income, and location of residences of the children's caregivers had shown a significant relationship to their use of TM. Farooqui et al. (2012) found that because TM treatments were not covered by hospitals and health insurance, financial affordability was a significant obstacle to TM usage. Findings from Micke et al. (2009) also revealed that their respondents had reported that the monthly costs for using TM were higher than conventional medicines, whereas family size and marital status were not related to TM usage (Wassie et al., 2015). Therefore, it is important to note that demographics of the individual accordingly related to his/her use of TM.

3.3 MEDICAL INFORMATION AND THE PROBLEM OF TM IN HEALTHCARE

With respect to TM, Article 27 of the Universal Declaration of Human Rights states, *“Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.”* (UNESCO, 2013, p.1). In Asia, TM may enjoy historical acceptance and the ingredients comprising them may be advertised as ‘natural’ (Danubrata and Daga, 2013). However, the WHO has warned that the growing use of TM in both developed and developing countries has been mirrored by increases in the number of reports of adverse effects and deaths resulting from TM (Nzuki, 2016). The increasing usage of TM is problematic (Lu & Lu, 2014) due to the widespread misconception among consumers that traditional remedies are ‘natural’, and are, therefore, safe and free from adverse side-effects (Akram et al., 2015; Mahady, 1998; UNESCO, 2013; Wachtel-Galor & Benzie, 2011; World Health Organization 2004c; World Health Organization, 2013). Because some TM are known to be harmful and others may be ‘fake’ products, this perception is not necessarily correct (Wachtel-Galor & Benzie, 2011; World Health Organization, 2013). In some developed countries, they are indeed perceived as ‘natural’ and ‘risk-free’ treatments (UNESCO, 2013, pp. 3–4). For example, no precautions/warnings can be found on the labels of many American TM products (Lu & Lu, 2014). Nonetheless, in August of 2013, a UK regulator warned people not to use a number of unlicensed TCM after they had been found to contain dangerously high levels of lead, mercury, and arsenic. Also, some TCM have come

under fire from animal rights groups because their ingredients had been derived from the body parts of endangered animals, such as bear bile, crocodile penises, and deer antlers (Danubrata and Daga, 2013).

As a result, in Europe countries, TM products need marketing authorization to be placed within the Europe market in order to protect public health (European Commission, 2011). Therefore, registration for TM will be identical to a full marketing authorization. Applicants have to submit bibliographic evidence that the product is safe (Keller, 2002), for at least 30 years and that the TM has been used safely in the Europe for at least 15 of those years. Evidence must also show that the TM are intended to be used without the supervision of a medical practitioner and that they are not to be administered by injection (European Commission, 2011).

The long historical usage of TM and its many practices, including the experiences that have been passed down from generation to generation, have demonstrated the safety and efficacy of TM. In many cases, their theories and applications are quite different from those of conventional medicines (Qi, 2000, p.1). Any medical practice must be subject to safety and efficacy requirements. Therefore, like modern medicines, TM has to meet these requirements (UNESCO, 2013). Modern drugs must go through a rigorous series of laboratory tests and clinical trials before being released to the market, which means that powerful methods have developed in order to prove the effectiveness of modern medicines, to test for their safety, and to standardize their good manufacturing practices. In contrast, few scientific tests have been conducted to evaluate TM products and practices. Quality tests and production standards tend to be less rigorous or controlled, and in many cases, practitioners may not be certified or licensed (Shetty, 2010). In a 2005 survey conducted by the WHO on its member nations, it was found that 84–90 countries (around 60%) had no national policies, laws, or regulations for TM, although more than half of these countries had proposed developing them (Mahady, 2001). In addition, these were most often countries in which traditional remedies are mostly used (Shetty, 2010).

During most of the first decade of the 21st Century, the WHO worked to develop international guidelines and technical standards to help countries formulate policies and regulations to control TM (Shetty, 2010). It is possible to make an assessment of these products, however, the quality-control methods and specifications for herbal medicines (mixtures in particular)

are very complex (UNESCO, 2013). Furthermore, the legal status of herbal medicines varies widely from country to country. In many countries, there are different ways of licensing, dispensing, manufacturing, and trading in order to ensure their quality, safety, and efficacy (Mahady, 2001). However, there are very few legislative criteria, which can be employed in order to incorporate traditionally used herbal medicines into national drug policies, and the situation is even more precarious in many developing countries (Mahady, 2001). Many other countries have, or are considering establishing, similar databases to protect their local resources. These nations include China, Ghana, Malaysia, Nigeria, South Africa, Tanzania, Thailand, and several other nations in the Middle East. Beyond the existing differences between indigenous and Western knowledge systems, efforts, which are being made to take TM mainstream, also have to cope with significant differences in regulations (Shetty, 2010).

Today most reported incidents concerning use of herbal products and medicines can be attributed to poor product quality or to improper use. Moreover, national and regional pharmacopoeias, which define the quality specifications and the standards for these herbal materials and for some herbal preparations, differ in the naming conventions and in the recommended methods of processing the products (UNESCO, 2013). Regarding the risks, most are low and can be avoided with appropriate product labelling. In order to protect public health, TM has to be carefully assessed, balanced against potential benefits, and clearly labelled for consumers and health professionals. Such an approach can be enforced if herbal medicines are subjected to pharmaceutical legislation. Nonetheless, in some cases, it has been necessary to withdraw some products from the market because serious reactions had been identified (Keller, 2002).

Presently, a lack of TM information and training among both health professionals and consumers has created potentially significant health issues (Lu & Lu, 2014). Of the users/patients, who self-administer herbal remedies, some do not inform their physicians, dentists, or pharmacists about their herbal drug usage (Ang-Lee, Moss & Yuan, 2001; World Health Organization, 2004c). In Saudi Arabia, for example, only 8.3% of the participants of one study usually discussed their TM usage with their physicians (Elolemy & Albedah, 2012), while in Iran, the figure from a similar study was just 3.2% (Kashani et al., 2013). Consequently, it is incumbent on practitioners to acquire a good knowledge of the properties of different products and plants, as well as to understand their beneficial and adverse effects on individuals of different ages and sexes under various conditions (UNESCO, 2013).

In light of the aforementioned challenges, focusing on the establishment of a regulatory framework; focusing on safety, efficacy, quality, and access; and placing an emphasis on the regulation of the rational use of TM products, practices, and practitioners may be a difficult task. Furthermore, to compound the existing problems, many countries around the world do not share the same standard policies for traditional/herbal medicines (Balasubramaniam, n.d.). Despite the great number of traditionally used herbal medicines and much empirical knowledge about their usages, this has become a key issue for The WHO in both industrialized and developing nations (Mahady, 2001).

World Health Organization (2005b) reported that many member countries face major challenges in the development and implementation of the regulation of traditional, complementary/alternative, and herbal medicines. These challenges have been summarized as follows:

- *Regulatory Status:* There are great differences between Member States in the definition and categorization of herbal medicines. A single medicinal plant may be defined as a food, a functional food, a dietary supplement, or as an herbal medicine in different countries. This depends upon the regulations that have been applied to foods and medicines in each country. Therefore, it is difficult to define the concept of herbal medicines for the purposes of national drug regulation, and this also confuses patients and consumers;
- *Assessment of Safety and Efficacy:* Requirements and methods for research and evaluation of the safety and efficacy of herbal medicines are more complex than those for conventional pharmaceuticals. For example, in practice, making an analysis may actually be particularly impossible, such as in the case of mixed herbal medicines;
- *Quality Control:* The safety and efficacy of herbal medicines is closely correlated with the quality of the source materials used in their production. The quality of the source materials is, in its turn, determined by intrinsic factors (genetic) and extrinsic factors (environmental conditions, cultivation & harvest, field collection, and post-harvest/collection transport & storage). Therefore, it is very difficult to perform quality controls on the raw materials of herbal medicines. It is more difficult to determine whether all the plants or starting materials have been included;
- *Safety Monitoring:* Adverse events arising from consumption of herbal medicines may be due to any one of a number of factors. These may include the following: 1) the

use of the wrong species of plant by mistake, 2) the adulteration of herbal products with other products, 3) undeclared medicines, 4) contamination with toxic or hazardous substances, 5) over dosages, 6) the misuse of herbal medicines by either healthcare providers or consumers, and 7) the use of herbal medicines concomitantly with other medicines;

- *A Lack of Knowledge about TM & CM within National Drug Regulatory Authorities:* A general lack of knowledge about herbal medicines within national drug authorities and a lack of appropriate evaluation methods are factors that have delayed the creation of or updating of national policies, laws, and regulations for TM, contemporary/alternative medicines, and herbal medicines (World Health Organization (2005b, p. iii-iv).

In summation, the WHO's policy is to encourage countries to use TM as they see fit, particularly in the area of primary healthcare (World Health Organization, 2004b). Many governments and consumers are interested in TM, and are now beginning to consider the aspects of TM practices and practitioners to determine whether they should be integrated into health service delivery. Because TM are of proven quality, safety, and efficacy, they can contribute to the goal of ensuring that all people have access to care (World Health Organization, 2013). Various TM practices have been developed in different cultures within different regions, but without a parallel development of international standards and appropriate methods for evaluating TM (World Health Organization, 2005a).

Despite the great number of traditionally used herbal medicines and much empirical knowledge about their use, in light of the aforementioned challenges this has now become a key issue for WHO in both industrialized and developing nations (World Health Organization, 1999), because the TM sector has come under scrutiny from global health regulators (Danubrata and Daga, 2013). However, at present, most member nations of the WHO regulate herbal products and continue to develop, update, and implement new regulations as needed. These regulatory approaches are aimed at protecting consumer health by ensuring that these medicines are safe and are of high quality despite the fact that ensuring product safety and high quality may be a challenge (World Health Organization, 2013).

3.4 RESEARCH STUDIES RELATING TO TTM IN THAILAND

This section provides an overview of the understanding, awareness and beliefs about TTM in Thailand. It begins with an overview of these aspects of healthcare professionals in their roles as providers/supporters of TTM. The current understanding, awareness and beliefs of consumers is then explored, based on geographical patterns of consumption from the past through to recent times. The goal is to identify the current understanding and use of TTM among healthcare professionals and consumers in Thailand, in order to compare and contrast these for Thai citizens on both sides of the issue (providers/supporters and users). This discussion serves as a basis for the development of an argument about the role that TTM plays in promoting health from the perspectives of both sides in the context of Thai society. This understanding may inform views on how to best promote TTM in Thailand.

3.4.1 The medical understanding and beliefs about TTM by healthcare professionals

The abandonment of systematic teachings of TTM in medical schools in Thailand sparked a decline in its acceptance, especially among well-educated people (Chokevivat & Chuthaputti, 2005). Even though TTM has officially returned as part of Thailand's healthcare system, it has become structurally inferior to Western medicine, due to the lack of scientific research to back up its claims (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014; Sermisri 1989). Teaching of TTM is based on a few classical textbooks and knowledge of TTM continues to be passed on by word-of-mouth, with no centralised teaching (Chokevivat & Chuthaputti, 2005; Lawrence, 2013). Herbal remedies are considered closely-held secrets, to the extent that when certain recipes are written down, some of the most potent ingredients might be deliberately left out (Lawrence, 2013). Chokevivat and Chuthaputti (2005) concluded that while the classical TTM textbooks are considered invaluable sources of national wisdom, therapeutic methods and herbal remedies, they may contain content that is erroneous or outdated.

As a result of its limited scientific basis and teaching, TTM is widely viewed by medical doctors as folk belief or, at best, as an auxiliary treatment (Mahidol University, 2012). TTM is seen as inconsistent (Chokevivat & Chuthaputti, 2005), non-scientific, old fashioned (Aphisamacharayothin, 2014), rurally-based and involving magic, superstition and religious practices (Sermisri, 2002). This situation has arisen because all Thai medical doctors are educated about modern medicine, with completely different notions of diagnosis, aetiology and treatment from those of TTM (Brun, 2006; Mahidol University, 2012).

Studies of Thai medical doctors have found that some have biases against, or negative attitudes towards, TTM due to the lack of evidence to prove its effectiveness (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014; Vadhnapijyakul & Suttipanta, 2014). Chokevivat and Chuthaputti (2005) conclude that its lack of scientific validation was the primary weakness of TTM in the view of medical doctors.

Similarly, Vadhnapijyakul and Suttipanta (2014) found that research studies of TTM in Thailand have emphasised its weaknesses, labelling traditional treatments as ‘unreliable’ and citing the lack of research in their development. This extends to the lack of ‘scientific proof’ for TTM production, which is viewed as comparing poorly to synthesised medicines whose safety and effectiveness have been proven by scientific and clinical trials (Aphisamacharayothin, 2014; Sukhabot, 2013; Thongruang, 2014). One explanation may be that medical doctors do not receive relevant research data about TTM, particularly from the pharmaceutical companies that supply TTM to hospitals; as a result, the majority (91.7%) shared the attitude that only in ‘some cases’ could TTM be given to patients in lieu of modern drugs (Roekruangrit, Sumpaonthong & Itharat, 2010). While some physicians sometimes used TTM in alignment with the policies of their hospitals, others have not because they are not confident about the effectiveness of herbal medicines. Thus, the perception that TTM lacks the support of clinical research studies is a barrier when it comes to incorporating it into healthcare policies and practice (Thongruang, 2014).

As a result, TTM has still not been fully integrated into the healthcare system in Thailand (Aphisamacharayothin, 2014). TTM is dispensed less frequently, with current usage not reaching the minimum national target as expected (Vadhnapijyakul & Suttipanta, 2014).

3.4.2 The medical understanding and beliefs about TTM by consumers

To obtain a clearer picture of 1) TTM usage in Thailand, and 2) the understanding, awareness and beliefs about TTM by Thai consumers, two national surveys, conducted in Thailand in 2001 and 2013, have been examined. This section also outlines research studies conducted throughout the country. These serve to compare the usages of TTM at different times and identify regional variation in the understanding and beliefs about TTM by consumers in Thailand.

In 2001, the Prime Minister’s Office conducted a preliminary survey to explore the use of

TTM throughout Thailand (comprising Bangkok, Central Thailand, Northern Thailand, Northeastern Thailand and Southern Thailand). The survey also compared use of TTM between urban and rural populations in each portion of the country. The results identified that a majority of respondents were non-users of TTM. Northern Thailand reported the highest proportion of users at 18.0% and Central Thailand the lowest at 11.9% (see Table 3.1). Variation in the use of TTM between urban and rural areas was not significant (Table 3.2) (The National Statistical Office of Thailand, 2001).

Results of preliminary surveys of health and welfare (2001)

Table 3.1 *The use of TTM based on regions including Bangkok (N= 62,869)*

Population	Region				
	<u>BKK</u>	<u>Central</u>	<u>Northern</u>	<u>Northeastern</u>	<u>Southern</u>
TTM users (%)	13.1	11.9	18.0	13.7	14.9
– For curing	12.0	11.0	16.4	12.1	14.0
– For prevention	1.1	0.9	1.6	1.6	0.9
TTM non-users	86.9	88.1	82.0	86.3	85.1
Not sure	<0.1	<0.1	<0.1	<0.1	<0.1
Total (%)	100.0	100.0	100.0	100.0	100.0
Total (N)	7,750	14,225	11,303	21,179	8,412

Table 3.2 *The use of TTM based on the living areas including Bangkok (N= 62,869)*

Rate/purpose of TTM use	All Areas	
	<u>City Areas</u>	<u>Rural Areas</u>
TTM users (%)	13.2	14.6
– For curing	12.0	13.3
– For prevention	1.2	1.3
TTM non-users	86.8	85.4
Not sure	<0.1	<0.1
Total (%)	100.0	100.0
Total (N)	20,424	42,445

A national survey on individual healthcare behaviour among participants over the age of 18 was conducted by the National Office of Statistics in Thailand in 2013. Results are outlined in Tables 3.3 and 3.4.

Table 3.3 *Individual healthcare behaviours related to use and knowledge of TTM (National Bureau of Statistics, 2013)*

Results	Percentage
Did not know about TTM and had never used it	41.6
Did know about TTM but had never used it	36.5
Did know about TTM and had tried it	21.9
Had visited traditional Thai healers	4.3

Table 3.4 *Views regarding government TTM policies (National Bureau of Statistics, 2013)*

Results	Percentage
The government should support herb farming to help agricultural economics	88.8
The government has few programs to promote TTM	86.3
The government should support the use of TTM in government hospitals more than it previously has	84.8

The results in tables 3.3 and 3.4 again indicate that non-users formed a larger proportion of respondents than users, with one significant reason for non-use (41.6%) being that the respondents did not know about TTM.

Similarly, Satyapan et al. (2010) noted that one constraint on herbal medicine use among a population in Bangkok was a lack of consumer knowledge about TTM. In Chonburi Province in Eastern Thailand, Sumngern (2011) noted that the top constraint to herbal use for the elderly was an insufficient knowledge of herbal medicines. These findings are consistent with the results of the two national surveys above, where the main reason non-users had never used TTM was lack of awareness of TTM (Ganghair 2014; The National Statistical Office of Thailand, 2001).

Putiyanan and Winijkul (2008) specifically examined knowledge about side-effects of TTM among a sample group drawn from Chiang Mai, Lam Phun and Chiang Rai in Northern

Thailand and the Samut Sakorn area—including Bangkok—in Central Thailand. They reported that 42.6% of the sample believed over-consumption of TTM could not cause harm, while 43.3% believed that over-consumption did pose health risks. Sompopcharoen and Sresumatchai similarly noted that most users lacked adequate knowledge of the medication's side-effects and did not know how to use Thai herbal medicines properly—for example, they did not know which herbs could be used to treat which diseases, or what the proper dosages for treatment were (Sompopcharoen & Sresumatchai, 2015).

In contrast, Chaichompoo et al. (2012) found that knowledge about TTM had no correlation with increased use of medicinal herbs, whereas 'attitude' towards using TTM to treat illnesses had a significant positive correlation with such use. The study concluded that only the attitude of the subjects towards TTM significantly influenced their usage. This stands in sharp contrast with the conclusions of the two national surveys in 2001 and 2013, which indicated that subjects' knowledge of TTM positively influenced their level of TTM use (Ganghair, 2014; Satyapan et al., 2010; Sumngern, 2011; The National Statistical Office of Thailand, 2001).

The findings of Chaichompoo et al. (2012) are also at odds with those of Luo, Grundling and Steynberg (2013) who conducted a study on outpatients in South Africa to discover the factors that had influenced their behaviour with regard to purchasing and using traditional Chinese medicine (TCM). Their results indicated that both attitudes and knowledge of TCM influenced usage. Finally, The WHO noted that rationale for using traditional remedies depends on the individual's knowledge and his/her ability to minimise the risks and maximise the benefits of TM use (World Health Organization, 2004b).

A study by Ruenkon, Likitkeithajorn and Siththeimthong (2003) found that the participating TTM users sometimes did not know their diagnosis, but that using herbs as medicine made them feel better by offering some form of treatment; they also believed using TTM was safer, had fewer side-effects and a high efficacy for curing disease. Putiyanan and Winijkul (2008) also found that about half (55%) of their sample believed TTM could help them attain a healthy lifestyle, while Rattanapikul and Fusiri (2012) specifically noted that their respondents (who all lived in Bangkok) felt a sense of pride when purchasing TTM and wanted to share the significance of their TTM experience with their associates.

In summary, there are consistent findings—particularly from the two studies by Chaichompoo et al. (2012) and Roekruangrit, Sumpaonthong and Itharat (2010), conducted in different parts

of Thailand at different times—that user/patient attitudes were the most significant influence on the level of TTM usage.

With respect to perceived efficacy of TTM, Chungsomjatepaisarn (2013) specifically noted that there was a widespread view that modern medicine cured diseases more quickly than TTM, but that TTM has fewer side-effects. This corroborates the findings of a study in Yasothon Province in 1996, in which respondents said that TTM could cure their diseases, but it might take longer than with modern medicines (Prasansuk, 1996); however, the advantages of using herbal medicines were that the diseases could be completely cured and that TTM was safer than modern medicines. Subsequently, however, Thongruang (2008) found that subjects held positive attitudes toward herbal medicines but were uncertain about their effectiveness and quality. Similarly, some Thai users perceive using TTM as outdated (Muangsai et al., 2014; Wongyai, 2004) and inconvenient (Muangsai et al., 2014; Suntonvipart, Chantachon & Koseyayothin, 2014) and believe that only some diseases can be cured with TTM (Muangsai et al., 2014). Such perceptions may reflect a lack of awareness of the actual quality and benefits of TTM (Sukhabot, 2013).

In regard to the practice of and level of satisfaction with TTM, Roekruangrit, Sumpaonthong and Itharat (2010) reported that most of their respondents: 1) had experience in using TTM (88.0%); 2) had requested it themselves (73.2%); 3) had requested it via prescription from a medical professional (92.2%); 4) rated their satisfaction level as medium with respect to TTM's therapeutic effects (53.0%), and 5) had used it safely and without complications (57.8%). Similarly, Chaichompoo et al. (2012) found that respondents' overall practice of TTM was at a medium level, with the only high level of TTM use being for the treatment of skin diseases; it was discovered that respondents had become accustomed to applying aloe vera to burns and scalds because it was easy to find the ingredients within their communities. Thongruang (2008) noted that 56.0% of respondents had used TTM to cure their own illnesses and only 24.7% used it for preventative or health-enhancing purposes; this mirrors the findings of the national survey in 2001, which reported that Thai users employed TTM reactively (to cure illnesses) rather than proactively (to prevent illnesses) (The National Statistical Office of Thailand, 2001).

Unfortunately, Ruenkon, Likitkeithajorn and Siththeimthong (2003) found that in some rural areas, where the socio-economic situation and level of education limit knowledge of TTM (Kittisopee, Anantachoti & Tangcharoensathien, 2005), small-scale TTM formulators often

added steroids to the formulas, with the result that consumers experienced side-effects (Ruenkon, Likitkeithajorn & Siththeimthong, 2003), thus tarnishing TTM's image (Wongyai, 2004).

Recently a survey conducted in Southeast Asia in 2015 reported that the use of TTM in Thailand was just 2.6% (Peltzer & Pengpid, 2015). While this figure is significantly lower than the levels suggested by the national surveys summarised in Tables 3.1 and 3.3, it is clear that TTM use is quite low within Thailand. In order to encourage TTM usage, Chokevivat and Chuthaputti (2005) suggested firstly, that the Thai government should disseminate accurate TTM knowledge to the public and, secondly, that TTM should be integrated into public healthcare facilities to provide Thai users/patients easy access to TTM services.

3.5 FACTORS INFLUENCING TTM USAGE

This section reviews the factors related to consumer behaviour in relation to TTM. Studies of TTM usages in Thailand, including those discussed above, have identified many factors that influence consumers' decision-making processes. These factors include: 1) consumers' knowledge of and attitude towards TTM; 2) the demographics of the users; 3) marketing factors (product, place, price and promotion), and 4) social factors, including the influence of family members, medical doctors, culture and beliefs.

3.5.1 Consumers' knowledge of and attitude towards TTM

As discussed in Section 3.2, two national surveys conducted in 2001 and 2013 by the National Statistical Office of Thailand concluded that knowledge of TTM was an influence on the level of TTM usage. Similarly, Satyapan et al., (2010) and Sumngern (2011) conducted studies in Thailand showing that the subjects' knowledge of TTM had a direct relationship with consumer behaviour in relation to its use.

The findings of these four studies of TTM in Thailand bear similarities to results of the study by Luo, Grundling and Steynberg (2013) in South Africa, which demonstrated that knowledge of TCM had influenced use of traditional remedies. The World Health Organization (2004b) similarly found that individual knowledge and ability to minimise the risks and maximise the benefits of TM were key elements of users' rationale for using TM. It can be concluded that TTM knowledge is influential in forming perspectives on and behaviour toward TTM.

3.5.2 Consumer demographics

With respect to consumer demographics, Ratanapikul and Fusiri (2012) noted that age, educational level, career and average monthly income all correlated with attitudes toward and use of TTM. Sumngern (2011) also concluded the influence of a range of demographic factors including age, genetics, gender, income and social status, environment. While Chaichompoo et al. (2012) found no correlation between the variables of age, sex or educational attainment and the use of medical herbs, they did find that income level was correlated with TTM use. Thus, it can be concluded that demographic factors play a role in the level of TTM usage in Thailand (Chaichompoo et al; 2012; Ratanapikul & Fusiri, 2012; Sumngern 2011).

3.5.3 Marketing factors (product, place, price and promotion)

Based on the literature, self-care appears to be common practice among Thais, with the first step in seeking treatment to buy medicines from drugstores (Kittisopee, Anantachoti & Tangcharoensathien, 2005; Lawrence, 2013; Sermsri, 2002; Thongruang, 2008). Most consumers/patients still buy TTM from drugstores (Kittisopee, Anantachoti & Tangcharoensathien, 2005; Thongruang, 2008) or herbal shops (Chaichompoo et al., 2012), because they are the most convenient, with the second choice being hospital dispensaries (Thongruang, 2008). If their symptoms are more serious, however, they go to the hospital (Bhokanandh, 2001; Chaichompoo et al., 2012).

Thongruang (2008) conducted a study of the distribution of TTM in Bangkok in order to understand purchasing behaviours and decision-making processes related to TTM products. If purchasing patterns are not appropriate, consumers are at greater risk of purchasing herbal drugs of low quality, placing their health and safety at risk. With respect to TTM products, Thongruang found that 66.0% of subjects asked for specific herbal medicines by name. In terms of frequency, 56.3% purchased TTM only occasionally and purchased the medicine in composite or mixed forms rather than in the form of a single herb. Thongruang concluded that the subjects based their decisions to purchase TTM products on the basis of having 1) complete labels, 2) legal licensing, and 3) good instructions.

Unfortunately, Chungsomjatepaisarn (2013) found that almost half of respondents (49.5%) from the four regions of Thailand, excluding Bangkok, had difficulty finding places to buy TTM products due to the scarcity of locations that sold them. Consequently, Rattanapikul and

Fusiri concluded that more TTM should be sold in pharmacies or drugstores (Rattanapikul & Fusiri, 2012).

With respect to the relative cost of TTM and hospital care, many studies have found that TTM is cost-effective (Aphisamacharayothin, 2014; Chinnawong, 2007; Chungsomjatepaisarn, 2013; Ruenkon, Likitkeithajorn & Siththeimthong, 2003; Sumngern, 2011). In particular, Chungsomjatepaisarn (2013) specifically noted that, for the same ailments, the cost of some conventional medicines was about four times that of TTM.

In contrast, Thongruang (2014) argued that, for the same treatment, the cost per unit for some TTM can be more expensive than modern medicines. Satyapan et al. (2010) also noted that one of the constraints on herbal medicine usage in Bangkok was the high cost of TTM. Kongrerak (2013) reported that one of the weaknesses of TTM's finished forms was high production costs. Finally, Rattanapikul and Fusiri (2012) concluded that TTM were high-priced items and that, in order to make TTM competitive in the medicinal marketplace, there should be some method of controlling TTM costs relative to economic conditions.

In relation to promotion of TTM, Kittisopee, Anantachoti and Tangcharoensathien (2005) found that advertising is a key influence on the use of drugs. Drug advertising covers a spectrum of media, such as television, radio, newspapers, magazines and other printed materials. To increase patients' knowledge base about TTM, Roekruangrit, Sumpaonthong and Itharat (2010) suggested that other appropriate forms of communication and media should be provided, such as leaflets and/or radio spots in hospitals.

With respect to all marketing factors, a study by Roekruangrit, Sumpaonthong and Itharat (2010) found that, overall, respondents were moderately satisfied with the promotion, prices and distribution of TTM. Rattanapikul and Fusiri (2012) rated marketing factors as having the greatest influence on TTM usage, from highest to lowest, as: 1) promotion (in particular, communication and information about TTM); 2) availability, (i.e. places to purchase TTM); 3) the products themselves, and 4) the price.

While there is significant variation across studies in the ranking of marketing factors (product, place, price and promotion) in terms of their influence on TTM use, it can nonetheless be concluded that marketing factors have a significant impact.

3.5.4 Social factors (family members, medical doctors, culture and beliefs)

Ruenkon, Likitkeithajorn and Siththeimthong (2003) noted that there are many external factors influencing people's use of TTM. In particular, the influence of family members and communities was found to play a role, along with other factors including culture, beliefs and the environment. Rattanapikul and Fusiri (2012) likewise reported that the external factor most frequently related to motivation to use TTM was the role of the family members, with the influence of culture in second place. Similarly, Chunsomjatepaisarn (2013) and Roekruangrit, Sumpaonthong and Itharat (2010) found family was a major influence on the use of herbal medicines in Thailand, while Luo, Grundling and Steynberg (2013) concluded that many of the respondents in their South African study decided to use TCM as a result of influence from other people.

Medical doctors also play a vital role in encouraging use of TTM (Aphisamacharayothin, 2014; Prasansuk, 1996; Roekruangrit, Sumpaonthong & Itharat 2010; Vadhnapijyakul & Suttipanta, 2014). The most popular sources of information for consumers in making decisions to purchase TTM are conventional medical doctors, followed by pharmacists and nurses (Chungsomjatepaisarn, 2013; Thongruang, 2008). Thus, third parties, including family members and medical professionals, play vital roles in encouraging TTM usage.

In summary, Thai consumers have mostly positive attitudes towards TTM (Chaichompoo et al, 2012; Putiyanan & Winijkul, 2008; Rattanapikul & Fusiri, 2012; Roekruangrit, Sumpaonthong, & Itharat, 2010; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003; Thongruang, 2008). However, the majority of Thai TTM users are uncertain of TTM's effectiveness and quality (Satyapan et al., 2010; Sukhabot, 2013; Sumngern, 2011; Thongruang, 2008), and some may believe that TTM is outdated (Muangsai et al., 2014; Wongyai, 2004) and inconvenient (Muangsai et al., 2014; Suntonvipart, Chantachon & Koseyayothin, 2014). While Thai users believe that TTM has fewer side-effects than modern medicine, they also believe that modern medicines can cure diseases more quickly than TTM (Chungsomjatepaisarn, 2013; Prasansuk, 1996) and that only some diseases can be cured with TTM (Muangsai, et al., 2014).

The literature both from Thailand and from around the world supports the idea that provision of adequate knowledge of traditional remedies (Ganghair, 2014; Luo, Grundling & Steynberg, 2013; Satyapan et al., 2010; Sumngern, 2011; The National Statistical Office of Thailand,

2001) would result in more favourable attitudes towards TM (Omar & Putit, 2012). Furthermore, if people believe that TM has benefits for their physical health, they would be more likely to use it in the future (O'Connor & White, 2009; Bharucha, Morling & Niesenbaum, 2003).

3.6 THE MAJOR BARRIERS INHIBITING USE OF TTM IN THAILAND

As indicated in tables 3.1 and 3.3, the usage of TTM is lower than expected. The following section reviews some of the barriers to TTM consumption, identified through various studies conducted in Thailand. This discussion adds to the previously identified barrier of attitudes to TTM among some medical doctors and consumers, discussed in sections 3.2.1 and 3.2.2. The discussion below examines barriers to integrating TTM into the healthcare practices of the Thai people presented by, first, the Thai healthcare system and, second, consumers' problems with TTM. Finally, a summary of major barriers from both sides is presented.

3.6.1 Major barriers: Health industry

According to Vadhnapijyakul and Suttipanta (2014), 97.4% of prescribed TTM is prescribed by conventional doctors in hospitals. This is consistent with the finding of Roekruangrit, Sumpaonthong and Itharat (2010) that 92.2% of users had requested TTM via prescriptions from modern medical practitioners. Thus, medical doctors play a vital role in encouraging consumer usage (Aphisamacharayothin, 2014; Roekruangrit, Sumpaonthong & Itharat 2010; Vadhnapijyakul & Suttipanta, 2014); however, many doctors currently lack TTM knowledge (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014; Vadhnapijyakul & Suttipanta, 2014) and have biases against TTM (Aphisamacharayothin, 2014; Jehso, 2015; Mahidol University, 2012; Thongruang, 2014; Vadhnapijyakul, 2011). This attitude is explained by the significant lack of clinical evidence proving the effectiveness of TTM (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014).

These two factors—lack of clinical support (and lack of awareness of) and anti-TTM bias—have left medical doctors less confident about using TTM (Satyapan et al., 2010; Sermsri, 2002; Thongruang, 2014). As a result, they prescribe TTM only in limited cases (Roekruangrit, Sumpaonthong & Itharat, 2010) and seldom refer patients to TTM doctors for further treatment (Vadhnapijyakul & Suttipanta, 2014). Consequently, TTM is dispensed less frequently (Sermsri, 2002), with the consequence that Thailand was not able to meet its

national target usage (Vadhnapijyakul & Suttipanta, 2014).

3.6.2 Major barriers: Consumers and marketplace

With respect to TTM users, Satyapan et al. (2010) noted the following constraints on herbal medicine use among a consumer sample in Bangkok: 1) high cost; 2) low quality or poorly prepared TTM; 3) lack of adequate scientific research studies; 4) among physicians, a low level of confidence in using TTM in their treatments; and 5) lack of consumer knowledge about TTM. Sumngern (2011) studied the factors influencing the use of TTM by elderly Thai citizens in Chonburi Province in Eastern Thailand, finding the top five constraints to be: 1) an insufficient knowledge of herbal medicine; 2) delayed effects after consumption; 3) lack of official quality control; 4) unqualified and uncertified herbalists, salespersons, and/or products; and 5) the fact that some herbal medicines may cause health problems.

Putiyanan and Winijkul (2008) also reported that most of their sample group—drawn from Chiang Mai, Lam Phun and Chiang Rai in Northern Thailand and Samut Sakorn (including Bangkok) in Central Thailand—thought that for an herb to qualify as TTM, development and improvement should be required. TTM needed to be certified like modern medications (78.6%), but improvements including packaging (18.4%), taste (11.0%) and marketing (10.1%) also needed to be considered. Similarly, Chungsomjatepaisarn (2013) found, in a study of 1,366 families across four regions of Thailand, that 51.4% of respondents reported that TTM packaging looked cheap, which they believed reflected poorly on the reliability of the TTM products themselves.

In the south of Thailand, Sukhabot (2013) also reported marketing problems for herbal medicines, but specifically noted the negative marketing impact of low-quality TTM products with counterfeit ingredients. The quality of many finished TTM products was found to be low and did not always meet international standards.

As previously mentioned, Thai users typically buy TTM products from drugstores (Kittisopee, Anantachoti & Tangcharoensathien, 2005; Lawrence, 2013; Sermsri, 2002; Thongruang, 2008) or herbal shops (Chaichompoo et al., 2012). However, the lack of TTM outlets is a major obstacle to TTM use; Chungsomjatepaisarn (2013) reported that almost half of study participants (49.5%) had stated that it was difficult to find places to buy TTM products, while Rattanapikul and Fusiri (2012) also found that TTM had limited availability in the marketplace. This is consistent with the finding by Chungsomjatepaisarn (2013) that

consumers (59.7%) want more TTM products that are ready-to-use.

The costs of TTM can also be considered an obstacle to increasing the use of TTM, with the prices of some TTM products found to be too high for the individual (Kongrerak, 2013; Rattanapikul & Fusiri, 2012; Satyapan et al., 2010; Thongruang, 2014).

Promotion of TTM could help raise TTM awareness among both Thai medical doctors and Thai users. However, with regard to TTM promotion by the Thai government, there are few programs in operation (Ganghair, 2014). In contrast, the private sector has actively promoted TTM products, particularly through radio advertising, but as much as half of this advertising has been found to contain misleading content and to exaggerate claims of TTM's results (Chandrawongse, 2011; Kittisopee, Anantachoti & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012). Furthermore, some advertisements had been broadcast without the permission of the government (Lomas & Chanthapasa, 2012), thus tarnishing TTM's image (Wongyai, 2004).

With respect to medical doctors, it has been noted that they are the greatest source of information for TTM (Chungsomjatepaisarn, 2013; Thongruang, 2008), including the provision of TTM services to users/patients (Aphisamacharayothin, 2014; Roekruangrit, Sumpaonthong & Itharat 2010; Vadhnapijyakul & Suttipanta, 2014). However, the lack of confidence surrounding the use of TTM has resulted in: 1) TTM being dispensed less frequently to users/patients (Sermsri, 2002), and 2) fewer referrals of patients to TTM doctors to receive further treatment (Vadhnapijyakul & Suttipanta, 2014). Therefore, it can be concluded that the medical doctors themselves have become one of the major barriers to increased TTM usage in Thailand (Thongruang, 2014).

Based on the findings from the studies mentioned above, the major barriers to TTM usage by the consumers can be summarised as follows:

1. *Insufficient knowledge of how to use TTM* (Ganghair, 2014; Putiyanan & Winijkul, 2008; Satyapan et al. 2010; Sompopcharoen & Sresumatchai, 2015; Sumngern, 2011; The National Statistical Office of Thailand, 2001).
2. *Biases against TTM due to the following beliefs:* (a) it is outdated (Muangsai et al., 2014; Wongyai, 2004); (b) it is inconvenient (Muangsai et al., 2014; Suntonvipart, Chantachon & Koseyayothin, 2014); (c) it can only cure some diseases (Muangsai et

al., 2014); and (d) it offers a slower rate of recovery (Chungsomjatepaisarn, 2013; Prasansuk, 1996).

3. *Marketing problems with respect to TTM products* (Putiyanan & Winijkul, 2008; Sukhabot, 2013).
4. *Medical doctors having significant, but conflicting roles*: i.e. they can encourage TTM usage as well as create major obstacles (Satyapan et al., 2010; Thongruang, 2014).

3.6.3 Summary of the major barriers

The main barriers to use of TTM—caused by conventional doctors (section 3.4.1), consumers or other parties summarised in section 3.4.2—consist of the following:

1. *Lack of a body of knowledge about using TTM among both medical doctors and consumers.*

The many research studies on TTM in Thailand reveal that a lack of knowledge of TTM usage among medical doctors, whose role is to provide TTM products and services to their patients, is the main barrier to using TTM (Aphisamacharayothin, 2014; Brun, 2006; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Mahidol University, 2012; Roekruangrit, Sumpaonthong & Itharat, 2010; Thongruang, 2014; Vadhnapijyakul & Suttipanta, 2014).

Thai consumers are in the same situation, in that they lack sufficient knowledge to use TTM properly, which causes them to avoid, or be cautious in deciding to use it (Ganghair, 2014; Putiyanan & Winijkul, 2008; Satyapan et al., 2010; Sompopcharoen & Sresumatchai, 2015; Sumngern, 2011; The National Statistical Office of Thailand, 2001).

2. *Negative attitudes toward and biases against TTM products among both medical doctors and consumers.*

Many research studies in Thailand have found that one major obstacle to providing TTM to users/patients has been the negative attitudes of medical doctors towards TTM (Aphisamacharayothin, 2014; Jehso, 2015; Mahidol University, 2012; Thongruang, 2014; Vadhnapijyakul, 2011). This due to the fact that TTM has a significant lack of clinical evidence for its effectiveness (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014; Vadhnapijyakul & Suttipanta, 2014).

In addition, many researchers have also reported consumers' negative attitudes towards, and misperceptions of TTM, which lead them to decide not to use TTM (Chungsomjatepaisarn, 2013; Muangsai et al., 2014; Prasansuk, 1996; Thongruang, 2008; Wongyai, 2004).

3. The Four Ps of Marketing—Product, Price, Place, Promotion.

There is a lack of trust in TTM products (Satyapan et al., 2010; Sumngern, 2011). This arises in part because the number of research studies is inadequate to support TTM's efficacy (Satyapan et al., 2010), with a lack of clinical research studies in particular (Aphisamacharayothin, 2014; Sukhabot, 2013; Thongruang, 2014). Furthermore, quality control measures for TTM are seen to be poor (Sumngern, 2011), and often the packaging of TTM looks cheap (Chungsomjatepaisarn, 2013; Putiyanan & Winijkul, 2008). In regard to price, in both the marketplace and public hospitals there are cost barriers to TTM usage, with some found to be too expensive to be covered by the individual or under hospital payments (Kongrerak, 2013; Rattanapikul & Fusiri, 2012; Satyapan et al., 2010; Thongruang, 2014). Additionally, it is difficult to find places to purchase TTM (Chungsomjatepaisarn, 2013; Putiyanan & Winijkul, 2008). Finally, there seems to be limited promotion, particularly from the government (Ganghair, 2014), while promotion by the private sector has been associated with misleading content and exaggerated claims (Chandrawongse, 2011; Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012). In addition, many sales people were found to be unqualified and uncertified (Sumngern, 2011).

This related to a statement by Dr. Surapote Wongyai, Dean of the Faculty of Oriental Medicine at Rangsit University in Thailand, who has said that misunderstandings and ignorance about TTM have tainted its image. 'People think that TTM is outdated, so we need to use high technology to develop, evaluate and assess the medicines. Repackaging them could also help gain acceptance' (Wongyai, 2004, p. 2).

4. The Fifth P—The Practitioners.

Conventional doctors have potentially the most significant role to play in encouraging TTM usage (Aphisamacharayothin, 2014; Roekruangrit, Sumpaonthong & Itharat 2010; Vadhnapijyakul & Suttipanta, 2014). However, currently conventional doctors demonstrate: 1) a significant lack of awareness about the body of TTM knowledge; 2) lack of skills with respect to carrying out TTM treatments, and 3) a negative attitude towards and understanding

of TTM products. Thus, practitioners have become the biggest obstacle to the integration of TTM into healthcare in Thailand (Thongruang, 2014).

Some of the factors noted above have caused TTM's image to become tarnished (Wongyai, 2004). As a result, many users and potential users may be unaware of how high the quality of much TTM actually is (Sukhabot, 2013), which decreases sales and reduces use (Sermsri, 2002). In particular, Thai users often compare TTM with modern medicines or with TM crafted in other countries, such as India and China (The Senate, Kingdom of Thailand, 2011). To counter this, more publicity about TTM is required. For instance, patients who have used TTM successfully should be encouraged to share their positive experience with their associates. Doing so may lead to TTM being used with greater frequency in hospitals and more being sold in the marketplace. It is necessary to change the decision-making processes of the users/patients by increasing their knowledge, promoting the use of TTM in their communities and improving attitudes towards TTM in all aspects: product design, efficacy and public knowledge (Roekruangrit, Sumpaonthong & Itharat, 2010). Therefore, it is imperative to craft a new image of reliability for TTM in Thailand.

CONCLUSION

Globally, there is an increased awareness of health, including 'back-to-nature' and 'health consciousness' trends that have allowed herbal remedies to become more widely accepted as a means of better caring for health and for promoting healthy lifestyles (Chokevivat & Chuthaputti, 2005). However, the increased use of therapeutic herbs can be problematic (Lu & Lu, 2014), due to a widespread misconception that 'natural' always means 'safe' and that remedies with natural origins are harmless and carry no risk (Akram et al., 2015; Mahady, 1998; Traditional Medicine, 2011; UNESCO, 2013; Wachtel-Galor & Benzie, 2011; World Health Organization, 2004c, 2013). Consequently, a lack of information about TM and a general lack of training for both health professionals and consumers are significant health issues (Lu & Lu, 2014).

Like other countries, Thailand has its own forms of traditional treatments and medicines, which are considered its 'National Wisdom for Healthcare', and has policies to assist in integrating TTM into the healthcare system and fostering its use for health promotion (Chokevivat & Chuthaputti, 2005). However, it has been noted that there is a substantial lack of evidence to prove TTM's quality and efficacy (Aphisamacharayothin, 2014; Chokevivat &

Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014). As a result, consumers and medical doctors alike lack trust and confidence in TTM products (Sermsri, 2002; Thongruang, 2014), which has led to TTM being used less frequently (Sermsri, 2002).

As a result, while the Thai government has tended to promote TTM as ‘Ancient and Local Wisdom with a Long History of Usage’ (Chokevivat & Chuthaputti, 2005, p.7), and to implement plans to improve the knowledge of TTM through research and development (World Health Organization, 2009), the private sector touts TTM’s reputation as a ‘miracle drug’, in such a manner that half of all advertisements contain false and/or exaggerated descriptions (Kittisopee, Anantachoti & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012). As a result, TTM’s image has been tarnished (Wongyai, 2004).

With the ever-growing popularity of herbal medicines, the goal should be to find more accurate and reproducible methods of identifying and preparing the herbs in order to certify the quality, safety, and consistency of TTM products. In regard to TTM’s market values, potential toxicities, and an increasing consumer demand, regulations regarding the production and marketing of herbal supplements and medicines need to be stringently examined (Wachtel-Galor & Benzie, 2011, p.4).

In accordance with ‘The Herbal Age is about to Come’ (Gunjan et al., 2015, p. 151), in Thailand, it is necessary to craft a new image of reliability for TTM (The Senate, Kingdom of Thailand, 2011). Educational efforts directed at both healthcare providers and consumers should be included to inform both groups about the benefits, as well as dangers, of herbs (Rivera, Loya & Ceballos, 2013) in order to promote the use of TTM to the Thai people.

The following chapter outlines research design and delves into the process of conducting the research and various methods utilised to develop the theoretical basis of the study. Finally, the chapter will set forth the aims of the research in order to develop the best communication strategies to reach Thai citizens and promote the use of TTM in Thailand.

CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY

This chapter focuses on research methodology and methods, including the theoretical principles and conceptual framework used in this study. It articulates the variety of research activities undertaken, including the sampling procedures and tools used to achieve the planned objectives of the study. The methodology and specific methods have been selected in order to address the following research questions.

4.1 RESEARCH QUESTIONS

The central research question of this study is ‘What is the role and meaning of TTM for Thai people in their lives?’ Under this question, there are three major sub-queries:

- 1. How do Thai people view TTM as it relates to their consumption?*
- 2. What is the current understanding of TTM by Thai consumers?*
- 3. What is the current awareness of TTM by Thai medical doctors?*

4.2 CLAIMS

In 2013, the National Statistical Office of Thailand reported a low level of TTM awareness and usage among Thai citizens (Ganghair, 2014). Consequently, the knowledge and beliefs of Thai people in relation to TTM need to be explored within a societal framework, in which social relationships, culture, lifestyles and healthcare in Thailand are all interrelated. Understanding this framework allows us to better comprehend the factors influencing the understanding of TTM among Thai citizens and, thus, suggest more effective forms of communication and promotion of TTM by the government to encourage greater usage in Thailand.

4.3 THE PHILOSOPHICAL DIMENSIONS OF QUALITATIVE RESEARCH

The tradition of qualitative methodology is grounded in the social sciences, where it is used to study human phenomena (Streubert & Carpenter, 2011, p. 3). This is particularly true in the area of healthcare (Al-Busaidi, 2008), medicine and related research (Kuper, et al., 2008, p. 4), and their social and cultural dimensions (Al-Busaidi, 2008). Quantitative research methods

and statistical procedures are not sufficient to fully describe the human values, cultures and relationships that have a bearing on healthcare practices (Streubert & Carpenter, 2011).

Qualitative research, on the other hand, is focused on answering the questions, ‘Why?’ and ‘How?’ (Kuper et al., 2008, p. 2), and is most appropriately carried out when meaning, rather than frequencies, are sought (Hulderson, 1994, p. 7). Thus, research is enriched by incorporating qualitative methodology into health research (Al-Busaidi, 2008); the generation of rich data, the exploration of real life behaviours, and the scope for research participants to speak for themselves (Kuper et al., 2008), allows the meaning of a phenomenon under studying to be sought and described (Al-Busaidi, 2008).

4.3.1 Justification for the research design of this study

The aims of this research study are to understand the reality of TTM for Thai people and support better communication for promoting TTM in Thailand. It is, therefore, necessary to explore the knowledge of and attitudes towards TTM among Thai people, including how they form their beliefs about TTM, in order to understand the factors that could promote changes in attitudes. Because qualitative research aims to aid in understanding natural phenomena by emphasising the meanings, experiences and views of the participants (Al-Busaidi, 2008), it is well suited to addressing these questions (Miles, Huberman & Saldana, 2014). Consequently, qualitative methods were chosen for this health-related research as being likely to produce deeper insights into the perceptions and barriers that impede changes in the healthcare practices of Thais (Al-Busaidi, 2008).

The benefits of using qualitative methodology include: 1) the ability to explore health problems or issues about which there is limited quantitative data in regard to TTM; 2) the ability to identify local perceptions about health, ongoing problems in interventions, appropriate solutions to the problems and relevant intervention strategies for target populations within the social context of Thailand; 3) the ability to investigate the feasibility, acceptability and appropriateness of potential new health programs; and 4) the ability to develop appropriate information, education and communication activities and materials with respect to TTM (Hulderson, 1994, p. 8).

4.3.2 Quality in qualitative approaches

In the field of health, qualitative research is often criticised as unscientific and is misunderstood in medical circles (Mays & Pope, 2007). The most commonly heard criticisms are as follows. Firstly, a significant disadvantage of qualitative approaches is that their findings cannot be extended to wider populations (Atieno, 2009), instead tending to generate large amounts of detailed information about a small number of settings. Such approaches have, therefore, been criticised for the lack of generalisability of their findings (Mays & Pope, 2007) compared to quantitative analyses (Atieno, 2009). Secondly, qualitative research, improperly applied, can result in findings that are little more than an assemblage of anecdotal and personal impressions strongly subject to researcher biases. Thirdly, qualitative research lacks reproducibility, because the research is so personal to the researcher that there is no guarantee a different researcher would not come to radically different conclusions (Mays & Pope, 2007).

Daymon and Holloway note that reliability and validity are important aspects of quality in any form of research (Daymon & Holloway, 2011). While these aspects are less controversial in the context of quantitative research, there is debate over the place of reliability and validity in the qualitative research paradigm (Golafshani, 2003, p. 597).

Specific to qualitative paradigm, Golafshani (2003, p. 604) notes that reliability and validity are conceptualised as equating to trustworthiness, rigour and quality. Leung (2015, p. 324) further notes that quality for qualitative research can contribute as significantly as quantitative research in terms of 1) validity, 2) reliability, and 3) generalisability, in particular regarding psycho-social aspects of patient-care, health services provision, policy setting, and health administrations. The point, argued by some qualitative researchers, is that validity is not a relevant aspect of qualitative research. Yet, they recognise that there is the need for some degree of quality checks or measurements for their research (Golafshani, 2003). Leung (2015) notes that validity in the context of qualitative research can refer to the appropriateness of the tools, processes and data. The choice of methodology: must be appropriate to the research question and desired outcome; must enable detection of findings/phenomena in the appropriate context, with due regard to cultural and contextual variables; the research design must be appropriate for the methodology; the sampling and data analysis must be appropriate; and, finally, the results and conclusions must be valid for the sample and context.

Golafshani (2003, p. 601) notes that reliability is the underlying concept in all kinds of research. However, Leung reports that the definition of reliability is challenging and epistemologically counter-intuitive. Thus, the essence of reliability for qualitative research lies in consistency (Leung, 2015, p. 326).

According to Leung, 'generalisability' is usually not an expected attribute of qualitative research findings. However, there is a growing trend of knowledge synthesis from qualitative research via meta-synthesis, meta-narrative or meta-ethnography, wherein evaluation of generalisability becomes pertinent. A pragmatic approach to assessing generalisability for qualitative studies is to adopt the same criteria as for validity: that is, use of systematic sampling, triangulation and constant comparison, proper audit and documentation, and multi-dimensional theory (Leung, 2015, p. 326). Therefore, the quality of research findings is related to the validity or trustworthiness of the research methods (Golafshani, 2003, p. 603).

Triangulation is a common strategy to improve the validity, reliability and generalisability of qualitative research (Bashir, Tanveer, and Azeem, 2008), by reducing errors linked to a particular method through the combination of different kinds of data or data collection methods (Golafshani, 2003; Hulderson, 1994). Triangulation may also include data analysis within a single study (Golafshani, 2003, p. 604). In the current study, two types of triangulation methods were utilised to conduct research, as well as to validate the same set of data and to verify the results.

1) Methodological Triangulation

In this study, multiple data collection methods from both focus groups and in-depth interviews were used to study a single problem with respect to TTM. These methods were utilised to reinforce and complement the data in order to cross-check both findings in the study (Macome, 2002).

2) Data Triangulation

'Person triangulation' also implies that the data has originated from multiple sources (Khanal, 2012). In the focus groups, the data was collected from different demographics and from a wide range of age groups of Thai citizens. All the collected data assisted in validating the findings by exploring different points of view about the subject under investigation (Hussein, 2009). With respect to in-depth interviews, data was collected from multiple categories of

individuals across five different roles (Promoter, Healer, Controller, Vendor and Researcher) and five careers (Practitioner, Nurse, Pharmacist, Lecturer and Business owner) involved with TTM in the governmental and private sectors.

The different data sources enabled triangulation of data. They also allowed review of a broader range of external and internal contexts affecting the usage of TTM products, thereby correcting for individual bias (Thongruang, 2014). It is noted that the interview questions asked of the participants have no commercial, in-confidence or sensitive data; the key assumptions of this study were accurately translated from English to Thai; and the data analysis used NVivo software, and included the ‘manual’ method as a complementary method, to improve the reliability and validity of the research.

Consequently, the appropriateness and usefulness of a qualitative approach, together with triangulation of data sources and data-collection procedures, reduce possible bias in this study and impart greater validity and reliability. Thus, this study assumes that the data from all participants is valid, reliable and generalisable.

4.4 CONCEPTUAL FRAMEWORK

This section focuses on discussing the KAP (Knowledge, Attitudes, Practices) framework as the conceptual framework for this study. It begins with the history of the KAP framework, including its applications, followed by its role in the arena of healthcare. Finally, the conceptual framework of the KAP methods, including the justification for its use in this study, is presented.

4.4.1 History of KAP research and its applications

KAP surveys were first developed in the 1950s in the field of family planning and population studies and by the 1960s were extensively used in a wide range of countries (Launiala, 2009; Rav-Marathe, Wan & Marathe, 2016). The aim of any national KAP study is to develop reliable data that can be used to understand human behaviours and practices to inform national program implementation (Ministry of Health, Rwanda & UNICEF Rwanda, 2014). The data from the KAP framework is frequently used in planning activities aimed at changing behaviours, based on the (erroneous) assumption that there is a direct relationship between knowledge and behaviours (Launiala, 2009). KAP frameworks have also been used as tools to evaluate changes in human behaviour in specific interventions by national governments, non-

governmental groups, United Nations agencies and the World Bank (Haloi, Ingle & Kaur, 2014, p. 99).

A KAP study evaluates the knowledge, attitudes and practices of a community (Haloi, Ingle & Kaur, 2014, p. 99; Kaliyaperumal, 2004, p. 1), in order to investigate human behaviours related to a certain topic and identify what people know (knowledge), how they feel (attitudes), and how they behave (practices) in relation to that topic (Haloi, Ingle & Kaur, 2014; Kaliyaperumal, 2004; Vandamme, 2009). Such a study serves as an educational diagnosis tool for a community (Haloi, Ingle & Kaur, 2014, p. 99; Kaliyaperumal, 2004, p. 1). Gumucio explains that ‘K’ stands for Knowledge, which is a set of understandings that may be (but not necessarily) based on science. It can also represent one’s capacity for imagining and way of perceiving. ‘A’ stands for Attitude and represents a position one takes, a way of being, or leanings and tendencies. Lastly, ‘P’ stands for Practices, or behaviours that represent the observable actions of an individual in response to a stimulus (Gumucio, 2011, p. 5).

It has been found that KAP studies are able to expand their frameworks into other research frameworks. For instance, by the 1950s KAP studies had provided an important boost to the globalisation of the ‘Diffusion of Innovation’ (DoI) field (Rogers, 1983, p. 69). By that time, innovation researchers had begun to use the DoI framework to apply the collective knowledge of natural diffusion in testing process interventions, in order to influence the spread of innovation (Dearing, 2009, p. 1), and to address how new ideas, products and social practices could be dispersed in a community (World Health Organization, 2012, p. 34).

Haloi, Ingle and Kaur (2014) noted that KAP surveys can be used to study the topics related to the five stages of DoI at different times. According to the DoI process, an innovation needs to be dispersed among the community to create awareness (knowledge), positive attitude (attitude), and behaviour (practice), in order to promote adoption of the innovation.

Mulvey et al. (2002) and Rogers (1983) also noted that the DoI model mirrors the KAP framework in assuming that when people have awareness (K) of the innovation, they will eventually construct a positive attitude (A) toward it, finally leading to the behaviour (P) of adopting it. Consequently, many DoI studies are often referred to as KAP frameworks, particularly where used for family planning communication campaigns, innovations and programs, which were being evaluated in many developing nations in order to cope with population problems (Rogers, 1983, p. 69).

The KAP model is thought of as a ‘learning hierarchy’ (Haloi, Ingle & Kaur 2014, p.100), and researchers assume that its three key pillars (knowledge, attitude and practices) are related (Rav-Marathe, Wan & Marathe, 2016, p.4). However, while the K-A-P sequence often occurs, it has also been found that practices may be adopted prior to knowledge of, or a positive attitude toward, new ideas or products (Haloi, Ingle & Kaur 2014). Conversely, having knowledge does not automatically mean a particular practice will be followed (Gumucio, 2011). Consequently, KAP researchers have argued that different KAP sequences are possible (Haloi, Ingle & Kaur 2014). It has also been found that there is often a low level of correlation—and sometimes no correlation—between attitude and practices in many KAP studies (Gumucio, 2011, p. 5). This phenomenon, known as the Knowledge-Attitude-Practice Gap (KAP Gap) occurs where there is no evident correlation between knowledge of, and/or positive attitudes towards, new ideas or products and the adoption in practice of those ideas or products (Rogers, 2003).

Nonetheless, KAP surveys retain their place for a number of reasons. They are easy to design and conduct (Haloi, Ingle & Kaur, 2014; Raina, 2013), are interpretable and measurable (Raina, 2013, p. 1), and concise results can apply to a wider population (Haloi, Ingle & Kaur, 2014). They are frequently more cost-effective and resource-conserving than other social research methods. They can be uniquely designed for a specific issue, and, finally, they are a useful tool to evaluate changes in human behavior (Haloi, Ingle and Kaur, 2014).

4.4.2 KAP in healthcare research and its applications

KAP studies have been used in public health for at least the past four decades (Haloi, Ingle & Kaur, 2014, p. 99). Consequently, they have become established among the methodologies used to investigate health behaviours and continue to be a widely used tool for studying human behaviour (Launiala, 2009; Rav-Marathe, Wan & Marathe, 2016), to gain information when people are affected by a health problem or disease (Rav-Marathe, Wan & Marathe, 2016, p. 4). KAP surveys show how people feel towards a disease by exploring answers to these questions: ‘Are they scared of getting infected?’; ‘Are they willing to protect themselves against it?’, and ‘Are they aware of the dangers of the disease?’ These practical questions clarify how people protect themselves from disease and whether or not they engage in risky behaviours (Vandamme, 2009, p. 2).

In healthcare, ‘K’ in KAP represents the people’s understanding (Kaliyaperumal, 2004) of the health problem or disease and the cognitive processes through which knowledge is acquired. It is a process of understanding, as distinguished from the experience of a feeling. This knowledge can be gained from both learning and experience (Rav-Marathe, Wan, and Marathe, 2016, p. 4).

Secondly, ‘A’ represents the attitudes people have towards the health problem or disease (Rav-Marathe, Wan & Marathe, 2016, p. 4), including any preconceived ideas that they may hold about it (Kaliyaperumal, 2004, p. 7). This includes beliefs, which could be true or false, about the object and the attitudes they project toward it. Thus, knowledge and attitude can overlap (Rav-Marathe, Wan & Marathe, 2016, p. 5).

Lastly, ‘P’ represents the practices of people, or how they demonstrate their knowledge (Kaliyaperumal, 2004; Rav-Marathe, Wan & Marathe, 2016) and attitudes through their actions (Kaliyaperumal, 2004, p. 7). According to Rav-Marathe, Wan and Marathe (2016), practice in healthcare can include preventive behaviours to protect against the health problem or disease. Removing misconceptions about an individual’s health issue can cause a change in their attitude, which can translate into changed behaviours.

The major advantages of KAP studies in healthcare research are summarised below.

1. KAP questions stimulate dialogue around the topic and encourage spontaneous responses from the members of a group, which assists in: 1) identifying their points of view; 2) observing the ways in which individuals interact; 3) identifying the ideas involved; and 4) clarifying the meanings or causes that attributed to practices. Thus, KAP studies are able to assess the level of knowledge, prevailing attitudes, and current practices in a program’s intervention and determine the important role activities play in health education (Gumucio, 2011).
2. Data from KAP studies are an important resource for promoting health policies (Green, 2001; Tamir et al., 2001) because they can focus on specific themes in order to identify what is known about various health subjects and what needs to be done (Gumucio, 2011), in fields such as family planning (Haloi, Ingle & Kaur, 2014, Launiala, 2009; Rav-Marathe, Wan & Marathe, 2016), water supply and sanitation, education, and many other programs related to health issues (Haloi, Ingle & Kaur, 2014).
3. KAP models include a component for communicating behavioural changes and/or developing health information, education and related activities (Gumucio, 2011). Thus, the

implementation of health promotion and communication campaigns can use information from the KAP study to increase the rate of behavioural change, by changing knowledge and attitudes and directly encouraging people to adopt healthy behaviours, irrespective of the behaviour change sequence (Haloi, Ingle & Kaur, 2014, p.100).

As previously mentioned, KAP studies assume that knowledge, attitudes and practices are related (Rav-Marathe, Wan & Marathe, 2016, p.4). However, Gumucio (2011) argues that having knowledge does not automatically mean that a related behaviour will occur. Similarly, Haloi, Ingle and Kaur (2014, p. 100) note that the sequences of KAP can differ; people may have knowledge of, and a positive attitude towards, a health behaviour or disease without this necessarily meaning they will construct their practice in order to protect themselves. Moreover, there are some situations, known as P-A-K sequences, in which a person's practice/behaviour has been constructed with a negative attitude towards, and insufficient knowledge of, the disease and/or health problem. For instance, Haloi, Ingle and Kaur explain that some people may use condoms to protect themselves from pregnancy or sexually transmitted diseases (practice), some may not want to use a condom (low positive attitude), and some may have insufficient knowledge about the condom's effectiveness (knowledge), potentially resulting in behavioural changes to prevent practice.

The P-A-K sequence is also exhibited among medical doctors in their practice related to TM (Ayurvedic medicines) in India. Gawde, Shetty and Pawar (2013) report that doctors demonstrated a lack of knowledge and negative attitudes towards Ayurvedic medicine. However, while they did not want to refer their patients to Ayurvedic doctors, they were willing to make their own Ayurvedic medicine prescriptions to their patients.

Awareness of new behaviours can occur at different times (Haloi, Ingle & Kaur, 2014, p. 99). A KAP study can be specially designed to collect information on a certain topic related to human health, in order to investigate behaviours and to identify the knowledge and attitudes of the relevant people (Haloi, Ingle & Kaur, 2014; Kaliyaperumal, 2004; Vandamme, 2009). This includes the study's ability to predict the outcome of the practice (Wan, 2014; Wan et al., 2017). According to Wan (2014), educational interventions can improve knowledge (K) and attitude (A), which can enhance self-care practices (P). Consequently, improved practice (P) can lead to improved outcomes (O). Thus, Wan proposed the Knowledge-Attitude-Practice-Outcome framework (KAP-O model of behavioural change). In the KAP-O framework, Wan concluded that appropriately collected data from KAP studies can produce

useful information and evidence-based knowledge, which can promote the outcomes of health services and their quality. Based on this framework, measurable patient care outcomes and their benchmarks should be used to evaluate the performance of a health system.

In order to specifically study diabetes, recently Wan et al. (2017) proposed a behavioural system framework, based on the KAP model, which can guide the care management of patients. It is called the KMAP-O framework. This adds motivation (M) to patients' knowledge (K), attitude (A), and practices (P) as predictor variables for diabetes care outcomes (O). Wan et al. argue that not only the knowledge (K) of, and attitude (A) towards, diabetes—resulting in practice (P)—but also 'Motivation' (M), are direct factors related to care management strategies or health education programs, which then indirectly affect the healthcare outcomes for diabetic patients. Wan et al. conclude that this KMAP-O framework allowed interventions to be more effectively designed through increased knowledge and motivation, attitudinal changes, and improved preventive practices, to reduce the progression of diabetes and its co-morbidities. They also advocate the use of health information technology to enhance changes in the KMAP-O framework and communications in the fields of health promotion and development.

Haasnoot et al. (2010) describe cultural beliefs and religious views in the knowledge, attitudes and practices of their participants during KAP interviews, as part of a study on tuberculosis in Tanzania. These included gaps in knowledge, particularly surrounding transmission, prevention, and the relationship between HIV/AIDS and tuberculosis in Tanzanians, which were difficult to correct due to religious or traditional beliefs. Such beliefs, dictating that infectious diseases like tuberculosis and HIV/AIDS are taboo, were upheld by revered figures within the Tanzanian tribal hierarchy. Consequently, the researchers note that there were multiple health assumptions and beliefs, some of which had a negative effect on patients' health and the spread of tuberculosis in Tanzania.

A KAP study by Al-Yahia, et al. (2017) on TM in Saudi Arabia also found factors such as beliefs and taboos had an influence on patients using TM. Consequently, they suggest that allopathic physicians need to identify these beliefs, as well as perceptions and medications of patients related to traditional practices, in discussion with patients (Al-Yahia et al., 2017; p. 10).

Paramasivam et al. (2010) conducted KAP interviews of small-scale dyeing and printing workers, in South India, to assess the fabric workers' views toward the health hazards of dyes. Their study extended beyond the workers' knowledge, attitude and practice to assess the facilities and infrastructure in the workplaces, with the findings indicating that reduction in health hazards was positively associated with workers being informed about safety precautions. Similarly, the United States Agency for International Development (2008) conducted a KAP study of a lead pollution clean-up program in Qalyoubia, among residents of the East District of Shoubra El Kheima. Findings indicated that smelter workers were aware of the need to use personal protective equipment to protect against health hazards. However, they did not use such equipment, with one of the reasons being negative perceptions—they perceived the equipment as uncomfortable and as a hindrance to working properly.

Specific to KAP studies in TM, it has been found that KAP surveys can review the factors concerned with the rationale for using TM. In Ethiopia, for example, Addis et al. (2002) reported that socio-economic status was related to the use of TM; their respondents used TM when they could afford and access it. Wassie et al. (2015) conducted a KAP study of TM among the communities of Merawi Town, Northwest Ethiopia. The findings showed that one rationale for using TM was accessibility and affordability. Similarly, Agbaje and Babatunde (2005) concluded that inaccessibility of modern medicine was one of the major factors influencing the participants' use of TM, in a Nigerian community.

Finally, the KAP model can identify the major hindrances or internal obstacles to using TM. Hilal and Hilal (2017) found that physicians in the Kingdom of Bahrain have had a 'fear of formal liability' with regard to utilising TM. They also found that the KAP model can determine the hierarchy of communication of TM as a hindering factor—finding, for example, that a lack of effective communication with health authorities was the factor of least importance with respect to utilising TM (p. 330). Suleiman (2014, p.7), in a KAP study related to TM in Riyadh, Saudi Arabia, noted that sometimes-aggressive advertising has contributed to an increased number of consumers using TM without first consulting a doctor or pharmacist, resulting in problems.

However, KAP studies in health research can lack enough insight into illness concepts/models based on 'community' knowledge. This knowledge type is practice-based and is usually

evident only when sickness arises in a community; therefore, it has been very difficult to detect using KAP surveys (Launiala, 2009). Barriers to behavioural change can also arise from people's insufficient knowledge of health problem or treatment benefits (Haloi, Ingle & Kaur, 2014, p. 100). Thus, Rav-Marathe, Wan and Marathe (2016) noted that the KAP framework cannot specifically address provider behaviours. Another researcher, Vandamme (2009), concluded that KAP is not a specific methodology but, rather, a conceptual framework for studying and analysing human behaviour.

In health management, patients' needs are complex; there are many target sub-population groups, with varying healthcare needs in each community. These complex needs must be reflected in the design and implementation imperatives of optimising resources and exchanging information, both of which are required when coordinated care needs to be enhanced (Wan et al., 2017). Accordingly, KAP studies are still advantageous in the logical formulation of causal sequences among the determinants of health behaviour (Rav-Marathe, Wan & Marathe, 2016). The data can provide additional information about the dangers of an outbreak or the spreading of a disease (Vandamme, 2009, p. 2). KAP studies can suggest intervention strategies that are suited to 'local situations and cultural factors' (Haloi, Ingle & Kaur, 2014; Green, 2001; Gumucio, 2011). They can also evaluate 'motivation' (Wan et al., 2017), and the 'beliefs, religion and taboos' of the population (Al-Yahia et al., 2017; Haasnoot et al., 2010). This includes the 'facilities and infrastructure' (Paramasivam et al., 2010; United States Agency of International Development, 2008), 'socio-economic status' (Addis et al., 2002; Agbaje & Babatunde, 2005; Wassie et al., 2015), 'economic situation' (United States Agency of International Development, 2008) and 'communication' (Hilal & Hilal, 2017; Suleiman, 2014). These factors influence the better planning of activities suited to the respective populations involved in the healthcare area, such as prevention activities and messages (Gumucio, 2011), and predict the prospective outcomes (Wan, 2014; Wan et al., 2017). Consequently, KAP studies are a good method for informing healthcare delivery in society (Raina, 2013). In particular, data are essential for informing public health work, to identify and address false assumptions (Launiala, 2009) in developing countries that are relevant to public health awareness campaigns (Haloi, Ingle & Kaur, 2014, p. 103).

4.4.3 KAP as a conceptual framework

The KAP method can give valuable insights into existing awareness and behaviour among members of a community (DaBreo & Inniss-Springer, 2016, p. II). According to Haloi, Ingle and Kaur (2014), there are three types of KAP study, with different aims and methods.

1. **Evaluative KAP:** this KAP study type aims to measure the extent of a known situation, in order to prove or disprove a hypothesis, the acceptability of messages or a proposed intervention strategy. Therefore, it is important to ensure that the questions corresponding to activities are established during collection of the data.

2. **Baseline KAP:** the aim of this KAP type is to explore an issue, to collect data on a particular population and/or a little-known subject. This type of KAP study is sometimes called an ‘exploratory survey’. It tends to lean more toward qualitative data than quantitative data to provide statistics. Therefore, the importance of the data-collecting process for this survey type is in the preparation of its questions.

3. **Comparative KAP:** the aim of this KAP study type is to build a database to compare, measure or evaluate change. Thus, the data is collected at the beginning and again later on, to compare how the population or survey used is similar or different from others or over time (Haloi, Ingle & Kaur, 2014, p. 101).

Despite the different aims of each type of KAP study, it has been found that its major use is as a tool for monitoring and evaluating a project’s activities (DaBreo & Inniss-Springer, 2016, p. II; Vandamme, 2009). The major use of data from a KAP study is to develop and plan communication for behavioural changes and/or education and related activities (Gumucio, 2011), such as public relations (DaBreo & Inniss-Springer, 2016).

The KAP data can be quantitatively or qualitatively analysed, depending on the aims and design for collecting information on the research topic (Haloi, Ingle, & Kaur, 2014). However, quantitative KAP analysis faces a critical issue in terms of the validity of its research methods. There is no standardised methodology in KAP surveys; it is also difficult to obtain reliable data and accurate information about people’s knowledge and attitudes (Vandamme, 2009, p. 1). However, an advantage of the quantitative KAP method is the large amount of data that can be collected; this is not possible with qualitative methods. Open questions in KAP surveys result in better understanding of the gap between what is said and

what is done (Haloi, Ingle & Kaur, 2014). Thus, the quantitative method—in particular, questionnaires—remains an important tool for assessing people’s perceptions, willingness and abilities to invest and participate in certain programs and practice (Vandamme, 2009, p. 6).

On the other hand, qualitative KAP methods—in particular, interviews—offer a systematic framework that is an effective, low-cost and quick way to discover certain topic-related beliefs and behaviours (Green, 2001). The KAP questions in qualitative methods tend to focus on the knowledge and attitude of the respondents (Haloi, Ingle & Kaur, 2014; Gumucio, 2011), but include their actions and beliefs (Haloi, Ingle & Kaur, 2014). The objective is to identify three features of the target population—their key knowledge, social skills and know-how—before starting an information program and/or activities in education (Haloi, Ingle & Kaur, 2014; Gumucio, 2011).

As noted above, KAP data—including that from qualitative KAP methods—can be used to identify knowledge gaps, cultural and religious beliefs, motivation, facilities and infrastructure, economic situation, communication and behavioural patterns; these can all facilitate understanding the practices of the people. Qualitative KAP data can help those involved in education understand what makes prevention messages ineffective (Haloi, Ingle & Kaur, 2014, p.101). In particular, attitudes, unlike practices, are not directly observable, making KAP studies a good means to assess them (Gumucio, 2011). As a result, regular KAP studies using qualitative methods can generate a database of trends in the knowledge, understanding and practices of the population, and information on the obstacles to improve them (Haloi, Ingle & Kaur, 2014). Finally, the data from qualitative KAP methods can be used to predict intervention outcomes (Wan, 2014; Wan et al., 2017) in order to inform policy or program decisions (Green, 2001).

In summary, the KAP model has specific advantages as a conceptual framework, and both quantitative and qualitative methods can identify population characteristics and problems associated with a topic, in order to assess the resources required for related activities (Haloi, Ingle & Kaur, 2014). The KAP data from both methods can be combined; while quantitative methods are scientific and precise, qualitative methods are preliminary and suggestive (Green, 2001). In fact, Haloi, Ingle and Kaur (2014) note that KAP sampling studies typically mix methods by using a questionnaire format and in-person interviews (p. 102). Thus, there is no inconsistency to using both KAP methods in collecting data (Green, 2001).

Both qualitative and quantitative KAP methods have their strengths and weaknesses (Green, 2001), but they remain useful tools for evaluating changes in people's knowledge, attitudes and behaviours. Their data can guide development of effective communication strategies and messages related to behaviour change (Haloi, Ingle & Kaur, 2014). This can allow a program to better meet the specific needs of particular communities (Haloi, Ingle & Kaur, 2014; Kaliyaperumal, 2004).

4.4.4 Justification of the theoretical framework to the study

In Thailand, TTM usage has not yet reached the national target set for 2011 (Vadhnapiyakul & Suttipanta, 2014). The reasons for this, and what it means for the adoption of TTM in the longer term, are still unclear (Thongruang, 2014). There has also been a lack of evaluation regarding communication in relation to TTM, particularly by the Thai government. Thus, the aim of this study is to explore the role and meaning ascribed to TTM among both Thai medical doctors and patients/users, to help inform improved communications for promoting TTM and encourage its use in Thailand.

The international aid community increasingly recognises that improving the state of health for poor people across the world depends upon understanding the socio-cultural and economic aspects of the context in which public health programs are implemented (Launiala, 2009, p. 1). However, in the past, many health communication programs have ignored oral communication, thus negating one form of cultural production (Airhihenbuwa, 1995). Qualitative research in healthcare has been criticised for its misguided approach of separating method from theory, and techniques from their conceptual underpinnings (Lambert & McKevitt, 2002). Thus, there have been recent calls in health communication research to focus on the health-related views of the participants, who are critical to the success of any health campaign (Basu & Dutta, 2009; Dutta, 2008).

It is important to assess the TTM environment in which a 'Creation of Awareness' is desired, before designing or commencing any awareness-raising activities (Haloi, Ingle & Kaur, 2014; Kaliyaperumal, 2004). Information regarding the primary healthcare needs of the people can be gained from many types of studies, but KAP studies are the most popular and widely used to gain such information (Launiala, 2009).

The ‘baseline KAP framework’ is well suited for the aim of this study, given that it is useful for the exploration of little-researched subjects and tends to lean more toward qualitative data than quantitative data (Haloi, Ingle & Kaur, 2014, p. 101). There are major reasons for using the KAP framework as the conceptual framework, as summarised below.

The KAP framework is a useful tool to evaluate changes in human factors (Haloi, Ingle & Kaur, 2014; Kaliyaperumak, 2004); it offers a conceptual framework (Vandamme, 2009) for evaluating attitudes and behaviours toward TTM (Haloi, Ingle & Kaur, 2014; Kaliyaperumak, 2004) among Thai people, and can be conducted at any point during a public health intervention (Haloi, Ingle & Kaur, 2014, p. 103).

The KAP questions help to focus on the knowledge and attitudes of Thai people to identify the key knowledge, social skills and know-how commonly shared by the target group, about TTM—for which a new program and/or activity on health education is intended (Haloi, Ingle & Kaur, 2014; Gumucio, 2011). The resulting data provides valuable insights into the current level of awareness and behaviours among Thai people (DaBreo & Inniss-Spinger, 2016, p. II)—what Thai people know about TTM, how they feel about it, and how they behave in regard to TTM in their life experiences (Haloi, Ingle & Kaur, 2014; Kaliyaperumal, 2004; Vandamme, 2009).

Finally, barriers to change, resistance or refusal may be expressions of cultural resistance and/or may reveal political stances surrounding TTM in Thailand (Gumucio, 2011). Such factors are often the source of misconceptions or misunderstandings that can present barriers to engagement in TTM activities and are potential obstacles to behavioural changes (Haloi, Ingle & Kaur, 2014; Gumucio, 2011).

The MoPH has created a slogan that encourages Thais to use TTM for minor illnesses before going to see a doctor (Sompopcharoen & Sresumatchai, 2015; Sumngern, 2011). However, there is still little recognition of TTM in terms of awareness and usage (Ganghair, 2014). In the national health system, it has been found that knowledge about the extent and characteristics of traditional healing practices and practitioners is limited and often overlooked (Wassie et al., 2015).

For this study, the KAP framework helps to explore current understanding of TTM, particularly new TTM products (finished forms). Thai people may have known about TTM

for some time but might have not yet developed a favourable or unfavourable attitude towards it, nor practised it. By understanding trends in TTM and its benefits, the researcher can position it effectively, thereby maximising its appeal (World Health Organization, 2012).

Data from KAP studies is often used to support health promotion policies (Green, 2001; Tamir et al., 2001), particularly when planning communication programs and activities to address false assumptions and change people's behaviour (Launiala, 2009). Thus, the KAP framework can provide reliable data that can be used to gain a better understanding of people's behaviour towards TTM (Ministry of Health, Rwanda & UNICEF Rwanda, 2014). Such data can identify what is known and what needs to be done to promote TTM in Thailand (Gumucio, 2011).

The advantage of KAP studies is that they can be used as evaluation tools to determine the effectiveness of interventions or programs related to TTM within the Thailand context (Vandamme, 2009). In particular, KAP data about TTM are an important resource for promoting TTM and planning national health policies related to it in Thailand (Green, 2001; Tamir et al., 2001). According to Haloi, Ingle and Kaur (2014), KAP data can be used to accelerate behaviour change by changing knowledge and attitudes and by directly encouraging people to adopt healthy behaviours, irrespective of the behaviour change sequence. It can also help to appropriately design specific interventions for the implementation of TTM promotion and communication campaigns (p.100).

In summary, it is expected that evidence regarding the use of traditional therapies globally will continue to emerge and will bridge the existing knowledge gap (Al-Ghamdi, et al., 2016). The KAP framework provides a mechanism for collecting data on what is known, believed and done in relation to health and TTM, and the current study has allowed me to identify gaps in TTM knowledge based on participants' viewpoints (DaBreo & Inniss-Springer, 2016). This enables identified weaknesses to be addressed (Robinson, 2009) to facilitate understanding and action (DaBreo & Inniss-Springer, 2016), and improve products or behaviours with respect to TTM (Robinson, 2009).

The KAP framework can also identify communication processes and sources critical to defining effective activities, highlight issues or obstacles in program delivery and solutions for improving quality and accessibility of TTM services (DaBreo & Inniss-Springer, 2016). Consequently, the KAP model is a good method to assess TTM delivery in Thai society

(Raina, 2013). It is essential to understand the approach to TTM by Thai people, including factors related to their behaviour change processes.

The following section presents each of the methods utilised and how they have been aligned in this study.

4.5 METHODS

With respect to the research method, the important question is: *'What is the best research method for answering the research question most effectively and efficiently?'* (Al-Busaidi, 2008, p. 2). It has been suggested that researchers should use several methods to discover information and gather data, to obtain a greater understanding of the real lives of those being studied (Streubert & Carpenter, 2011).

This study did not propose using the quantitative method of KAP and statistical testing, as it did not intend to prove or disprove a specific hypothesis related to TTM issues. Moreover, based on a review of the literature, it was found that KAP data from a quantitative method (questionnaire) had some limitations. For instance, Al-Ghamdi et al. (2016) noted that their KAP study of TM and modern medicine in Saudi Arabia faced the limitation of using a 10-item questionnaire, and the results of their study did not reflect in-depth knowledge, attitudes and practices of participants. Similarly, Gawde, Shetty and Pawar (2013) reported that when they used questionnaires to explore allopathic resident doctors' practices of Ayurvedic medicine in India, they did not obtain sufficient information on the change over time in knowledge and attitude of any specific cohort. Vandamme (2009) concluded that KAP studies have a common problem that is related to quantitative studies and data.

Based on a review of the literature, KAP qualitative methods—such as focus groups—and in-depth interviews are preferable (Gumucio, 2011; Launiala, 2009; Monde, 2011) where the research questions pertain to increasing the researcher's own knowledge and understanding of a specific situation or problem (Gumucio, 2011; Launiala, 2009), especially when the objective is to study health-seeking patterns (Launiala, 2009) or to highlight unknown aspects (Gumucio, 2011). As a result, in this KAP study, two qualitative methods (focus groups and in-depth interviews) were used to collect the data with respect to TTM.

Kaliyaperumal (2004) noted it is important to divide the community population into sub-categories when conducting a KAP study. Thus, the populations for this study were divided

into two sub-groups: TTM users and the health professionals who are in the role of supporters. Focus groups were utilised to determine how Thai users make sense of their experiences and to explore their actions taken with respect to TTM. In-depth interviews were conducted to better understand each health professional's needs and problems. These interviews were used to uncover the visions and missions that healthcare professionals associated with their roles, and how these related to TTM development and promotion in governmental and private sectors.

However, it should be noted that the data collected from both methods was used for the purposes of comparing and contrasting. This was carried out in order that gaps in their levels of knowledge, attitudes, and practices of TTM by both types of participants in their different roles could be identified as previously mentioned. Regarding the content of the focus group discussions in particular, it was not my intention to compare and contrast the actual levels of knowledge, attitudes, and practices of the consumers themselves in each group (both users and non-users with different age ranges). In contrast, I did seek to accordingly uncover the majority of their viewpoints in relation to each TTM topic.

By combining both methods, I could explore topics that appeared in analysis of the interviews and could highlight the areas where there seemed to be a lack of consensus (Freitas et al., 1998, p. 7). Information about the awareness, attitudes and behaviours relating to TTM, with focus groups, contributed to building projects around the in-depth interviews. This is especially useful when the topic or population has not already been extensively studied or when the researcher is new to the field (Freitas et al., 1998, p. 7). Finally, KAP information obtained from focus groups and in-depth interviews can confirm the current understanding and beliefs with respect to TTM (Gumucio, 2011, p. 66). It can better define 1) which aspects of the KAP spectrum should be focused on, and/or 2) which activities should be implemented for promoting TTM. This means that the KAP information collected from Thai people can have a meaningful impact on improving future promotion and uptake of TTM.

The following section presents each of the methods utilised in the context of this study.

4.6 DATA COLLECTION AND CODING

The first phase of data collection involved conducting consumer focus groups; this was then followed by conducting in-depth interviews with the health profession participants in their

different roles and careers. The qualitative data collected provided a better understanding of TTM from the perspectives of two types of participants— consumers and health professionals (see Figure 4.1).

For both focus groups and in-depth interviews, this study utilised ‘semi-structured interviews’, which are more commonly used in healthcare-related qualitative research studies, due to their characteristics. These are based on a flexible guided topic that provides a loose structure of open-ended questions, to explore experiences and attitudes, which enabled the study to obtain rich TTM data. They helped the researcher build rapport with the participants, especially informants from in-depth interviews (Al-Busaidi, 2008), because they provide a more relaxed atmosphere (Boyce, 2006). Data from both methods provided a deep insight into TTM issues, from the points of view of consumers and supporter participants (in both government and private sectors), which could be incorporated into the study design.

However, the levels of knowledge, (positive) attitudes and practice in regard to TTM varied between these two categories of participants (Thai users and medical doctors). This fact should be kept in mind when awareness creation programs are developed for these categories, to attain maximum efficiency (Kaliyaperumal, 2004, p. 7).

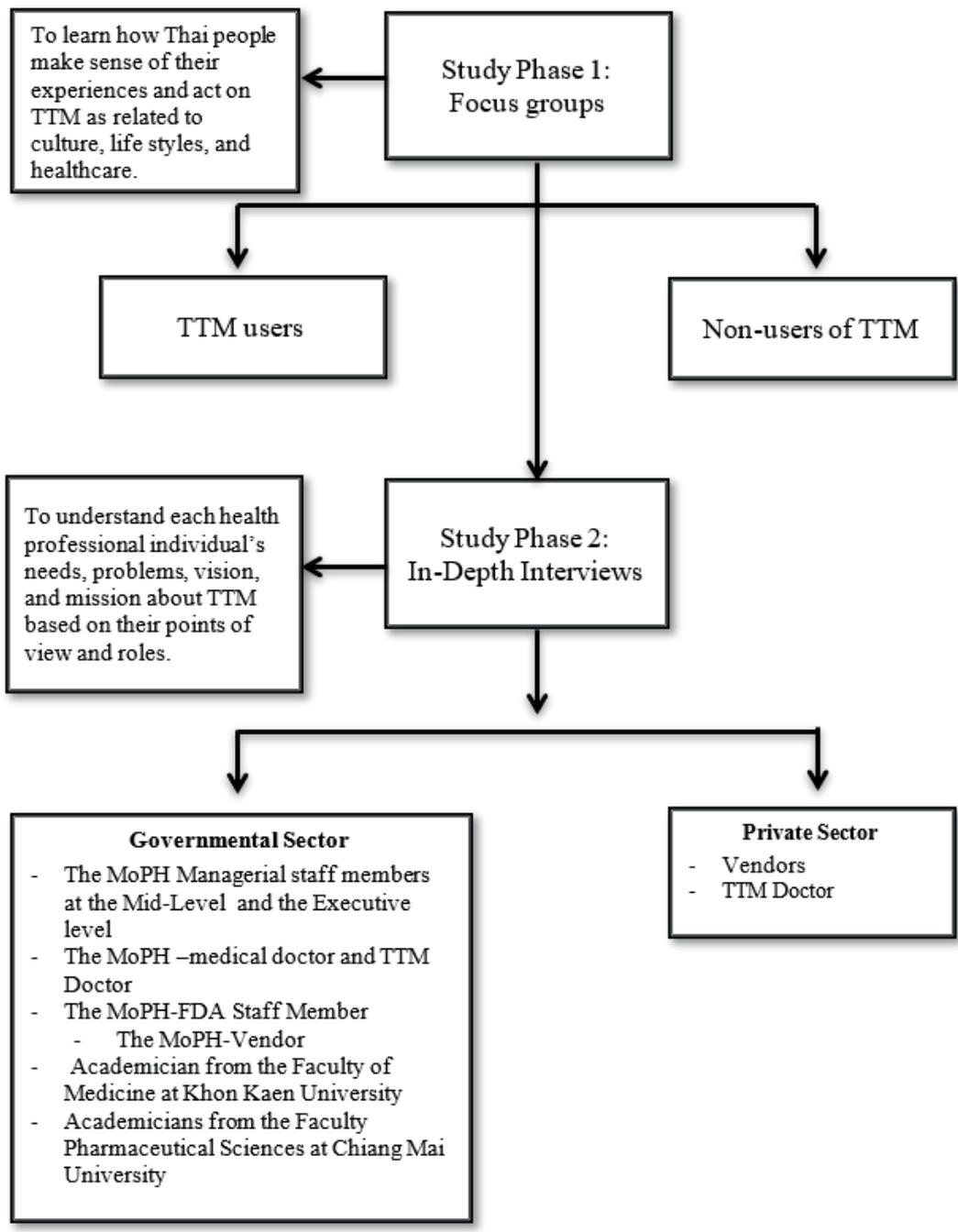


Figure 4.1 *The process of collecting data*

With respect to ethical clearance, the Human Research Ethics Committee of the University of Canberra approved the interview study. Participants were informed of the study's purpose and of their rights to withdraw from the study at any time. Prior to being interviewed, each participant was required to sign two informed consent forms. The focus group participants received remuneration of 300 Thai Baht for their participation, while the health professional informants in the in-depth interviews were given a gift set.

4.6.1 Phase 1. Focus groups

In order to obtain participants for focus groups, I made a conscious decision about which individuals would best provide the desired information and how many were needed for each focus group, including how to invite them (Heffernan, n.d.).

Based on a review of literature, there are many factors related to the health of individuals and communities, such as age, genetics, gender, income and social status, environment and behaviour (Sumngern, 2011, p. 14). Therefore, in order to provide a framework for the focus group criteria of this study, I considered these factors that were found in previous research on TTM in Thailand in 2003–2013, as summarised below.

In 2008, a survey conducted was “Screening for undeclared synthetic drugs in TTM for life style”; it found that the demographics of the surveyed population (gender, level of education and occupation) had little effect on consumption behaviours as related to TTM (Putiyanan & Winijkul, 2008). These results stand in contrast with a 2012 study, “The motivation in choosing TTM of consumers in Bangkok”, which concluded that age, educational level, career and average monthly income all influenced motivation to use TTM (Rattanapikul & Fusiri, 2012). Another 2012 study, “Factors related with people’s behaviour towards using medical herbs for illness treatments”, was conducted in three provinces in Northeastern Thailand. Statistical testing found that ‘income’ had a negative correlation with use of medical herbs for treatment, while the variables of age, sex, educational attainment and knowledge about treatments had no correlation (Chaichompoo et al., 2012).

Age is another factor that influences the use of TTM. Based on a 2003 study on the use of herbs, conducted in the Muang District in Phitsanulok Province, Thailand, those who most used TTM were individuals with ages from 39–50 years, and those who used it the least were 27–38 years of age (Ruenkon, Likitkeithajorn & Siththemthong, 2003). Another study on factors that influence use of herbal medicinal products in U-Thong hospital in Suphanburi Province, conducted in 2010, found that a majority of respondents (i.e. TTM users) were female; a majority was also over 60 years of age and the remaining users were below 20 years of age (Roekruangrit, Sumpaonthong & Itharat, 2010). A 2013 study conducted on individual healthcare behaviours in all parts of Thailand on people over the age of 18 found that only one out of five (20%) Thai citizens were aware of TTM (Ganghair, 2014).

As a result, participant selection was based on purposive sampling, in which they were selected according to criteria specified by the researcher. The primary focus group segmentation was developed by identifying key population groups: 1) TTM users, defined as those who use TTM ≥ 4 times/ year, and 2) non-TTM users, or those who use TTM 0–3 times /year —within different demographics (gender, occupations, educational levels).

In the Thai social context, a hierarchical culture, status is especially important. Therefore, more homogeneous groups were needed with respect to status and power differences (Stewart, Shamdasani & Rook, 2007). It is considered very rude in Thailand for a younger person to even suggest they have a different opinion to either an older person or one who is more ‘senior’ or ‘important’. Therefore, breaking up groups by ‘age’ and ‘social class’ as much as possible is more important than in Western countries (Davies, n.d.). Based on the six abovementioned studies on factors that influenced the use of TTM, in three out of four regions of Thailand (including Bangkok), a secondary segmentation was an age range of between 18 and 59 years.

Recruitment took place at Huay Koeng Hospital in Udonthani during the period of 10 to 20 June 2015. The recruiting process for the consumer participants began by approaching the prospective participants and informing them of the purpose of the focus group discussions. After the explanation was given, they were then asked if they would like to participate in the focus group interviews. If they agreed to be a part of the focus group interviews, they were next asked about the frequency of their TTM usage per year and their ages. The purpose of these two questions was to obtain information so that the participants could be grouped in accordance with the first and second segmentation criteria as mentioned above. In addition, they were told that they had the right to withdraw from the study at any time. Lastly, in order to follow up on the participants and to confirm the dates, times, and locations of the focus group discussions, they were asked to provide the researcher with their names and contact information.

As a result, the focus groups comprised the eight sub-groups in Table 4.1, to obtain a wide range of answers and homogeneous groupings that represented a comfortable mix of people (Marczak and Sewell, n.d.).

Table 4.1 *Total participants per group*

Age ranges	TTM Users	TTM Non-users
18–26 years old	7	8
27–38 years old	6	6
39–50 years old	8	8
51–59 years old	8	6
Total	29	28

In summary, 57 participants were involved in a research process that explored the role and meaning of TTM for Thai people (see Appendix 2). The recruitment and discussions took place at Huay Koeng Hospital in Udonthani, Thailand. The focus groups were held from 22 to 23 June 2015, and 29 to 30 June 2015, at 10:00–12:00 and 13:00–15:00. The duration of the discussion was approximately 1.5 hours. All information sheets and consent forms were given to participants to sign before the discussions.

At the start of each focus group, I explained the purpose of the discussions. During the discussions, participants' backgrounds and experiences with TTM were described to explore how Thai people experience TTM. The participants were asked questions in three separate sessions on the following topics: 1) their knowledge and information about TTM; 2) the role that TTM plays in their everyday lives, and 3) how, from their points of view, the use of TTM could be increased.

I was a co-participant in this process of discovery and understanding. Serving as the moderator or facilitator of the discussion, I encouraged all respondents to contribute their thoughts, feelings and ideas about the topic without being pressured and without any interjections regarding my (as researcher) opinions. All interactions were audio-recorded with two tape recorders (one back-up, in case of failure) and subsequently transcribed by myself. In addition, field notes were taken and later compared with the transcript (Heffernan, n.d.).

Problems and Solutions

Regarding research ethics, on 17 March 2015, I was granted permission to proceed by the HREC of the University of Canberra, Australia. The site for recruiting participants was Huay Koeng Hospital, one of the Community Hospitals in Udonthani, Thailand; this site was selected because in 2015 this hospital became one of 21 new Thai Traditional Medicine

hospitals throughout the country. This hospital had also recently received an award and been recognised as the second best Community Hospital for 2015 by the MoPH (Udonthani Provincial Health Office, n.d).

During the first group of discussions (TTM users of 18–26 years of age), a problem arose in that the participants could not answer questions concerning a ‘finished form’ of TTM. It was discovered that among this group, most participants had never seen a finished form of TTM and were exposed to TTM in this form for the first time at the focus group. Thus, it was necessary for me to purchase some finished forms of TTM (as shown in Figure 4.2) to show to the participants during the focus groups.



Figure 4.2 Example of a ‘finished form’ of TTM product

These examples were used with the second focus group through to the last group. This helped the participants understand the project, including questions directed towards the research question: ‘*What is the role and meaning of TTM for Thai People?*’ It also helped obtain more information and views from the participants with respect to TTM.

4.6.2 Phase 2. In-depth interviews

The focus of this study was to uncover the healthcare professionals’ current levels of awareness and understanding, which were related to TTM’s consumption as supporters in the public healthcare system. As a result, the contexts of the healthcare professional’s knowledge, attitudes, and practices were found to be relevant to their adoption and/or rejection of TTM

policies & practices. Therefore, their knowledge, attitudes, and practices were examined in order to determine whether these had impelled or inhibited their adoption of TTM.

In this study, the health professional participants were again selected by purposeful sampling. According to Palinkas, et al. (2016, p. 1), for qualitative research that aims to identify information-rich cases related to the phenomenon of interest, this is the best approach. The aim of the interviews was to accomplish the following: 1) to understand the informants' perspectives and to collaboratively create a meaningful account of the research topic area from each viewpoint; 2) to identify and understand their knowledge, attitudes, perceptions, needs, and problems; and 3) to comprehend the vision and mission of individuals from the governmental and private sectors with respect to TTM, including their views regarding consumer behaviours in their areas.

Based on the literature review, these contexts could be interpreted from the data, which was implicitly gathered from their various roles and which were related to TTM policies and practices in both the government and the private sectors. The creators of national healthcare policies could inform the directions of policy towards TTM adoption. In addition, they could collect the data to inform the government in order to foster support that could encourage the adoption of TTM policies at the national level. By performing their roles as controllers, the Thai FDA provide invaluable data in regard to regulations concerning the safety, efficacy, and security of TTM which are related to the development and implementation of TTM. It is also important to note that the vendors in both the public and private sectors have the power to directly impact the supply of TTM in public healthcare system and in the marketplace.

It is the hospital directors, conventional doctors, and TTM doctors in the government sectors, who are directly affected by this policy adoption. They have to cope with the current challenges that arise from TTM adoption and practices. As such, they are the individuals who have the ability to provide the meaningful data from healthcare facilities around the nation. In the educational institutions, it is the academicians, who have the capacity to offer knowledge and training courses for TTM practitioners, which could focus upon disseminating knowledge, attitudes, and practices of TTM in workplace situations.

Initially, there was no intent to interview ‘folk doctors/TTM doctors’ in the private sector. However, after these practitioners were mentioned by focus group participants, it was decided they should be represented in the interview population. There was obvious value in comparing the viewpoints of the private sector TTM doctors with doctors from the government sector, to better understand their viewpoints with respect to government policies promoting use of TTM, as well as the problems both sets of practitioners face. Thus, the interviewees for this research consisted of the individuals listed below.

The government sector interviewees consisted of:

1. The MoPH: staff members of the Public Health Service from the mid-executive and executive levels from Udonthani in Northeastern Thailand and from Bangkok, in their roles as policymakers, promoters and product developers.
2. The MoPH: staff of the Thai Food and Drug Administration (FDA) in Bangkok, in their roles as TTM controllers.
3. The MoPH: Thai healers from Chiang Mai in Northern Thailand, in their roles as TTM doctors, and ‘modern’ doctors from Udonthani in Northeastern Thailand.
4. The MoPH: pharmaceutical sector representatives from Prachinburi in Central Thailand, in their roles as vendors.
5. Academics from the Faculty of Medicine at Khon Kaen University in Northeastern Thailand, and the Faculty of Pharmacy at Chiang Mai University in Northern Thailand, in their roles as researchers.

The private sector interviewees consisted of:

1. Pharmaceutical sector representatives from Sakonnakon in Northeastern Thailand, and from Nonthaburi in Central Thailand, in their roles as vendors.
2. Thai traditional healers from Udonthani in Northeastern Thailand, in their role as TTM practitioners.

Fourteen individuals (see Appendix 3) from five roles (promoter, healer, controller, vendor, researcher) and five careers (practitioner, nurse, pharmacist, lecturer, business owner) were interviewed; this was considered to be enough for thematic saturation of the data collection process (Thongruang, 2014).

The intensive interviews, conducted to connect with all aspects of TTM from the government sector and private sector, used a semi-structured interview format. Questions explored the topic and were tailored to elicit and to explore each participant's specific experience (Charmaz, 2001). The main focus of the discussion centered on: 1) knowledge of current trends in TTM and attitudes among Thai people towards TTM, from the unique perspectives and substantial experiences of these individuals; 2) the role TTM plays in the lives of the interviewees and Thai people; 3) how TTM relates to social relationships, culture, lifestyles and healthcare in Thailand, and 4) how the government can promote the benefits of TTM within Thai society.

The sequencing of questions was not the same for every participant; instead it depended on the process of each interview and responses of each individual. A decision was made regarding which issues to pursue, based on the different careers of participants. For some points, findings from the user participant focus groups were raised with the interviewees, in order to gain a deeper understanding of the perspectives of health professional interviewees, as well as to compare and contrast findings from both methods.

A consent form was signed by participants before the interview. The interviews took place during August and September 2015 at the interviewees' workplaces, in three of the four different regions of Thailand (Northeastern, Northern and Central Thailand, including Bangkok). No interviews were conducted in Southern Thailand. The maximum duration of time for interviews was two hours. All interactions were audio-recorded with two tape recorders (one back-up, in case of failure) and subsequently transcribed by myself. Field notes were taken as reminders about the topic and later compared with the transcript (Heffernan, n.d.).

4.6.3 The process of data analysis: Thematic analysis

Data analysis of information obtained through the focus groups and in-depth interviews required considerable judgment and skill (Bender & Ewbank, 1994). According to Braun and Clarke (2006), thematic analysis is a flexible and useful research tool. It allows those using it to make active choices about the particular form of analysis they are engaged in. Moreover, it has the potential to help those seeking to describe patterns across the qualitative data, and can lead to a more sophisticated accounting of the data. For studies using the qualitative approach, thematic analysis is frequently being used at present to analyze data obtained from interviews.

Formalising the identification and developing themes are a part of the process, which also includes two other elements: ‘reporting the data and theorising the language’ (Jugder, 2016, p. 2).

To improve the reliability and validity of the research, NVivo software was used to analyse the interviews, in addition to the manual method. The rationale for using the two different methods was 1) to improve the trustworthiness of the analysis, and 2) to increase the credibility and validity of the findings. Furthermore, the strength of the data analysis process was enhanced through triangulation (Verle, 2008).

The NVivo software is a powerful tool that can facilitate many aspects of the data analysis process (Hutchison, Jonston & Breckon, 2010), and provide enhanced demonstration, identification and validation of emerging themes and sub-themes. In addition, NVivo was an efficient way of managing the data and saving time in this study (Jugder, 2016). One of its time-saving features included counting the frequency of each participant’s voice under each node, while cross-checking the data analysis with manual checks. This enabled and ensured that the voices of the participants could be heard, and that there was an efficient location and identification of individual responses with respect to TTM.

Following Braun and Clarke (2006), the data analysis in this study consisted of a six-step process, which provided clear steps:

Step 1: Becoming Familiar with the Data. All interviews were translated verbatim from Thai into English immediately after the interviews, to identify any areas needing clarification. Transcripts of the data were repeatedly re-read as an active form of double-checking them against the original audio-recordings for accuracy, including searching for meanings (Braun & Clarke, 2006).

Step 2: Generating the Initial Codes. NVivo was used to analyse the data from all transcripts that aligned with the study’s research questions to: 1) enable effective categorisation, and 2) formalise the identification and development of patterns with respect to TTM, driven by both the research questions and by broader KAP theoretical assumptions (Braun & Clarke, 2006). This was accomplished by importing the data into NVivo so that it could be systematically gathered and analysed. Memo writing was also used to provide a basis of analytical power to further understand TTM through theoretical sampling concepts

during coding (Catterall & Maclaran, 1997). Thus, the process of coding and developing categories was progressively made stronger, clearer and more theoretical.

The process of analysing and coding was accomplished line-by-line and by labelling almost every line in the interview transcripts, in order to extract those phenomena or experiences that were significant to participants. This was done by assigning a conceptual label to capture what had been said and by focusing on identifying patterns of meaning (Braun & Clarke, 2006). This stage was carried out in order to: 1) identify the initial phenomena of TTM, and 2) label the meanings of what respondents had said about TTM, with specific questions delving into concepts based on the KAP framework. As a result, an initial list of ideas was generated regarding what was in the data and what was interesting about it, to produce a list of themes in the next step (Braun & Clarke, 2006, p. 18). It needs to be noted that the KAP data for both methods was also separately coded in order to ensure that they were able to be compared and contrasted across both participant groups. Each of the concepts related to TTM was divided and separated between the two forms of TTM (traditional form and finished form).

In this step the initial codes consisted of four major themes for each method/cohort. The first three themes of each method were divided, based on the three pillars of the KAP model (knowledge, attitude, practice). The fourth theme was communication and promotion of TTM. Each key theme includes significant sub-themes based upon how frequently they were mentioned by participants. The main themes and their sub-themes are summarised below.

1. Knowledge of TTM: To better comprehend the history, knowledge and understanding of TTM from the participants' viewpoints, this concept includes five sub-themes: 1) meanings of TTM; 2) characteristics of TTM; 3) roles of TTM; 4) how the knowledge has been transferred to the participants, and 5) limitation of the knowledge of each participant.

2. Attitude towards TTM: This theme encompasses the beliefs and perceptions participants expressed or exhibited in regards to TTM and how they relate to specific perceptions of culture, healthcare and lifestyle. There are three sub-themes of this data: 1) attitudes towards the traditional form of TTM; 2) attitudes towards the finished form, and 3) the factors that constructed their attitudes.

It is noted that the attitude towards both forms of TTM uses the same criteria to code the data, such as efficacy, duration of treatment etc. The data related to attitudes is also grouped into

positive, negative and general comments. Thus, all concepts relating to attitude towards both forms of TTM have been compared and contrasted in order to prepare for the following step.

3. Practices of TTM: To better understand the practices of both forms of TTM, this concept is grouped into the sub-categories: 1) use of traditional forms, including the factors for use or rejection, and 2) use of finished forms, including the factors for use or rejection of them. The use, rationale and problems associated with the practice of TTM were reviewed under each theme and sub-theme.

4. Communication and Media of TTM: This concept reviews the ways in which both forms of TTM have been promoted, by grouping the data into two sub-themes: 1) promotion of TTM by the government sector, and 2) promotion of TTM by the private sector. Each sub-theme also addresses the media used to promote TTM by both sectors, as well as problems related to the promotion in Thailand, including suggestions by the government from both groups of participants.

This list of ideas above identifies novel relationships within the TTM data without becoming overwhelmed by stacks of undigested data (Gubrium & Holstein, 2001). While some data was left without a code, other data was coded at least once, and some many times, as relevant to the many potential themes (Braun & Clarke, 2006).

Step 3: Searching for Themes. When all data was initially coded and collated, it was then identified across the data set (Braun & Clarke, 2006), examining larger swathes of data by combining codes that were similar and considered as having the same role. Thus, all initial codes relevant to the research questions were incorporated and grouped into more abstract sub-themes that could be verified and investigated. This represented the interviewee's voice, which re-focused the analysis at broader levels of themes (Braun & Clarke, 2006).

To further explain the patterns of TTM related to the research questions and the research purpose, the initial findings from Step 2 were later grouped into the key themes, based on the KAP data for each participant cohort (consumers and health professionals) as follows:

1. KAP data for TTM consumers from the focus groups: The first initial coding from Step 2 retained four key themes, but they were re-grouped as outlined below:

1.1 Knowledge of TTM: having been primarily grouped as meanings, roles and characteristics

of TTM etc. (in Step 2), this was re-grouped into six sub-themes: 1) attribution of TTM; 2) the forms; 3) production processes; 4) side-effects of TTM; 5) problem of TTM knowledge, and 6) contribution to TTM knowledge.

1.2 Attitudes towards TTM: after careful investigation, this was divided into four sub-themes: 1) attitudes regarding the efficacy of TTM; 2) attitudes about the production process; 3) a sense of belonging related to TTM, and 4) an overview of the attitudes about using TTM.

1.3 Practices of TTM: based upon the factors of usage or rejection as the criteria for grouping, ‘practices’ was grouped into five sub-themes: 1) culture and beliefs; 2) social factors; 3) knowledge and attitude; 4) current lifestyles and economic situations, and 5) an overview of TTM practice.

However, between the two forms of TTM, the data for each sub-theme were still preserved separately in order to evaluate the consumer participants’ KAP data for both forms.

1.4 Communication and Media of TTM: this data was grouped into two sub-themes: 1) insufficiency of promotion by the government sector, and 2) exaggerated claims used in advertising by the private sector.

2. KAP data for health professionals from the interviews: As with the data for the consumer participants, the initial coding from Step 2 was re-grouped as follows:

2.1 Current knowledge of TTM in Thailand: this consisted of: 1) the definition and history of TTM; 2) the contribution of TTM knowledge, and 3) problems related to knowledge and understanding of TTM.

2.2 Knowledge, attitudes and practices among medical doctors: this data was summarised based on health professionals’ viewpoints in order to more fully understand the roles of the doctors and to compare and contrast this data with the relevant literature for the further coding process. The new categories were: 1) knowledge, and limitations of knowledge, of TTM among medical doctors; 2) attitudes, both positive and negative, towards TTM among medical doctors, and 3) the practices of medical doctors, including barriers to use of TTM.

2.3 Consumer behaviour: in accordance with the focus of this research on TTM usage by ‘consumers’, the next key theme indicated was ‘consumer behaviour’, based on the

viewpoints of health professionals. This key theme reviewed the roles and meanings of TTM for Thai people in order to gain a greater understanding of how it is related to healthcare, culture and lifestyle. This theme was also used to cross-check the findings from the 'KAP data of consumers' from focus groups (see above). The major sub-themes under 'consumer behaviour' consisted of: 1) consumer rationales for using TTM, and 2) the limitations on use of TTM by consumers.

2.4 Communication and Media used to promote TTM. The data from initial coding of in-depth interviews was grouped into two sub-themes: 1) unsuitable promotion by the government sector, and 2) exaggerated claims used in advertising by the private sector.

Several sets of codes that did not clearly fall within any of the above themes/sub-themes were grouped under the sub-theme of 'overviews', to retain the data, even though they may not be revisited in the future.

Step 4: Reviewing the Themes. This step, an important self-correcting phase of the research (Charmaz, 2006), involved re-reading the entire data set to allow any relevant data and directions to surface naturally. Once the reviewing process reached saturation, no new TTM information was found. With enough data, the 'thematic map' could be generated to ascertain whether the themes corresponded to the data sets and accurately reflected the meanings evident in the data set as a whole (Braun & Clarke, 2006). Ultimately, this process generates a 'storyline' with respect to the realities of TTM, in order to answer the research questions.

In order to present the findings in 'Chapter 5', key themes from both methods from Step 3 were reviewed; some were retained while others were re-grouped to gain a clearer picture of TTM. Finally, the storyline of TTM from each method was identified (see Tables 5.1 and 5.2).

It was noted that all factors in each of the meta-themes, including their sub-themes related to TTM, were investigated carefully. In order to appropriately provide the storyline of TTM, the data was re-checked manually. If the data was found to be linked, it was integrated to create the thematic map.

Step 5: Defining and Naming the Themes. To gain a deeper understanding of knowledge, attitudes and practices among both participant cohorts, the key themes were defined by

determining which aspect of the data each theme captured, in order to identify what was interesting about TTM, and why (Braun & Clarke, 2006).

In this step, the four main themes—related to knowledge, attitudes, practices and communication/promotion of TTM—from both methods from Step 4, were reviewed and some themes/sub-themes re-named, with ‘concise and punchy’ names within the scope of the concept (Braun & Clarke, 2006, p.93), properties and variations. This immediately gave me a sense of the story of TTM represented by each theme (Braun & Clarke, 2006). The themes were then tested and refined by considering them alongside others, until links and/or relationships had been identified (Daymon & Holloway, 2011) and reflected in the findings (Braun & Clarke, 2006). Finally, all themes were interlinked, built upon and developed into the foundations of a story, to better understand the social realities of TTM and to assist in preparing for the report in the last step (see Tables 5.1, 5.2).

Step 6: Producing the Report. The final stage was writing up the thematic analysis to report the KAP data for both participant cohorts. For this, the manual method was utilised to: 1) carry out a re-coding check of the transcript contents, to ensure clarity and to identify issues within the key themes and sub-themes, and thereby guarantee reliability and validity of the research, and 2) select examples from the transcripts to illustrate elements of the themes and to provide examples of the points being made. In this way, the realities of TTM in each respective area could be outlined, presented and explained with sufficient evidence of themes within the data (Braun & Clarke, 2006), to incorporate new concepts, terms, knowledge and attitudes, and to include an argument for TTM in relation to the research questions and aims.

CONCLUSION

This qualitative research has utilised the KAP model as its conceptual framework to contribute insights and to explain the roles and meaning of TTM for Thai people in their everyday lives. In addition, the study has sought to assist practitioners, promoters and policymakers in identifying the factors that influence Thai consumers in relation to TTM, in order to identify the best communication methods to promote TTM in Thailand.

To accomplish the purpose of this research, two qualitative methods (focus groups and in-depth interviews) were used to collect data. Following thematic analysis of the interview data outlined by Braun and Clarke (2006), the complementary tools of NVivo software and manual methods were used in the process of data analysis. As a result, the research explored all

aspects of the roles and meaning of TTM for Thai people through two qualitative methods, which have assisted in gaining a better understanding of TTM in Thailand.

The following chapter presents the findings. Concepts described in the overview of findings in the main themes have been developed and their properties have been illustrated, by using narratives representing each participant's voice and by examining the discussions in which participants constructed the meanings of their words with regard to the roles and meaning of TTM in their everyday lives.

CHAPTER 5 FINDINGS

This chapter provides a detailed account of the findings from the two phases of empirical data collection: 1) analysis of the focus groups, and 2) analysis of the in-depth interviews. The results presented have been divided into key themes and sub-themes emerging from the data analysis, together with quotes expressing the participants' shared experiences and perceptions that have contributed to the themes.

5.1 FOCUS GROUP FINDINGS

This section of the thesis presents the findings from consumer participants in focus group discussions. It reviews their current understanding, beliefs and practice of TTM in their lives. This includes their views of the current communication and promotion of TTM by both sectors.

5.1.1 Results from thematic analysis

This section presents the results from thematic analysis, in which four themes were revealed when answering the first and second research sub-questions: 1) *How do Thai people view TTM as it relates to their consumption?*, and 2) *What is the current understanding of TTM by Thai consumers?* The study's aim was to develop a broader and more holistic understanding for the government promotion of TTM in Thailand, by answering these two questions.

It is important to note here that in the findings derived from the focus group discussions, participants had drawn their understanding and beliefs about TTM by comparing them with conventional medicines. Moreover, the participants had a high level of awareness about the traditional form. Yet, they had not taken notice of the finished form until I asked them about this form and showed them samples, which they then saw for the first time.

Thus, in order to explain and compare the participant voices regarding both forms of TTM, *the findings of each theme begin with presenting data for the traditional form followed by the finished form.* In this chapter, particular words used to indicate the number of participants responding to a given issue are: 'all', 'most', 'a majority', 'some', 'a few', and 'none'. For the purpose of common understanding in this study, the following should be specified: 'all' = 100%; 'most' = 80% to 99%; 'a majority' = 50% to 79%; 'some' = 30% to 49%; 'a few' = 1% to 29%, and 'none' = 0%.

Table 5.1 *The emerging themes and sub-themes from Thematic Analysis*

Themes	Sub-Themes
<p>1. Knowledge of TTM: A superficial knowledge of TTM</p>	<p>1. Knowledge of attribution of TTM: TTM, plant-based medicines, can be made at home</p> <p>2. Knowledge of the forms of TTM: TTM are decoctions or medicinal pots for treatment as part of the Thai way of life</p> <p>3. Knowledge of production process: TTM is a simple process that has been handed down from generation to generation</p> <p>4. Knowledge of side-effects when using TTM: TTM has fewer side-effects</p> <p>5. Problem in knowledge about using TTM: There exists a lack of knowledge about TTM properties and proper dosages</p> <p>6. Contributions of knowledge about using TTM: TTM knowledge has been transferred from generation to generation and acquired by personal interest</p>
<p>2. Attitudes towards TTM: TTM is inferior to conventional medicines</p>	<p>1. Attitudes about the efficacy of TTM: TTM is safe, but offers a slower recovery</p> <p>2. Attitudes about production process of TTM products: The traditional form is dirty, but the finished form is clean</p> <p>3. Attitude about a sense of belonging: TTM does not belong to them</p>
<p>3. The practice of TTM: TTM is a second choice and only for the treatment of minor illness</p>	<p>1. The practice of using TTM depends on culture and beliefs</p> <p>1.1 TTM are preventive medicines to be used for minor illnesses and certain conditions</p> <p>1.2 TTM are alternative medicines to treat cancers and to promote wellness</p> <p>2. The practice of using TTM depends upon social factors</p> <p>3. The practice of using TTM depends on knowledge and attitude</p>

	<p>4. The practice of TTM depends upon current lifestyles and economic situations</p> <p>4.1. The inconvenience of using the traditional form</p> <p>4.2 The barrier of inaccessibility related to the finished forms of TTM</p> <p><i>4.2.1 The distribution channels of the finished form are in short supply.</i></p> <p><i>4.2.2 Cost barrier of the finished form</i></p> <p>5. The practice of TTM is only for the treatment of minor illness</p>
<p>4. Communication and media of TTM: The insufficient promotion of TTM</p>	<p>1. Insufficient promotion by the government sectors</p> <p>2. The exaggerated claims in advertising by the private sectors</p>

5.1.2 THEME 1 Knowledge of TTM: A superficial knowledge of TTM

To answer the research questions mentioned above, at the beginning of the discussion participants were asked to talk about their understanding of TTM. As a result, several definitions of TTM and understanding about it were revealed. Based on the participants' voices, their knowledge and understanding of the meaning of TTM, as well as their knowledge of using TTM (including ways in which knowledge was obtained), can be divided into six main areas: 1) an attribution of TTM; 2) the forms of TTM; 3) production process of TTM; 4) side-effects of TTM; 5) problems surrounding the knowledge about how to use TTM, and 6) contribution to knowledge of TTM. The results are summarized below:

5.1.2.1 Knowledge of the attribution of TTM: plant-based medicines; can be made at home

The findings indicated that half of the participants defined TTM by its attributes and for them, TTM is a 'household medicine' that is made from plants, vegetables or foods. Some participants from different demographics in both the user and non-user groups specifically mentioned several herbs, plants and vegetables that they already knew and had been growing at home, to explain their knowledge and understanding instead of explaining the meaning of TTM. For instance, a Female Farmer non-user began to answer the first question in regard to

her viewpoints, by stating: *“I think of lemongrass and butterfly pea flowers because they are daily used and grown in the gardens. For example, if we are burned by hot water, we can use aloe vera for application. When someone is bitten by centipede, a bite is cured by Barleria Lupulna or Cassumunar ginger. Above mentioned herbs can be found around the households, so we do not need to find (them) in the woods.”*

As a result, several herbs were named in the discussions, such as: Turmeric, used for curing stomachaches; Bai Ya Nang (*Limacia trianda* Miers), used for curing cancer and detoxification; and Creyat, used for curing fevers and sore throats. Moreover, there are several meanings herein. Some participants meant that TTM is available and easily found around their homes or within their communities, and they can be used for cooking, eaten raw, and/or used for treatment.

“It is an available plant which is grown near the house. It also can be used for cooking and treatments, such as pepper, Bai-ya-nang, Greater Galangal, lemongrass, or Holy Basil.” (Housewife user)

Only one user stated that TTM was not only made from plants, but could also contain animal ingredients, as noted below:

“The word ‘herbs’ is identified to mean not only plants, but also to (parts of) animals, such as the bones of flying lemurs, quills, and the gall bladders of bears. All things surrounding us are herbs that can be used for the treatment of disease and to maintain your health.” (Male Farmer user).”

The two examples above indicate that most participants had constructed their knowledge and understanding that TTM is only plant- and/or vegetable-based medicine, without realizing that TTM can be mixed with animal parts. This shows that the participants had little knowledge of TTM, based on my views.

In addition, I found that the majority linked the attribution of TTM as plant-based medicine to the cost of TTM and thus, for participants, TTM is cost-effective because using it can help them to save money, given that they can use the raw materials they already have in and around their homes.

5.1.2.2 Knowledge of the forms of TTM: decoctions or medicinal pots for treatment as part of the Thai way of life

The findings revealed that some participants explained their meaning of TTM by using a ‘form of TTM’ to describe their understanding. The majority of the participants had mainly

been referring to TTM as *'decoctions/ medicinal pots'*. Only a few participants had mentioned the ground medicines. Despite the fact they mentioned TTM differently, however, they strongly referred to the past Thai culture of healthcare treatment that TTM had been used as a part of the Thai way of daily life and culture for centuries.

I also found that the participants, who explained TTM in terms of decoctions (medicinal pots) and/or ground medicines, also had the same sense that TTM could easily be found in their local areas and could help them to save money. This was similar to the participants who explained TTM by its attributes (in Theme 1, Sub-Theme 1), as noted below:

"TTM refers to the decoction or medicinal pots that are easy to find and it helps us save the money." (Housewife user)

Based on the first question, I realized that all participants had a high level of awareness of TTM in its 'traditional form', in particular decoction/medicinal pot. Yet, 61.4% of total participants were unaware of the new 'finished forms' of TTM. At the focus groups, some stated that they were seeing the finished forms of TTM for the first time. Moreover, participants with previous knowledge of the new form, could be grouped into two categories: 1) individuals who had seen the finished form of TTM, but had never used it (17.5%), and 2) those who had used it (21.1%). It is important to note that members of these two groups had seen and/or had used the finished form before the discussion. Nevertheless, when they were explaining their comprehension of TTM, none of the participants mentioned anything about having seen or being aware of the finished form, yet they had a high level of awareness about the traditional form. Without specifically being asked about the finished form, they would have been unable to compare and contrast their viewpoints of both forms. Once again, the findings indicate that the participants had little knowledge and awareness of TTM, causing them to be unaware of the new (finished) form of TTM.

To gain a greater understanding of their viewpoints about TTM, the consumer participants in the next stage were asked a few intermediate questions. For instance, the questions, *'How do you use TTM?'* and *'Do you have any allergic reactions to TTM?'*, were asked. The findings indicate that the TTM knowledge acquired by participants in terms of its production processes, side-effects and problems, was concerned with their use of TTM and included the ways in which they had come by that knowledge. This information is presented in sub-themes 3–6 below.

5.1.2.3 Knowledge of the production process: TTM is a simple process that has been handed down from generation to generation

More than half of participants had the perception that TTM (traditional form), is created by a ‘simple production process’, by using fresh herbs or boiling a single herb as a treatment for their minor illness. They believed that the preparations could be learned through the dissemination of TTM knowledge and that the practice had been transmitted by former generations. Thus, they understood that they could make this form by themselves if they could understand the methods. In fact, when the participants shared their experiences about making TTM for themselves, an observation was made that they had replicated what their former family members had done through an empiric base. They understood that the ancients had used some herbs with good results, so they decided to copy the procedures they had seen or done in the past by simply boiling herbs. Their actions did not display a broad knowledge of TTM. It was revealed that none had the experience of making the ‘traditional form’ by using many kinds of herbs and utilizing complex methods, unless their family members made it for them, as noted below:

“My grandma made something like ground medicine that (was) mixed with water. It looked like a poly-pharmacy by combining by many herbs, but I do not know what exactly it was.” (36-year-old Male non-user)

Regarding the ‘finished form’ of TTM, only one participant had the experience of making this with her family members. Her simple production process, using single herbs and made according to a local method, was similar to the participants who make the ‘traditional form’, as noted below:

“My older sister makes drugs by herself from turmeric, by slicing and drying, and then grinding it into a powder and making (it) into the capsules. We make herbal medicine by ourselves because they grow plentifully (here), so we do not need to buy. However, I do not know whether these drugs are standard or not because they have not been fumigated, just locally dried.” (47-year-old Female non-user)

It was noted that the ways in which participants had used both forms of TTM in their daily lives were by applying the simple methods and/or local methods, such as boiling herbs, as well as drying and grinding herbs to use when they were ill. Accordingly, none had utilized complicated methods in their TTM practices. Therefore, it can be concluded that almost all of the participants had a lack of knowledge in using both forms of TTM.

During the discussions, a 52-year-old Male government staff member and non-user (the only

governmental staff participant in the study) claimed that this phenomenon had occurred because the system in Thailand had caused the disappearance of TTM knowledge and treatments. This explanation may indicate one of the reasons that had made it necessary for the participants to utilize TTM via simple processes, because they lacked advanced knowledge, as noted below:

“I used TTM when I was young. In the old days, it is used for some diseases, such as malaria fever which is treated by sharpened herbage mixed with water. However, I have not taken (it) since then. It might be due to the progress that Thailand had made that has caused the above mentioned herbal medicines to begin to disappear.” (A 52-year-old Male non-user)

Based on findings from two participants (one Female Farmer non-user with a High School education and one Male private sector employee user with a Bachelor’s Degree) from different demographics of gender, age group, occupation and educational level, I realized that *“the knowledge of TTM had been discontinued, the knowledge of TTM had also been extracted”*. As previously noted, none of the participants ever mentioned TTM’s ‘finished forms’ unless I specifically asked about them. It is possible that the participants may have seen the new form of TTM somewhere before the interviews. However, they might not have thought that it was truly herbal medicine/TTM because their perception had been solely based on the old traditional form that mostly had to be boiled before use. For instance, a 47-year-old Female non-user stated, *“It seems like people have been implanted (with the idea) that herbs must be boiled and several steps done.”* In another statement from a 28-year-old Male user, who had once seen a sample of TTM ‘finished form’, said, *“Although the herbal medicine is in capsules, it is not different from conventional medicine because it does not look old & classical and does not imply ‘herbs’”*. Both examples indicate that when traditional treatment and TTM were lost from Thai culture of healthcare, the participants’ knowledge base retained the perception of TTM as plant-based medicine that had to be boiled or used local methods for consuming only, without realizing that nowadays TTM has been modified as finished medicine (tablets, capsules etc.) that is ready to use.

5.1.2.4 Knowledge of the side-effects when using TTM: TTM has fewer side-effects

With respect to side-effects of TTM, it is significant to note that all of the participants had a high degree of individual perception and blind faith that *“both forms of TTM offer few to no side-effects as compared to modern medicines”*. The main reasons were: 1) TTM is made

from plants, and 2) it is safer than modern medicines. Therefore, they strongly believed that TTM could be taken over a long period of time to maintain their health.

I found that when they reported side-effects when using TTM, they explained without having any personal experiences to support their statements. Most participants believed that if TTM were shown to have side-effects, there would be only certain symptoms, such as having a rash or itchiness. Furthermore, they explained that unlike using modern medicines, TTM would not affect their organs, as noted below:

“People who take herbal medicine continuously may have the risk of having accumulated substances or retroactive effects which are similar to taking conventional medicines. However, it may not have a lot of effects and is unlikely to affect the liver and kidney like conventional medicines.” (54-year-old Female user with a Primary School education)

While only two groups, with an age range of 51–59 years old, both users and non-users, were aware of side-effects when using TTM. However, they shared ideas *“based on their blind trust”* similar to the group of participants who were unaware of side-effects when using TTM, mentioned above. They reported that if the TTM had contained animal ingredients, been improperly produced, or been taken over a long period of time, there might be some side-effects that would occur later. For, instance a 52-year-old Male non-user stated: *“I have heard that unless we wash (it) well and boil cleanly, it will have accumulated substances.”*

The findings revealed that many participants were not concerned about TTM’s side-effects, because they claimed to just boil and drink them as they had for many years. Moreover, they mentioned that the TTM will be automatically excreted from their bodies. In addition, the findings showed that a Housewife non-user with a Primary School education believed that being *“allergic to TTM”* meant that detoxification was taking place.

In summary, based on observation, most of the participants constructed their knowledge regarding side-effects of TTM from their blind faith, without any experience or proof. It was found that most participants claimed that TTM is made from plants that have been used since ancient times; and TTM has fewer to no side-effects and is safer than modern medicines. Consequently, it can be concluded that the participants did not have adequate knowledge about side-effects when using TTM.

5.1.2.5 Problem in knowledge about using TTM: There exists a lack of knowledge about TTM properties and the proper dosages

The findings show that one of the reasons for rejecting TTM is a lack of knowledge about using it. Despite the fact that some participants believed that they could make TTM themselves, they believed that to use TTM one must have sufficient knowledge of what kinds of herbs to use for each disease. This thought not only came from the non-user groups but also from a member of a user group, as noted below:

“If I think of herbs, they must be in the woods or along the garden fence, and they are complex things. Therefore, you need to know how to use them. If not, they cannot be useful because they need to be mixed and (you need to consider) what diseases they will cure.” (50-year-old Male user)

According to a non-users group, some admitted that they did not use the ‘traditional form’ because they did not have adequate knowledge. They felt that they were unfamiliar with how to choose and prepare the herbs, and were unsure of which herbs could cure which illnesses. Thus, they had decided not to use TTM because its usage is too complex and complicated for them. For instance, two teenagers from a non-users group with an age range of 18–26 years (different genders and different educational levels & occupations) mentioned that, *“I do not have any information in which herbal medicine can cure illness.”*

Regarding TTM’s ‘finished forms’, some participants lacked sufficient knowledge with respect to understanding that “the properties and ingredients that the finished forms contain” are similar to the ‘traditional forms’. In particular, three participants from both the user and non-user groups, with different demographics, mentioned that *“I would like to know how concentrated the extracted herbal medicine in capsule medicines is.” (36-year-old Male Farmer non-user with a Senior High School education).*

Another three farmer participants with different educational levels specifically claimed that they did not know about the properties and dosages for taking TTM, which is different from conventional medicine that they just had to read the label for, as noted below:

“For herbal medicine, we do not know the exact dosage we have to use, which makes us scared of using them. It is different from conventional medicines which are prescribed by the doctors that are wholly disclosed on the drug cases.” (56-year-old Female user with a Primary School education)

One of the three mentioned above claimed without proof that TTM had only one active ingredient, which was different than conventional medicines that have many more active ingredients.

“The important point, there is only one active ingredient in herbal medicine, while western medicine may be combined with other active ingredients.” (57-year-old, Female General Contract non-user with a Primary School education)

The information gathered above indicated that participants perceived that they had a greater knowledge of conventional medicines than TTM. This perception was echoed by, a 57-year-old Female non-user, who mentioned: *“When I go to see the traditional doctor, I do not know which drugs can cure a stomachache or a headache, which is confusing. (It is) different from seeing conventional doctors.”* In the participants’ minds, a comparison of TTM to conventional medicines was always linked as the basis for their knowledge and rejection of TTM.

5.1.2.6 Contributions of knowledge about using TTM: TTM knowledge has been transferred from generation to generation and acquired by personal interest

As previously mentioned in Theme 1, Sub-theme 3, the participants’ knowledge of TTM had been replicated from previous generations through an empiric base, by copying the procedures that they had seen in the past. The findings unveiled that the knowledge of TTM also depends upon the individual’s personal interest in herbs. Despite the fact that many of the consumer participants did not have adequate knowledge in using TTM, it was found that the degree of interest that individuals have in TTM could make them want to learn more about it and to try to use it.

“It might be a personal preference. For me, I do like everything about herbs; I frequently find some herbal books for further study. When I feel sick, I will follow the herbal pharmacopeia’s directions for treatment, such as using grilled lemongrass to be pounded and mixed with warm water and salt for curing sore throat. However, to bring herbs to eat has quite a complicated process. Because I personally like herbs, I will make it myself.” (Female user with a High School education)

On the other hand, the participants who were not interested in herbs and TTM, did not want to discover any further information about TTM, as noted below:

“I am not interested in herbal medicine, so I am not interested to find out about its information.” (32-year-old Female Housewife non-user with a Vocational College education)

In summary of the knowledge and understanding of TTM by consumer participants, the findings indicate that they had explained their knowledge of TTM by using its attributes, forms, production processes and side-effects to describe their understanding. For them, TTM are household treatments that they can make themselves by boiling herbs/plants that are available at their homes and in their local areas. TTM are medicinal pots and decoctions that represent the Thai way of life and that have been used since the time of their ancient ancestors. Therefore, they believed that TTM has been used for centuries, and they can be used without having to worry about side-effects.

However, the findings indicate that knowledge of TTM has disappeared. As a result, the participants had been using TTM without having sufficient knowledge. They had utilized TTM (the traditional form) by using simple processes to treat their illnesses without realizing the existence of new finished forms of TTM. This was due to the fact that their knowledge and understanding of TTM had been solely based on using the traditional form, in which the process consists mainly of boiling the herbs. The findings also showed that the majority of consumer participants were unaware of the new finished form of TTM, due to the knowledge of TTM disappearing and discontinuing from the culture of Thailand's healthcare.

Participants also suffered from a lack of knowledge about side-effects when using TTM, as well as a lack of knowledge about TTM's properties and dosages. Finally, the results revealed that received knowledge of TTM had not only come via transference from past generations, but they, themselves, had developed individual interests in TTM that had inspired them to discover further information about using TTM to treat their illnesses in their daily lives.

5.1.3 THEME 2 Attitudes towards TTM: TTM is inferior to conventional medicine

The findings revealed that personal attitudes and beliefs in the 'efficacy of TTM', 'production process' and 'sense of belonging' are reasons for using or rejecting TTM. They also found that participants had a negative attitude towards TTM more than a positive attitude, as summarized below.

5.1.3.1 Attitudes about the efficacy of TTM: TTM is safe, but offers a slower recovery

Despite differences in the demographics and various viewpoints of the participants, I realized that their understanding, attitudes and perceptions of the efficacy of TTM treatment in the

traditional form had been constructed and shaped by the life experiences of their family members and culture. From my perspective, it is important to note that when the participants explained the efficacy of TTM in its traditional form, they meant that local wisdom, traditional beliefs, individual beliefs, and culture came along with TTM. Not only has this ancient wisdom been passed from generation to generation, it has been directly transferred from person to person, family to family, via the beliefs and experiences of each family member. From this myriad of factors, each individual has, over time and through his/her experiences, constructed his/her beliefs about TTM's efficacy. Accordingly, the efficacy of TTM in its finished form was constructed based on *"the belief of the efficacy of herbs and their traditional form"*.

Based on the participants' understanding that 'both forms of TTM' are made from plants, as previously mentioned, their attitude towards TTM is that it is safe. For instance, a strong statement to emphasize this belief came from a 27-year-old Male Private Sector employee user: *"I feel safe when I use TTM because substances do not accumulate in my body."* Indeed, another 54-year-old Female Housewife user related her beliefs about TTM's side-effects to *"the history of TTM"* and the fact that TTM has been used for generations in Thailand (including her generation). Thus, she had formed her belief that there are no side-effects and that *"it is safe"*. She claimed if TTM had not been safe, the ancient people would not have used it for generations until the present day:

"I certainly accept herbal medicine because it has existed since ancient times and has been passed down from my older generations. People who have used (them) also confirm that they had had good results. Moreover, it is made from plants which are much safer, so it is unlikely to have anything dangerous. If there is, it would not be much. Otherwise, people would not have been using them since (the time of) their ancestors." (54-year-old Female user)

Two females (one user and one non-user) with different ages, educational levels, and occupations had used "their own powers of observation" to explain their attitude towards the efficacy of TTM. They shared their experiences based on eye-witness accounts of TTM's ability to maintain health, as they watched their family members and friends use TTM to maintain their health, supporting their statements:

"My grandmother drinks boiled herbal water instead of pure water. Now she is 92, and still stays healthy. Therefore, (I want) to give an example of the experience to make other people understand the properties of herbal medicines." (28-year-old Female Private Sector employee user with a Bachelor's Degree)

“I have seen my neighbors buy herbal medicine to take, and I notice that they still have good health. Maybe this medicine does not create accumulated substances in the body.” (52-year-old Female Housewife non-user with a Primary School education)

With some participants mentioning efficacy of TTM by blind trust, history of TTM and their own power of observation mentioned above, most had a positive attitude of feeling safe when using TTM. Therefore, they had constructed a purpose in using TTM for helping them to stay healthy.

However, I revealed that in terms of efficacy of TTM there is a more negative attitude towards it than positive, that caused many consumer participants declining to use TTM. I found that members of all groups, particularly the users' group with an age range of 51–59 years old, had a high perception and attitude according to TTM's efficacy that *“both forms of TTM offer a slower recovery”*, but they cure completely, particularly the traditional forms, whereas conventional medicines offer a fast recovery time:

“I used both medicines which were prescribed by the doctor. However, the faster results must be the conventional medicine, while TTM (finished form) is a gradual treatment which is slower. Assume that we take a headache conventional medicine, it will cure within 5 minutes, but TTM must take a long time.” (54-year-old Female General Contractor user with a Primary School education)

Conversely, five participants from a user group aged 18–26 years old, and one participant from a non-users group aged 27–38 years old, stated that the recovery time is similar to that of modern medicines, because they believe that each medicine has its own properties to cure various diseases and duration of treatment of each drug depends on each individual patient's condition and disease process.

Despite the various views of TTM efficacy, the participants still valued the capacity of TTM when conventional medicines are their criteria for measurement. Therefore, they compared TTM's duration of treatment with that of conventional medicines and were able to explain their understanding of the capacities and efficacy of TTM, and could elaborate their ideas. I found that participants (both users and non-users), and in particular females, used the words “faster”, “quick” and “better”, to emphasize their ideas regarding conventional medicine's value compared with TTM's values. They formed their personal understanding of TTM and placed a value upon it in terms of the duration of treatment, demonstrating that for them TTM has lesser value than conventional medicine:

“We have to accept that conventional medicine is quick as requested.” (52-year-old Female Housewife user with a High School education)

“In my opinion, conventional medicine is better and can work faster.” (31-year-old Female Farmer user with a High School education)

“I am afraid it does not heal as fast as conventional medicine.” (48-year-old Female Housewife non-user with a Primary School education)

“For the believability, I think conventional medicine is better.” (32-year-old Female Housewife user with a Senior High School education)

In summary, I observed that the participants linked their understanding of TTM, its efficacy (in particular duration of treatment), and its side-effects to the following factors: 1) their blind trust; 2) TTM’s long history of use, which can be traced back to their ancestors, and 3) their observations of the results of TTM usage by themselves or their family members and friends. These three factors have been utilized by the participants as the basis for forming their ‘individual beliefs’ and for guiding their individual decisions that TTM is safe, but offers a slower recovery time. These factors and beliefs were used by the participants to determine whether or not to use TTM.

5.1.3.2 Attitudes about the production process of TTM products: The traditional form is dirty, but the finished form is clean

In the discussions, I found that production processes of TTM were also a factor that had assisted the participants to construct and form their attitudes, which ultimately led them to accept or reject TTM. However, I found the attitudes towards both forms of TTM, in terms of production process, were completely different. For participants, the traditional form of TTM was considered ‘dirty’, whereas the finished forms of TTM were associated with cleanliness, as summarized below.

With respect to the ‘traditional form’, the findings revealed that some of participants had the perception that this form was dirty, because they perceived that in the past herbs and TTM were put on the floor. Most participants perceived that the benefits of TTM not only came from the kinds of herbs used, but also from the ways in which they were prepared. The findings from the users and non-users of 27–38 years (particularly the Female participants) noted that perceptions of the production process of this form depended on the makers. Therefore, if the TTM had been made improperly, this form of TTM would be unclean and may lead to bad results, as noted below.

“For Thai herbs, if you boil them without cleaning, the result of treatment may

negatively change, and the properties may change too. Therefore, it may depend on the maker. Sometimes the herbs may be of good quality, but if the makers have an unsanitary process, the treatment may not be effective.” (31-year-old Female user with a High School education)

In contrast, when the participants had seen the finished form, the findings showed that the perceived quality of this form, particularly its “degree of cleanliness”, had a high impact on using TTM. This factor has shifted consumer confidence from the traditional form, making TTM’s new form more acceptable. For instance, a 31-year-old Male non-user, stated: *“If it is taken by the means of being sharpened from fresh herbs and is mixed with water, I cannot take it because I do not know if the water mixture is clean or not. But, if it is transformed to capsule medicine, I might try it.”* Another statement from a 32-year-old Female user also emphasized the importance of cleanliness: *“The more the finished pattern of herbal medicine compares with Western medicines, the more I (would) choose using herbal medicine because at present it is contained in clean packaging.”*

Nonetheless, a few participants were found to have retained their negative attitudes towards the new finished forms of TTM. They expressed concerns about the quality of this form with regard to degree of cleanliness, which is similar to the opinions of others regarding the traditional form above. For example, one of two Housewife users from the same age group (27–38 years) and of the same educational level (Senior High School) stated, *“I do not trust in the quality of the capsulized drugs contained therein.” (35-year-old Female Housewife).* This statement shows that for participants’ attitudes towards both forms of TTM, whether or not TTM had been modified, some participants still had a lack of trust in the quality of production processes of both forms. I found this negative attitude provided by another Housewife user, who shared her ideas that due to perceiving the “traditional form” as unclean, the image of the “new form” may be affected:

“It may (be) because (of the fact that) before being capsulized, the herbal medicine had been placed on the floor. In my opinion, some people think that it is dirty, smells awful, and is bitter.” (32- year- old Housewife user)

One of the Female non-users said that *“The dirtiness (of TTM) is one of my considerations for using TTM”*. Thus, I strongly concluded that in terms of the production process, ‘cleanliness’ was the most important factor when making decisions about using both forms of TTM. In particular, the finished forms have been more widely accepted than the traditional forms because participants rated them as having the same value of cleanliness as modern medicines.

5.1.3.3 Attitude about a sense of belonging: TTM does not belong to them

Based on the discussions, I revealed that some participants had formed their attitudes by using three criteria, 'age', 'illness' and 'culture', to explain their attitude towards using TTM. Consequently, they mentioned that TTM does not belong to them, as summarized below:

Three females with an age range of 27–38 years, with different educational levels and occupations, had the following perception: *“TTM was primarily used by the elderly.”* Therefore, one of them used 'age' as the criteria for using TTM. For instance, a 31-year-old Female non-user mentioned, *“It is a drug that elderly people have liked to make since ancient times, such as decoction, medicinal pot, or wrapped herbs that are used for solving sprains. I also consider that it is not my age to use herbs.”*

Another attitude is: *“TTM is for people who have serious illnesses.”* This statement comes from a 52-year-old Female Housewife non-user who further stated: *“Only people who have diseases consume herbs. I also started drinking Dao-Inca (Sacha Inchi) and Pandanus leaf mixture for curing my high (blood) pressure”*. I found that these attitudes and perceptions made some participants believe that TTM did not belong to them and, therefore, they did not want to use it.

However, I revealed the major conflict in attitudes on using TTM represented the current culture of their healthcare and health choices. The findings revealed that five out of eight groups (groups 2–5 & 7) mentioned that they (including others) believed that *“they were not born into a personal culture that included herbs, but had been born into a culture of modern medicines”*, as follows:

“I think (that) they (the non TTM users) are their belief and culture, that they have not been accustomed to using Thai herbs since they were young. Just like us, we are familiar with conventional medicine since we were young.” (27-year-old Male user with a Bachelor's Degree)

In summary, with respect to the sense of belonging, there was a strong belief that TTM did not belong to participants because 'age', 'illness' and 'culture' had been used to construct their attitudes. Therefore, some of the participants concluded that TTM is for the 'elderly' and for *“people who really have serious illnesses”*. In addition, they noted that as they had not actually been born with herbs and TTM, they were not a part of the participants' cultures.

This attitude towards TTM had accordingly made some participants not consider using TTM.

According to Theme 2 Attitude towards TTM: TTM is inferior to conventional medicines, to sum up the discussions, it can be concluded that participants had constructed their attitudes towards TTM based on three major reasons: 1) a lack of trust about TTM products in terms of ‘efficacy’ in that both forms of TTM offer a slower recovery time and requires a ‘production process’; 2) the production process concerned with degree of ‘cleanliness’ (in particular traditional form), and 3) a lack of ‘a sense of TTM belonging to them’ because they were unaccustomed to TTM.

These three factors made some non-user group members dislike herbs and TTM, shun the knowledge of its benefits, and as a result had rejected TTM:

“I have never used herbal medicines. I, therefore, barely know how many advantages they have. Usually, I use the hospital’s medicine. Maybe it is because I am not interested in herbal medicine, so I am not interested to find out about its information.” (32-year-old Female Housewife non-user with a Vocational College education)

More than disliking herbs and TTM, I found that three Female non-users, working as General Contractors, in different age groups and of different educational levels, had a strong bias against TTM. Three of them stated that it is inferior to conventional medicines:

“Herbal medicine is bitter, unattractive, and more difficult to take. It is different from conventional medicine that we can take more easily.” (22-year-old Female with a High School education)

“I think Western medicine is better because it can cure faster, and it must have been well extracted. On the other hand, herbal medicine needs much water to be boiled for a long period until one cup remains. The important point, there is only one active ingredient in herbal medicine, while Western medicine may be combined with other active ingredients.” (57-year-old Female with a Primary School education)

One of the users stated that, based on his experiences, people who do not use TTM may think that TTM cannot compete with conventional medicines:

“Another opinion is that Thai herbs do not cover every illness, so they cannot compete with modern drugs.” (27-year-old Male user with a Bachelor’s Degree)

Thus, with respect to that attitude towards both forms of TTM, it can be concluded that from the majority of participants’ vantage point, TTM is inferior to conventional medicine in many aspects, except side-effects.

5.1.4 THEME 3 The practice of TTM: TTM is a second choice and only for the treatment of minor illness

This section presents the current practice of TTM based on the participants' voices. The findings review that the participants' behaviours in using TTM are based on four factors: 1) culture and belief; 2) social factors; 3) knowledge and attitude, and 4) economic situations and lifestyle. The problems associated with the practice of using TTM are also reviewed. The results are presented as follows:

5.1.4.1 The practice of using TTM depends on culture and beliefs

As previously mentioned in Theme 2 Attitude towards TTM: TTM is inferior to conventional medicine, the efficacy of TTM treatment in the traditional form had been constructed and shaped by individual beliefs, traditional beliefs, local wisdom and culture. It was reviewed that the ancient wisdom and beliefs of TTM had been passed from the participants' past generations to them, and thus led to their current practice of using TTM:

i) TTM are preventive medicines to be used for minor illnesses and for certain conditions

With respect to the 'traditional form', the findings revealed that it was a 'preventive medicine' for curing participants' minor illnesses, such as fevers, chicken pox, wounds and certain other conditions. For instance, there was significant evidence from female participants, who believe that it is good to use the traditional form after giving birth, because it can help a woman's uterus to recover, as it is traditional belief:

"Personally, I took decoction and medicinal pot when I gave birth. It helped in uterus involution and lochia exudation, but it makes the lochia foul-smelling because it expels the excretion from the body, but it helped me to recover very fast." (Female user)

Two young male participants (one user and one non-user), with the same level of education and same occupation, strongly believed that traditional treatment and TTM were good after having an accident. Indeed, one strongly believed that it was "a belief in Northeastern Thailand" (where the focus groups were conducted):

“From my experience, when I fell off my bike, it is the belief of (the people of) the Northeastern part to bring the patient grilled on fire of Ngai Camphor Tree (which) will make the blood circulate better and (help) the wounds to heal faster.” (Male user)
“I used to try herbal medicine by drinking decoction to cure the bruised (area) as I was hit by a car.” (Male non-user)

Regarding the ‘finished form’, I found that the belief in the efficacy of TTM in this form had been based on *‘the belief of the efficacy of herbs and traditional form’*. A few female users and non-users, from groups with different age ranges, significantly claimed that Creyat was good for curing sore throats and Turmeric was good for flatulence. Therefore, when they had symptoms, they had continued using them:

“I used to take Turmeric, and it is laxative by burping. I (would) get better very quickly.” (19-year-old Female non-user)

“I usually buy Turmeric to have at home. It makes my stomach relieved when I have flatulence.” (47-year-old Female user)

“The doctor prescribed Creyat that were compatible with my illness and could cure (me) completely. That makes me begin to have personal preference. Now I use it in case I have a sore throat.” (31-year-old Female user)

Indeed, I found that the consumers constructed the purpose for using each form of TTM for each illness, despite having a lack of knowledge about TTM. They used their own beliefs as well as traditional beliefs to negotiate their healthcare, in order to select what kinds of illness and when to use both forms of TTM. Later, they informed me of other benefits of TTM to negotiate their health choice, as following.

ii) TTM are alternative medicines to treat cancers and to promote wellness

Another belief in using TTM is that it can be viewed as an ‘alternative medicine’ when patients have cancer, and the traditional form of TTM may be used in conjunction with modern medicines in some cases. For instance, one Female Private Sector employee user immediately stated, *“In case of having a cancer, I will choose herbal medicine because all people use herbs when they have cancer. Anyway, it may be used with conventional medicines as well.”* Once again I realized that the participants’ decision in using both forms of TTM did not come from their own knowledge. In contrast it came from their own belief and/or their observation, to construct the purpose for using TTM, in particular the traditional form.

In addition, based on the participants' beliefs that TTM would have fewer side-effects than modern medicines, several participants strongly believed that TTM was 'alternative medicine' that they can consume over a long time, which was good for their health and promoted wellness.

Consequently, they ascribed their personal attributes of TTM based on 'traditional beliefs and individual beliefs' to form their practice in consuming TTM as being useful as 'preventive medicines', which can cure minor diseases and relieve symptoms, and/or as 'alternative medicines', which can maintain good health and when having cancer.

5.1.4.2 The practice of using TTM depends upon social factors

Based on the usage of TTM in the previous Theme 3, Sub-Theme 1 above, the findings revealed that most participants had explained their experiences based on their direct or indirect experience of using '*TTM in the traditional form*'. It was found that their experiences had mostly focused upon the decoctions/medicinal pots to treat their minor illnesses. Moreover, their attachment to TTM had been based on their childhood usage when family members, such as grandfathers and grandmothers, had given it to them or when they had seen their family members (or others) use it when they were young:

"I have some for certain diseases. When I have illness, my mother and my grandmother will sharpen drugs and have me drink it, like a tradition that has been passed on by the generations." (23-year-old Male General Contractor user)

The findings also unveiled that participants frequently mentioned that based on the treatments their family had used in the past, they currently often used the same traditional treatments, in particular for wounds. For instance, a 26-year-old Female user admitted that, when having wound, she imitated the treatment methods her parents had used:

"I used a press of papaya leaves on bruises. Sometimes taking medicine does not completely cure. Anyway, it depends on the disease you have. Maybe it is the custom we have seen my parents do, and we imitate (it)."

I found that the participants who continued using TTM in the traditional form had the confidence to use it, because they felt that they could trust the recommendations of family members or friends:

"Some people accept its properties, but some others do not. Meanwhile, some people still wonder if it can cure (them) completely or not. For me, I accept its properties because my mother used to use TTM, and it worked well." (23-year-old Female user)

“I will use if it (TTM) is from my neighbour’s suggestion, like Java ginger, it is dug out and sliced for boiling. Actually I follow ones who recommend whatever is good for health.” (46-year-old Female non-user)

The reason most often mentioned for discontinuing use of the ‘traditional form’ was that the family member, who had helped them with TTM, had died. An example is from a 22-year-old Female non-user: *“I used it when I was a child. My grandfather used sharpened root of herbs boiling with water when I had chickenpox or whatever. Since he has died, I do not use (it) anymore.”*

Another reason to stop using the traditional form came when some participants were being treated by medical doctors. They stopped using TTM because they were afraid that the doctors would blame them for using TTM (traditional form). Therefore, some of them had stopped using the traditional form of TTM while being treated with conventional medicines:

“I usually take herbal medicine as a kind of ground medicine or carminative. However, I do not take herbal medicine while taking conventional medicine because I am afraid that the doctor will blame me.” (54-year-old Female user)

Regarding the ‘finished form’, the percentage of participants who had used it was 21.1% (12/57 participants). However, it was significantly found that these participants, who had used this form of TTM, had had them prescribed by medical doctors (75%; 9/12 participants). It was found that sometimes the medical doctors prescribed the finished form of TTM in conjunction with conventional medicine treatment.

While the percentage for the other three channels was 25% (three participants), one Female Farmer user had used the finished form of Creyat that belonged to her niece. Two other Farmer participants (one user and one non-user) in different age groups had, themselves, bought the finished form to use. A 50-year-old Male user had bought a finished form of TTM from ‘an advertisement’, whereas a 46-year-old Female non-user had bought it from ‘a drugstore’. Thus, it can be concluded that the practice of finished form of TTM really depends on the medical doctors. Many participants, particularly those in the non-users group, stated that they would use ‘TTM in finished form’ if the doctors prescribed them, because would feel safe using it under supervision of the medical doctors; the participants who had chronic diseases would especially be comforted by that fact.

“I have never seen the finished form, but I know the kind of herb. So far, I have always used conventional medicines. If herbal medicine is recommended by the doctor, I think I would try (them).” (45-year-old Female non-user with a High School education)

“I have just seen today. But for me, it depends on the doctor because I have chronic disease, so I have to take medicine according to the prescription. I believe that the doctor must prescribe relying on my symptoms.” (47-year-old Female non-user with a Primary School education)

One Male user strongly stated that he (and others) depended on the decisions of medical doctors and would not go against their decisions.

“We have to be dependent on and not argue with the doctors of course.” (52-year-old Male user with a Bachelor’s Degree)

Based on the discussions, I found that some participants had changed their roles of ‘users’ and had become ‘advisors’ after they had experienced good results from using TTM. Some had had the experience of recommending TTM to their family members and friends. Nonetheless, some others would only recommend TTM to their family members. Their reasoning for not recommending it to others was due to the fact they were afraid that if it was not good or something went wrong, the others would later complain to them.

In summary, with respect to the practice of using TTM, the participants developed trust about using the ‘traditional form’ based on the experiences of their family members and friends. For their ‘family members and/or friends’ they act in the capacity of advisors, by playing an important role and supporting use of the traditional form.

In contrast, the role of advisor for the finished form of TTM is played by the medical doctors, because their patients place their trust in them and rely upon their authority. Yet, the medical doctors have exerted their influence to stop individuals from using ‘both TTM forms’ and, in particular, the traditional form. Based upon the circumstances, consumers can shift between their roles as users and advisors when they feel that their TTM experiences have been positive enough to recommend TTM to others.

5.1.4.3 The practice of using TTM depends on knowledge and attitude

The findings indicate that the consumer participant’s knowledge of TTM had been transferred from previous generations, when they had seen their family members use TTM, and/or when their family members had given them TTM as a treatment. It was found that some had still

been using TTM by copying the procedures that they had witnessed or that they had carried out in the past. However, their knowledge was empirically based and did not represent advanced forms of knowledge, because single herbs (not herbal combinations) had simply been boiled. The simplistic methods of usage were due to the fact that TTM knowledge had disappeared from Thailand. Consequently, the participants had been using TTM with a lack of sufficient knowledge.

The findings significantly indicate that the knowledge of the consumer participants was directly related to the use of TTM. I revealed that both users and non-users had mentioned the fact that to use both forms of TTM, one must have sufficient knowledge of what kinds of herbs to use for each disease.

“You need to know how to use them. If not, they cannot be useful because you need to consider what diseases TTM will cure.” (50-year-old Male user)

Therefore, the participants who were not using TTM strongly admitted that they had not been using it because they were lacking knowledge of it.

Aside from having the necessary knowledge to use TTM, I found that the participants' attitudes towards TTM were also a factor that had impacted their personal usage of TTM to negotiate their health choice. The findings revealed that the participants, who had expressed a definite bias against TTM, had shunned comprehending the benefits of TTM and had, as a result, decided not to use them:

“No, I do not accept (TTM) because I do not use (them), and personally do not like herbs. Even though they are grown along my place” (47-year-old Female with a Primary School education)

In contrast, the participants who had exhibited favourable impressions of TTM, had also developed individual interests in TTM and tried to discover further information about using it to treat their illnesses. Therefore, it can be concluded that individual knowledge and attitudes about TTM are factors that encouraged the consumer participants to use TTM.

5.1.4.4 The practices of TTM depend upon current lifestyles and economic situations

The participants' perceptions on why they and other people consumed TTM can be summarized as follows: 1) TTM remains as their culture's and individual beliefs since past generations; 2) they believed in those who had recommended TTM to them; 3) TTM could

help them to cure diseases and provide sustenance; 4) TTM has fewer side-effects, and 5) TTM were often found growing around their homes, so they could save money.

However, when I asked about what they would do if they were ill, I realized that all of them would take drugs they had on hand or buy drugs to care for themselves and if they didn't recover within a few days they would then go to hospital. Therefore, their first choices were modern medicines, and they particularly mentioned Paracetamol. Later, I asked why their first choice had not been TTM and why they had not performed a cross-check to determine TTM's usefulness for their conditions. As previously mentioned, given that they could make it themselves and could save money, why had they not used TTM in the first place? For the reasons stated below, participants explained why they had rejected the use of TTM for first practice in their lives.

The results revealed that the rationale that caused some participants to use or reject TTM was their lifestyles and economic situations. I found that these participants perceived these two conditions as their barriers. Their concerns arose from two specific areas: 1) traditional form of TTM—concern with the inconvenient nature of using this forms; and 2) finished form of TTM—the barriers arising from the inaccessibility of this form are distribution channels and cost. Thus, they reject using both forms of TTM because each form of treatment and products was not suited to their current lifestyles and economic situations, summarized in the following.

i) The inconvenience of using the traditional form (time consuming, taste and smell)

As previously mentioned in Theme 1, Sub-theme 3, some of the participants who had the perception of a simple production process of the traditional form (simply boiling herbs), still used traditional treatments in their daily lives. For instance, a 54-year-old Female user said, *“Today, I drink boiled herbages which are for uterus treatment, and Dao-Inca to heal the pain in (my) legs.”* However, the individuals who used TTM via simple processes explained that they had spent time in this pursuit, such as finding, washing and boiling herbs in order to produce TTM for consumption, and this had not been convenient for them.

For some participants, in particular non-users, the inconvenience encountered in using the traditional form had led to the perception that it is *“a complicated process which wastes time*

to produce”. As a result, many participants (including users) stated that they had had difficulty when using the traditional form of TTM:

“For herbal medicines, it is difficult to take and to produce medicines because they need to be found and boiled before they can be used. Because of the many steps in the production, it makes me think that it is difficult to use.” (40-year-old Male non-user)

Three female non-users with an age range of 39–50 years strongly admitted that their laziness had made them decide not to use this form.

Another inconvenience about using TTM is concerned with its taste and smell. The participants from each of the groups highly agreed that the taste of the medicinal pots (traditional form) was harsh and bitter, plus they believed that TTM smells bad, which had made it difficult for them to take. Therefore, some refused to use it because it had been inconvenient to consume.

“It is bitter, harsh to the taste, and smells awful. Therefore, I would rather not take (it) even though I like herbs.” (31-year-old Female non-user)

ii) The barrier of inaccessibility related to finished forms of TTM

Once the samples of the ‘finished form’ were shown to participants, almost all members of the groups (except the users’ group with age range of 51–59 years) expressed positive views. It was stated: *“It is easy and convenient to use the finished form. (It is) similar to modern medicines.”* Examples of the ideas expressed by participants with different demographics are shown below:

“Finished herbal medicine makes us more comfortable because we do not need to boil or do it by ourselves since it comes in the capsule form.” (28-year-old Female Private Sector employee user with a Bachelor’s Degree)

“I have just seen (it) today and think that if it is packed in the box with the description of its properties, like conventional medicines, it would look desirable. Suppose that you have a stomach ache and it takes a lot of time to find and make the herbs, this is very uncomfortable. Yet, if herbs are adjusted to be in the case or capsule, it will much more comfortable and convenient.” (41-year-old Male Merchant non-user with a Vocational College education)

“I have never seen it before today. I think it looks like Western medicine. If it is being sold, I will buy to take because it looks convenient. I think if it is really good; of course, people will buy it.” (52-year-old Female Housewife non-user with a Primary School education)

A significant discovery was that the participants' perceptions about the 'new form of TTM' were similar to perceptions about conventional medicines. Thus, they concluded by their own blind faith that the new form was not bitter like modern medicines, which contrasted with the traditional form. The fact that the TTM had been extracted and capsulized and that it was in clean packaging made it easier for them to accept and take.

Indeed, I uncovered that the main reason for selection was its convenience over the previous form; participants did not have to make it themselves and that reduced their barrier to use compared to the traditional form. This includes participants having trust in the quality of cleanliness and the fact that it has few to no side-effects for the new finished form. Yet, the desire of many participants (both users and non-users) led them to want to try it. Because they want to avoid the side-effects from conventional medicines, participants stated that they would like to use the 'finished forms' as a replacement for modern medicine and/or as another option for their healthcare.

"We know that taking conventional medicine erodes the stomach. If herbal medicines (the finished form) can replace, anyone would like to try, and if it has a good result people will turn to use more." (45-year-old Female Farmer non-user)

"Now we have seen this form, we should try using and change to new ideas so that we will have a new choice." (47-year-old Female Farmer non-user with a High School education)

Only two female participants in the different age groups (one user and one non-user) did not want to try using the finished form of TTM. This was because some capsules came in large sizes and some smelled, making them hard to consume.

"I believe in the products, but the reason I do not use herbs is because of their taste and a smell (traditional form). Although they are processed to be in capsule form, they are still hard to swallow and their smell still spreads to my nose." (37-year-old Female non-user)

Despite the fact that the finished form of TTM could reduce the barriers of inconvenience that were involved with preparing and using the 'traditional form', there was another problem concerned with the 'distribution channels' and 'cost barrier' in using the finished form, which made the participants reject using TTM, summarized as follows.

a) The distribution channels of the finished form are in short supply

It was found that some participants had perceived a barrier to use as not knowing exactly where to find the finished form. For instance, an explanation was raised by a 20-year-old Male non-user: *“If it (the finished form) is in capsules, it may be easy to take. By the way, is it difficult to find?”* In addition, a 42-year-old Female user said, *“I have never tried (finished form) because I think it is in short supply. I do not want to waste my time to find whereas conventional medicine is more convenient for me.”*

The results unveiled that members of the user and non-user groups had mostly thought that the ‘finished form’ is in short supply and only available from hospitals. One had just found out on the day of interview that TTM is dispensed in the hospitals. Six participants (10.5%) realized that the finished form of TTM was available in the marketplace. Four participants (three users and one non-users) had realized that TTM was available in 7-11 convenience stores. One 46-year-old Female non-user had bought the finished form of TTM (Creyat) from the ‘drugstore’, while a 50-year-old Male user had bought it from ‘an advertisement’. This showed the barriers to the distribution channels for the participants wanting to use the finished form of TTM.

A great explanation provided by one Male non-user (the same person who stated that modern progress in Thailand had made TTM disappear) led me to understand their awareness and belief of TTM. He stated that Thais were unaware of it and a possible reason for this could be because not many herbs have been produced to be taken in their finished forms:

“It sounds like Thai people are unlikely to know herbal medicine despite the fact that herbs we eat everyday are plants, vegetables, and food. Maybe there are quite a few finished herbal medicines (among these), so people may not know about them.” (52-year-old Male Government staff member non-user with a Bachelor’s Degree)

From the participants’ viewpoints, finding places to purchase the finished forms is another point of concern about using them. Therefore, some would personally prefer to rely on conventional medicines as noted below:

“TTM cannot be found at every place, so we need to choose conventional medicine instead.” (27-year-old Male user with a Bachelor’s Degree)

b) Cost barrier of the finished form

Based on the discussions, it is significant to note that all participants from both groups acknowledged that the ‘traditional form’ could save them money because they could make it themselves, by using vegetables/herbs already planted at their homes. In contrast, for the ‘finished forms’, findings revealed that some perceived the cost barrier in using it because they thought that some finished forms were more expensive than conventional medicines. For instance, a 23-year-old Male user mentioned, *“I never took (finished form of TTM) because I am afraid it is expensive.”* A further comment on the cost of TTM’s finished form came from a Male non-user who emphasized his idea by comparing the price of one kind of TTM with the price of Paracetamol:

“It has been said that some herbal medicines are more expensive than conventional medicines. As we have bought (them) at the drugstore, you will see that both drugs have the same efficacy, but the price tag of herbal medicines is higher. For example, Paracetamol is just ten baht whereas herbal medicine is more than twenty baht.” (52-year-old Male non-user)

I also found conflict between users/patients and medical doctors. Some participants believed that medical doctors would not prescribe the finished form of TTM for them. Therefore, they believed that they, themselves, had to buy it. As a result, they stated that although they would like to try them, they did not want to buy the finished forms for two reasons: 1) the plants were growing at their homes, and 2) nearly all were using their social security card to cover their healthcare costs and did not want to pay extra for TTM. For instance, a 35-year-old Female Housewife from the users group strongly stated, *“For me, I definitely will not buy those drugs (Creyat) because I already have Creyat trees at home, and it can be taken with hot water.”* A 54-year-old Female Housewife non-user said, *“For me, whatever you say. Herbal medicine is alright. If the doctor prescribes for me, I will take. But if I have to pay for myself, I will not buy it.”* Therefore, in order to reduce the cost of their health expenses the participants have rejected using TTM products.

5.1.4.5 The practice of TTM is only for the treatment of minor illnesses

Based on the aforementioned factors from Theme 3, Sub-themes 1–4, it can be summarized that the participants still believed in herbs and TTM, as they represent Thai culture and their individual beliefs. Some had used TTM due to the trust that they had in their family members

and/or friends. However, it was found that the main barriers that caused them to refuse to use TTM had been their knowledge and attitude towards TTM, which also included their current lifestyle and economic situation.

Moreover, the findings showed that the perceptions of the respondents had been: 1) the ‘traditional form was dirty’ as a result of its production processes, and 2) both forms of TTM ‘offered a slower recovery time’. Both perceptions had led to a lack of confidence among the participants. Thus, when using drugs to treat themselves, the participants said that their sense of confidence had been more focused upon conventional medicines, especially when experiencing serious illnesses.

All of these factors led me to uncover that the majority of participants had constructed proposals on using each medicine to negotiate their health choices, based on: 1) given that TTM can be consumed over a long time period, it can be used to maintain their health; 2) TTM is a preventive medicine for minor illness, and 3) conventional medicines are for treatment, especially in the case of chronic diseases.

As a result, they consider that the traditional form of TTM is to only be used for minor illnesses and certain conditions and/or promote their wellness.

“Consequently, I have more confidence in conventional medicines, even though I accept Thai herbs. I may use them for minor illnesses, but for serious illnesses, I prefer conventional medicines.” (31-year-old Female user with a High School education)

“Personally, I think herbal medicine is complementary medicine that if we take (it for) long use, it will make us healthy. However, it is not the exact medicine, so we should go to conventional medication if we need treatment.” (36-year-old Female Farmer user with a High School education)

“I choose Paracetamol for healing a fever or a headache. However, it must have more accumulated substances than herbal medicine. The purpose we take it is for treatment; while herbal medicine is for maintaining our health and we can take (it for a) longer time.” (51-year-old Male Farmer user with a Vocational College education)

In contrast, the data showed that the finished form of TTM can replace the conventional medicines in some cases. It was found that two participants (one from each group) who had beliefs in efficacy of modern medicine and TTM were different. Therefore, they used ‘diseases’ to construct their health practice, and had switched between drugs (conventional

medicines and the finished form of TTM) to treat their minor illness for the specific symptoms:

“It depends on a disease. For example, I take two tablets of paracetamol to heal a headache, while (if I have) a fever, I had better use Creyat which is more compatible.”
(23-year-old Male General Contractor user with a Vocational College Education)

Regardless of the reasons that participants had for practising with TTM, I revealed that they felt that both forms of TTM were only to be used for minor illnesses, because there were three major obstacles for them: 1) they lacked sufficient knowledge of TTM and proper attitudes about using them; 2) given that TTM offers a slower recovery, there was a resulting lack of confidence regarding its efficacy; and 3) the inconvenient nature of using both forms of TTM had made them unsuitable for the participants because TTM did not fit their current lifestyles and economic situations.

The participants from both groups claimed that even though they noticed side-effects from conventional medicines, they would rather use them because they were not patient enough to be cured by TTM. For instance, 54-year-old Female Housewife non-user concerned with her economic situation strongly stated this specific reason: *“Although patients know that it (conventional medicines) is dangerous, they need to be cured as fast as required so that they will be able to work to earn money.”*

To sum up the TTM practices, for participants TTM was considered to be their second choice and/or last choice for their healthcare treatment. This was because they had perceived barriers and limitations in regard to using TTM. However, it was found that when they had become dissatisfied with conventional medical treatments, they may turn to use TTM:

“I have used TTM once when I got (a) problem from playing sport. Before using this product, I had used conventional medicine and it did not make me get better. Therefore, I decided trying this advertised medicine (TTM) for my last choice.” (50-year-old Male user)

“I may try (TTM) if my illness cannot be cured by conventional medicines.” (42-year-old Female user)

Consequently, the role that TTM plays in their healthcare is limited to the treatment of their minor illnesses, or when having cancer. Another role that TTM plays includes the promotion of their wellness.

5.1.5 THEME 4 Communication and media of TTM: Insufficient promotion of TTM

To evaluate the level of commitment regarding governmental policies to promote TTM, the participants were told that currently the policies were to strongly promote TTM. With respect to these policies, they were asked to express their opinions. I found that the agreement to promote the use of TTM in Thailand by the government showed the rationale related to the benefits of TTM in terms of medical benefits, economic and culture of treatment. Overall, all participants strongly agreed that the government should support the use of TTM in Thailand because they see it as beneficial to both individuals and to the country of Thailand itself. The major reasons for supporting TTM were as follows: 1) *To replace modern medicines* because the perception of TTM is that they have few to no side-effects. Thus, if the government were to promote TTM they would easily grant access to TTM to serve as a replacement for modern medicines; 2) *Saving the individual's and country's expenses* because the participants believed that TTM is cheaper than modern medicines if raw materials from Thailand are used; 3) *Retaining Thailand's cultural heritage* because the participants would like the new generation to know about TTM and they may want to use it if the government strongly promotes it. In this way, the Thai way of life can be retained long into the future. Example of participants' expressions of the government policy are noted below.

"I agree (with promoting TTM) because herbal medicine belongs to Thailand, and we can use the material in our country so that we can save the national budget." (21-year-old Female non-user)

"I agree because we could conserve TTM for future generations in order to inherit and gain knowledge of more information. If they have enough information, they will return to using TTM." (20-year-old Male non-user)

The participants explained their opinions about the government policies to promote TTM. Later, they were asked about communication channels and activities where they have learned about TTM and which have been most influential in promoting it from their viewpoints. They were also urged to compare and contrast the communication of TTM from both government and private sectors. The following section presents the results:

5.1.5.1 The insufficient promotion by the government sectors

Regarding the government's promotion of TTM, it was found that 14.0 % (8/57 participants) learned about TTM through the government's promotion practices. These findings came from

four participants from the users group with an age range of 18–26 years, who had come to know about TTM by doing their own research and presenting reports on the topic in high school. Another two participants had been introduced to TTM by hearing about exhibitions on TV. One 57-year-old Female from a non-users group had gone on a sightseeing tour arranged by the Sub-district Administrative Organization. One 41-year-old Male non-user, by chance, had gone to an exhibition when he went shopping at a department store, where an exhibition was being held.

Specific to the channel of ‘Mass Media and Activities’, this translates into only 7.0% (4/57) of the total participants having learned about TTM from the government, through TV, Exhibitions and a Sightseeing tour. With respect to ‘Exhibitions’, I found media conflict for the promotion of TTM by the government. The findings showed that for this channel only negative viewpoints had been expressed, whereas with respect to the other media channels and activities, participants had expressed the pros and cons of them.

Results showed that all four females from the non-user group with an age range of 27–38 years were in disagreement about exhibitions being a channel for the government to promote TTM. One believed that this type of event was held only for people who liked herbs. The three others stated that exhibitions were for people who liked to buy herbal cosmetic products. This was because the products being sold in the exhibition were mainly cosmetic products rather than TTM. A statement was made by a 57-year-old Female non-user who said that the exhibitions do not offer access to many people because they are held infrequently and are sometimes discontinued. Furthermore, a 42-year-old Female user strongly noted that when exhibitions are held in ‘hotels’, they are not held in places that rural people frequent and that it wastes the government’s money. Therefore, according to the beliefs of the majority of participants, particularly from six Females (one user and five non-users) from three different groups mentioned above, ‘Exhibitions’ were not good government channels for promoting TTM. Consequently, I claimed that there is communication and media conflict in regard to the promotion of TTM in Thailand by the government, which affected the current understanding, awareness and knowledge of TTM.

“I have seen the news about the exhibitions, but I have never been there. I personally think it should not be held because it wastes the budget and it can only gain access to a few of the targeted people. When an exhibition is held like this (one), it is difficult for people who are in rural areas to reach there. For example, when an exhibition is held

at the hotel, I believe that no villagers from remote areas would come. Therefore, it cannot (provide) access to villagers.” (42- year-old Female user)

Nonetheless, I found that knowledge and awareness of TTM of participants in both the user and non-user groups could be improved by promoting activities, such as sightseeing tours, and by utilizing mass media via the Internet. It was found that some participants had searched for information about herbs from various websites when they had to do their reports or projects. Another had been on a sightseeing tour arranged by the Sub-district Administrative Organization. Later, they had become interested in herbs and applied their knowledge about TTM in their daily lives.

“My teacher assigned me to do the report about the usefulness of herbs that I had never known before. During the time of searching the information, I got more interested and gained more knowledge of herbal medicines.” (19-year-old Female user, Student)

“Currently, I have worked on a project about herbs, but I do not have any knowledge of this field. So, I have searched for information about herbs, such as the hot compress ball and then I have done the research. I have applied this information and use it in daily life.” (23-year-old Male General Contractor user)

“Once, my government office had a sightseeing tour to the herbal garden belonging to Princess Maha Chakri Sirindhorn. Before that, I had not known what plants are for medication until I went there. I found that everything we eat or plant is herbal medicine, such as snake jasmine flower, Wildbetal Leafbush, etc. I realized that everything in Princess Maha Chakri Sirindhorn’s garden is herbal medicine.” (57-year-old Female General Contractor non-user)

5.1.5.2 The exaggerated claims in advertising by the private sectors

The number of findings from the discussions confirmed that participants had received more information about TTM from the private sector than from the governmental sector. Moreover, they had mostly received their information from the *Radio* and *TV/Cable TV* respectively. However, it was revealed that advertisements provided by the private sectors, and containing exaggerated TTM claims, were mostly found on private radio stations. A considerable majority of people frequently stated that these claims are “unbelievable”, “beyond the truth”, and “overstated” as shown below:

“They advertise like this medicine can completely cure liver disease and cancers. They speak like this, (and) for me it is too overstated to believe.” (54-year-old Female user with a Primary School education)

During the discussions, participants stated that in the advertisements, some stories could be made up or the interviews may be fake. When I asked them to provide the reasons for their

ideas, they told me they observed that the same phone call was repeated every day. Some reported that this kind of advertising had made them change to other channels when they heard these advertisements on the radio and did not want to buy TTM products because the exaggerated claims had made them not believe in them. Others became uncomfortable because the claims of a very fast recovery period had made them frightened and not want to buy. Once again, this shows the communication and media conflict in promotion of TTM by private sectors.

“Some advertising is scary because of the spoken words since the overstated claims are that it can cure immediately after taking. I think it is too fast and too scary. I think I will not buy it.” (32-year-old Female user with a Senior High School education)

I also uncovered that a relative of one participant had had the experience of purchasing “fake TTM products”. The mother of a Female non-user had bought an herbal medicine product from a private TTM advertisement and experienced the product’s side-effects (*her urine became bloody*). Afterwards, she realized that what she had taken was not an herbal medicine/TTM. Similarly, a 41-year-old Male non-user participant claimed that some products from radio advertisements had been compounded with steroids. Such circumstances show the rationale in the communication and media conflict that may represent one cause of the decline in use of TTM in Thailand, when participants had a negative attitude on using it.

I also revealed that participants bought the products with exaggerated claims because of the ways in which private sectors have set the media agenda, by persuading that their products suited the medical benefits and lifestyle of the buyers. It was found that in the advertising, the DJ motivates people to believe in TTM by claiming that it has good properties, can heal with multi-purpose properties, and has the ability to totally cure illnesses. One female participant specifically mentioned that in TTM private advertising, the way of speaking to women was to use a few words targeting their sexual health in order to hit the points of sale and to motivate them to buy the products. The statement is shown below:

“It is worth using, such as Flora Women’s Drugs, that I used to take in capsules. I think the way of speaking can change the weak point into the strong point, such as certain advertisements that emphasize the body and internal sexual health of women. However, they just use a few words to cover the properties of product.” (31-year-old Female user with a High School education)

Consequently, I found the power of communication for the promotion of TTM by private sectors is related to the participants' health choices and practice of TTM. Three female users in the age range of 27–38 years significantly stated: *“If the advertisement is related to uterus drugs, I will buy!”*. This indicated that, for the women participants, the roles and meaning of TTM is to solve problems related to their sexual health, therefore when the private advertising promote their TTM products in this way, women will buy it accordingly.

The findings also revealed that one Male user had bought TTM products from an advertisement with exaggerated claims, even though he realized it, because he wished to recover from his illnesses. Nevertheless, after unsuccessfully using conventional medicines, his perception of TTM was that it was his ‘last choice’:

“I have heard the [Name] advertisement and I think it is overstated because they advertise that this drug has a wide application. Anyway, I found there are many people who have bought this product. Actually I have used (it) once when I got problem from playing sport. Before using this product, I had used conventional medicine and it did not make me get better. Therefore, I decided trying this advertised medicine for my last choice, but it did not help as well.” (50-year-old Male user)

In summary, the findings uncover a communication and media conflict in order to promote TTM in Thailand, by both sectors. From the participants' vantage point, less promotion and useless channels from the government caused a lack of knowledge and awareness about TTM; while advertising from the private sector, touting TTM's exaggerated claims, has discredited TTM itself.

5.2 IN-DEPTH INTERVIEW FINDINGS

This section presents the data from in-depth interviews with health professionals regarding the current knowledge, understanding, beliefs and practice of TTM by consumers and medical doctors, from their viewpoints. This includes their views with respect to the communication for the promotion of TTM by both government and private sectors.

5.2.1 Results from thematic analysis

This section focuses upon answering the two research questions concerned with health professional informants: 1) *How do Thai people view TTM as it relates to their consumption?* and 2) *What is the current awareness of TTM by Thai medical doctors?* in order to develop

the best communication for the promotion of TTM in Thailand. This section presents findings from the thematic analysis, indicating the roles and meaning of TTM in Thailand, including understanding and beliefs by both consumers and medical doctors, and related factors influencing the use of TTM, based on health professional informants. The results consist of four key themes (as noted in Table 5.2) that can be summarized as follows:

1) Knowledge of TTM: The discontinuation and disappearance of Thailand's TTM knowledge. This highlights a lack of knowledge of TTM in the past until the present day, representing the first factor influencing TTM usage.

2) Practice of TTM in public healthcare by medical doctors: TTM treatment only for massage. This theme uncovers the knowledge, attitude and practice of TTM, including factors that have led to the limited usage of TTM by medical doctors. This is also reflected in a lack of insight into TTM among them and conflicts that exist between national policies and practices to assist in developing and promoting TTM.

3) Practice of TTM by consumers: TTM is an alternative choice. Based upon the viewpoints of health professionals, it was found that consumer behaviours, including obstacles to using TTM, had the effect of limiting consumer usage. However, it is noted that this theme was specifically used to compare and contrast findings of understanding and beliefs about TTM by the consumer participants in the focus groups (see Section 5.1).

4) Communication and media of TTM: An unsuitable and inaccurate promotion of TTM, this uncovers the current communication and media representing TTM based on the health professional informants' views.

Table 5.2 *The emerging themes and sub-themes from Thematic Analysis*

Themes	Sub-themes
<p>1. Knowledge of TTM: The discontinuation and disappearance of Thailand's TTM knowledge</p>	<p>1. The definition of TTM: TTM is household treatment that was established from Buddhism and represents the Thai way of life.</p> <p>2. Knowledge of TTM: Secretive and unclear</p> <p>3. Knowledge of TTM: A lack of research to support the development of TTM</p> <p>3.1 A lack of existing research to support the efficacy of TTM</p> <p>3.2 Research studies have been conducted on superficial topics</p>
<p>2. Practice of TTM in public healthcare by medical doctors: TTM treatment only for massage</p>	<p>1. A limitation of knowledge about TTM by the medical doctors</p> <p>2. Biases against TTM by medical doctors</p> <p>3. Practice of the medical doctors depends upon an individual's personal interests</p> <p>4. Medical doctors secretly gave TTM to their patients</p>
<p>3. Practice of TTM by consumer: TTM is alternative choice</p>	<p>1. The practice of TTM by the consumers</p> <p>1.1 TTM are preventive and alternative medicines to be used for minor illnesses and for certain conditions.</p> <p>1.2 TTM was being used secretly when receiving the western treatments.</p> <p>2. The rationales for using and rejecting TTM by the consumers</p> <p>2.1 TTM's usage depends on culture and individual beliefs.</p> <p>2.2 TTM's usage depends on the knowledge and attitudes of the consumers.</p> <p>2.3 TTM's usage depends upon demographics (economics and social status, age, location, and level of education)</p> <p>2.3.1 Economics and social status</p> <p>2.3.2 Age</p> <p>2.3.3 Location</p> <p>2.3.4 Level of education</p>

	<p>2.4 TTM’s usage depends upon accessibility and convenience.</p> <p>2.4.1 A lack of affordable finished TTM products</p> <p>2.4.2 A lack of distribution channels to gain access to finished TTM products for the consumers</p> <p>2.4.3 The finished TTM products available: Finished TTM products are limitedly available to be used by the consumers.</p>
<p>4. Communication and media of TTM: The unsuitable and inaccurate promotion of TTM</p>	<p>1. The unsuitable promotions used by the government sectors</p> <p>1.1 Trendy promotions for TTM</p> <p>1.2 Useless media channels for the promotion of TTM</p> <p>2. The exaggerated claims in advertising used by the private sectors</p>

5.2.2 THEME 1 Knowledge of TTM: The discontinuation and disappearance of Thailand’s TTM knowledge

This section reviews findings concerned with the knowledge of TTM in Thailand. It begins with the definition of TTM and is followed by the history of TTM knowledge, including its limitations from the past until present day. This information is summarized as follows:

5.2.2.1 The definition of TTM: TTM is household treatment established from Buddhism and represents the Thai way of life

Based on discussions, five (out of 11) of the governmental staff (all three academicians, The MoPH staff-(4), and a governmental TTM doctor) called TTM ‘holistic treatment’. Yet, the academicians-(1,2), a management staff member-(1), and a MoPH conventional doctor specifically mentioned that TTM consisted of household items (foods and vegetables) used to treat illnesses.

In addition, one member of Management at the MoPH-(1) claimed that TTM originated from ancient knowledge, incorporated with practices from China and India, and is perceived as knowledge with established moral and ethical principles originating from Buddhism.

“The history of TTM in summary is the knowledge of Thai traditional medication that has been collected and developed to apply for healthcare of Thai people. Since the historic time of Sukhothai Kingdom, it has been recorded for 800-900 years that Thai people had the pharmacopeia and used herbs to compound for medicines, food, or healthcare..... If you look at the subject contents, one part of TTM had the knowledge base from Buddhism; meanwhile, it got knowledge from Chinese medications.” (High-level Official at the MoPH-1)

All informants from both sectors noted that TTM, representing the Thai way of life and Thai wisdom, has been passed down from generation to generation. Thus, I concluded that the culture and knowledge relates to the meaning of TTM by the health professionals.

5.2.2.2 Knowledge of TTM: Secretive and unclear

Based on the discussions with an academician-(1) and a member of Management at the MoPH-(1), I found a conflict of knowledge of TTM that has happened since the past and affected current knowledge of TTM. Both informants claimed that in the past, the ways to transfer the knowledge of TTM was ‘in secret’. Given this fact, ‘Folk doctors’ kept their knowledge a secret and only transferred it to their family members or proper students who would take on a greater responsibility within the community and society. Conversely, for this reason, the member of Management at the MoPH-(1) claimed that the knowledge of TTM had become underdeveloped as compared to Western knowledge, which flourished, and as a result led to TTM knowledge disappearing. Both strongly stated that the knowledge of TTM should not be kept secret as in the past because TTM’s ancient wisdom would, therefore, be lost from Thailand.

Aside from folk doctors keeping the knowledge a secret, I found two other causes that made the knowledge of TTM disappear, explained by two government staff. Firstly, the MoPH medical doctor noted that in the past, TTM knowledge had been disseminated by ‘word-of-mouth’. Secondly, the member of Management at the MoPH-(1) claimed that ‘the system of Thailand’ (the governmental policies and laws) had also caused TTM treatments and knowledge to disappear. These informants further claimed that this condition had continued for a long time in Thailand, causing uncertainty about TTM treatments.

“I would like to use the words ‘the systematic operation’ with respect to making TTM become banned goods. At that time, there were the policies and laws being issued to make Thai traditional products become obsolete and to make it improper to use TTM. Therefore, we have to agree that for the last 80-90 years the acceptance of TTM has

decreased because it had (previously) had a commercial dimension which had been systematically devalued.” (High-level Official at the MoPH-1)

To sum up, despite the fact TTM was revived due to national Thai policies, the findings unveiled that the knowledge of TTM remains unclear today. These circumstances, arising “since the past”, happened due to three factors: 1) knowledge was kept secret by the folk doctors; 2) transfer of knowledge was only by word-of-mouth and not written down, and 3) the system of Thailand. Based on a health professional’s view, there is a current lack of trust in TTM, resulting in decreased usage because of the discontinued dissemination of TTM knowledge occurring since the past.

5.2.2.3 Knowledge of TTM: A lack of research to support the development of TTM

As previously mentioned, the discontinuance and disappearance of Thailand’s TTM knowledge since the past has caused a lack of trust in TTM currently. However, from the viewpoints of interviewees in both sectors, it is significant to note that current research on TTM is the most important factor to aid in improving the knowledge and usage of TTM. Thus, by conducting research, explanations can be presented that will allow users and conventional doctors to eventually accept TTM. Nonetheless, it was revealed that many problems still exist, as follows:

i) A lack of existing research to support the efficacy of TTM

All of the governmental interviewees frequently mentioned that currently there is a lack of existing research to support the efficacy of TTM in several areas. This has affected the usage of TTM because many Thais and conventional doctors do not have sufficient trust to use them. In particular, conventional doctors, who have accepted Western standards for a long time, have examined pertinent data gathered from TTM research. In contrast, conventional medicine has highly detailed information representing research studies carried out around the globe, offering a variety of supporting information, while TTM does not.

Despite a lack of research to support TTM, the MoPH conventional doctor informants mentioned that many research studies had been carried out on Creyot and Turmeric and thus, the medical doctors have prescribed them to the patients. Even though the consumer participants from focus groups did not mention research on TTM, I found that Creyot and Turmeric were significant herbs/TTM that they had confidence to use in both traditional

forms as well as the new finished forms. In this sense, I revealed that the knowledge and attitude towards TTM are significantly related to TTM usage. When the medical doctors have had the research to support Creyat and Turmeric they have developed trust and confidence to use them. This also applies to the consumer participants.

ii) Research studies have been conducted on superficial topics

On this issue, I uncovered disagreement about current knowledge of TTM, among health professional informants. The main issue is concerned with the development knowledge of TTM today. Two government academicians (1-2) mentioned ‘the active ingredients in TTM’; that some research studies had been conducted on easy topics, while the formularies, which have 30–40 elements, had not been researched and as a result, had blocked the development of herbs. The third government academician pointed to another issue by stating that the research studies being conducted presently had particularly missed the point by not trying to find out the exact active ingredients of TTM. He, indeed, claimed that the government was not supporting the research studies, and this differed from other countries.

Three of the governmental interviewees (a government academician-(2), a mid-level staff at the MoPH-(4), and a government TTM doctor) specifically examined how research studies in Thailand differed from those in China and India. Despite the fact that knowledge from these two countries had been applied to Thai traditional treatments, they further noted that the scope of the research from the two countries was far more profound than studies conducted in Thailand.

The FDA respondent mentioned that the research being conducted cannot be used because it is not holistic research and is, therefore, incomplete. Furthermore, she noted that the research studies were not headed in the same direction.

“Individual research has not been gathered to meet the requirements of the products. Each research (study) is separate, and it is not heading in the same direction, so it is incomplete.” (Staff Member of the MoPH- FDA)

A TTM Doctor for the government also claimed that today’s research studies do not match the holistic treatment of TTM. His reasoning stemmed from the fact that many research studies had examined only a single herb and had searched for the active substance for treatment, in

order to produce a single drug. He further noted that this method is counter to TTM's methodology of holistic treatment:

“Most of our research emphasizes on searching and taking active substances for treatment, which is opposite to TTM. The concept of Thai traditional is to combine many formularies in order to supplement and control the action of drugs. However, researchers in Thailand still emphasize single–subject research, such as Creyat Root (Fah-Ta-Lai-Jone) or Farung keenok (Psidium guajava Linn.) to be applied as a single drug. Anyway, it does not meet the needs of the treatment and match up enough because it is not the way of Thai traditional treatment. I think the government should promote clinical research and drug utilization research, not research of the effects on cells.” (TTM Doctor for the Government)

I found that all mentioned above showed the conflict of the current knowledge of TTM, in terms of medical benefits, which may lead to a lack of awareness and trust in using TTM by medical doctors.

Five governmental informants (a MoPH management staff member-(2), a government TTM doctor, and three academicians), particularly the academicians in their roles as researchers, felt that a governmental budget was needed to support research studies on TTM. The five felt that research is more important to the development TTM and with proper research, the people, including the conventional doctors, would accept the use of TTM. Consequently, Academicians-(2&3) and a FDA staff member suggested that for the purpose of conducting the research the government should establish Centers for TTM Research so that the studies could be carried out in the same direction.

“Actually, there has been research (or the interview reports) that have been proposed by many professors regarding the recommendation to establish an institution in order to have the government have holistic support, and (this) may help in terms of the policy to make everything go to the same direction.” (Academician for the Government -3)

5.2.3 THEME 2 Practice of TTM in public healthcare by medical doctors: TTM treatment only for massage

Based on the interviews with health professionals, it is significant to note that instead of TTM doctors, conventional doctors had the most personal influence on Thai citizens to use TTM. This was similar to the findings from the focus groups, in the consumers' views. Thus, this section reviews findings that are concerned with the knowledge, attitude and practice of TTM

by the conventional doctors, and encouraging the usage of TTM in Thailand, in their roles as prescribers/supporters.

5.2.3.1 A limitation of knowledge about TTM by the medical doctors

Almost all of the ‘governmental people’ interviewed strongly claimed that despite the fact that the role of conventional doctors was to be major supporters to encourage TTM usage, they lacked knowledge of and trust in TTM. Based on the informant viewpoints, the reasons for the doctors’ lack of TTM knowledge can be summarized as follows: 1) these doctors had only accepted the knowledge that had originated from Western standards; 2) this knowledge had been exclusively garnered by conducting research; 3) TTM was lacking with respect to research, and 4) the slower recovery time for holistic treatments with TTM had caused conventional doctors to gain trust in the efficacy of TTM.

Many informants from both sectors (including the government TTM doctors) showed the conflict of TTM knowledge. They admitted that it was hard to understand and monitor ‘the efficacy of TTM’ during treatments as well as when conducting research on TTM’s efficacy. They noted the difficulties as follows: 1) TTM is a holistic treatment; 2) specific active substances and other details cannot be readily identified, and 3) existing lack of knowledge about TTM. Two participants (an academician-(2) {also a pharmacist}, and a private vendor-(1)) gave an example of unclear knowledge in regard to ‘efficacy and proper dosage to be used of TTM’ by comparing TTM with conventional medicines. For instance, the government academician mentioned that from the viewpoint of “researcher/supporter” little was known about the active ingredients and dosages that were to be used in TTM treatments. Thus, when treating patients, the individual traditional healers had to apply their own experiences to adjust the treatment by TTM. As a result, this made it difficult for medical doctors to treat and monitor the patients. Furthermore, the methodology of TTM treatments differ from the treatment methods using conventional medicines, which rely on proven theories and detailed practices that can be followed when treating their patients.

“For instance, in TTM or ancient medicine the adjustment of formularies depends on the symptom of patients, while (with) conventional medicine, we have detailed information, such as quantity of dose, and we have to change the quantity if the patient does not respond. TTM uses many experiences in order to adjust the formularies, which are difficult to monitor.” (Academician for the Government-2)

5.2.3.2 Bias of TTM by medical doctors

Aside from a lack of TTM knowledge, I found that conventional doctors also had a bias against TTM. A government TTM doctor explained this happened since the past: *“In the past (about 3-4 years ago), the villagers did not dare to walk to ask for information about Thai herbs in hospitals because medical doctors do not have enough knowledge about herbs. They had negative feelings for the people, who had questions about herbal medicines, and the people were told to go to another place.”* This led me to realize that the conflict between TTM knowledge and attitudes by medical doctors related to the users/patients selecting healthcare and TTM, and reflected the use of TTM in Thailand accordingly.

One of the vendors from the private sector strongly stated that from her direct experiences modern doctors have a bias about TTM treatment. She further noted that the doctors felt ashamed to use TTM or felt that they would lose their “dignity” if they had to use it. They did not care whether or not using TTM could save the national budget. She stated that even though her products had ingredients similar to other products, her products had failed to secure the bid simply because they had been registered for “Traditional Medicine”. Yet, others (imported brands), registered as “Conventional Medicine”, won the bidding.

“When we assigned the representatives went to have the proposal of Brinjal Lozenges (Ma- Wang), we had to have doctors’ signatures before getting into Pharmacy Division. I am not really sure whether they were just kidding, they asked why they should sign. In my opinion, the doctors may think they are incredible, and will ‘lose their dignity’ when they sign the confirmation and turn to using TTM. During the presentation, we felt embarrassed, despite (the fact that) my packaging is very attractive, just because we have the word ‘traditional’. Therefore, we failed when the board compares us with the other company that has the same drugs, we have been rejected because the other company has imported drugs and has the words, ‘conventional medicines’. (Vendor in the Private Sector- 2)

In addition, she stated that some medical doctors had accepted the use of some types of TTM because conventional medicines could be abused, whereas TTM could not. Thus, TTM in liquid form and in lozenges for treating coughs had been widely accepted in hospitals, whereas other types of TTM were not being used:

“Some conventional medicines are abused, such as the group of anti-tussis (Cough mixture). For example, they mix cough syrup with coke, which leads to drunkenness. I do not know what method they process, but these are harmful. Therefore, traditional cough medicine and others are accepted widely including the support from advertisements. The hospitals do not oppose the proposal, as well as the medical

doctors accept our certain drugs, such as Lozenges, cough mixtures, and liquid drugs, but other drugs have not been accepted yet.” (Vendor in the Private Sector- 2)

This phenomenon has been explained by five (of 14) informants (all three government academicians, a MoPH mid-level staff member-(4), and a private TTM doctor) concerning the weak point of TTM, with respect to “the duration of treatment”. They agreed that a holistic treatment with TTM is a long-term treatment. An academician claimed that when comparing TTM treatment to conventional treatments, he felt that, based on his experiences, TTM was not suitable to be used in crisis conditions due to the fact that it offered a slower treatment, and there was a lack of medical tools.

“For me, this matter (a slower recovery) is true because the emergency or crisis condition has to rely on many medical tools, and Thai traditional treatments cannot keep up.” (Academician for the Government-1)

Finally, I found the medical benefit of traditional treatment and TTM in order to negotiate healthcare choice. Three of the governmental interviewees (one Management staff member-(2) {also a nurse}, one mid-level Manager-(4) {also a pharmacist}, and an Academician-(1) {also a conventional doctor}) claimed that conventional doctors, and Thai people, accept TTM treatment only for “massage” because it is practical and the results can be easily seen. Yet, other TTM treatments, including medicines, have been accepted to a lesser degree due to the fact that it is harder to understand their holistic treatments and they offer a slower recovery. Based on my views, this proved that TTM was underserved in healthcare system of Thailand, causing the role and meaning of TTM to be limited only to massage treatment, while in terms of medicine itself it has less value and integration in Thailand’s public health care system by medical doctors.

This was repeated by another managerial staff member of the MoPH (also a conventional doctor), who shared a negative experience that occurred after he had been transferred to work with his department. He said that many of his friends, who were conventional doctors, had a negative perception of the DTAM department and the staff. They called it “the exorcist department” and claimed that he was “working with massagers”, that implied the value and status of TTM through the eyes of medical doctors had a lack of awareness and trust in its use.

“The day I decided to move here (DTAM), my college friends complained, and they wondered if I was insane to work for the exorcist department because for Western medication, they thought that superstition looked nonsensical. They thought I worked

with massagers (and) that had a negative image.” (High-level Official at the MoPH-1)

A governmental Academician-(3), who is a pharmacist, accepted that in the past, modern doctors and pharmacists had negative attitudes towards TTM because there had been a lack of knowledge about it. However, he argued that currently medical doctors and pharmacists had obtained a more basic knowledge of TTM and that there had been a slight increase in its acceptance. This change had occurred because these two groups had received more TTM information and had witnessed the results of TTM usage.

“Formerly, we have had bad experiences with TTM and/or negative attitudes about it, but this was not my personal attitude. It was because generally we studied Western knowledge. For me, I am a pharmacist and studied the Western knowledge which is science. Therefore, we will accept anything that has been proven as having the same result as expected. When we turn to look at the Eastern medicine, sometimes the results are not exact as we expect, so Western medicine will think that it is not science. We have stuck to this idea all along, and that is because in the past TTM or herbs did not have any information to prove. However, today there is a lot of information to prove or make us see the results.... Therefore, the attitude regarding TTM using seems to be different from the past, at present, the acceptance is gradually getting better.” (Academician for the Government- 3)

Thus, it can be concluded that knowledge and attitude of TTM related to the practice of TTM by the medical doctors.

5.2.3.3 Practice of the medical doctors depends upon an individual's personal interests

I found that the findings from both methods of data collection, (focus groups with consumers and in-depth interviews with promoters and supporters) yielded the same results: knowledge of TTM depends upon personal interest and can lead a person to study TTM themselves.

Three informants (a MoPH conventional doctor and a MoPH vendor including a private vendor-(1)) stated that gaining knowledge about TTM depends upon “an individual's personal interests”. In fact, the MoPH medical doctor informant admitted that his personal interest in TTM has led him and others to study traditional treatments and TTM. Moreover, he had sometimes prescribed TTM in conjunction with conventional medicines.

An academician-(1), who is also a conventional doctor, had also studied TTM himself because of his personal interests. Also, using some TTM products, he mentioned that he had

conducted research on himself and used his personal findings to help treat the patients in his clinic. This was restated by a TTM doctor in the private sector, who shared an experience to prove that conventional medical doctors had come to study with him because of their personal interests and that currently, pharmacists are also beginning to study.

“A conventional doctor in Military Hospital became my student. He used to be a TTM doctor here and took some formularies of his parents and treated patients. When he had success in treatment, he applied for study in order to get a professional license. Currently, there are also many pharmacists who are interested and want to apply for study.” (TTM Doctor in the Private Sector)

Two staff members of the MoPH (a Management staff member-(1) and a Vendor) mentioned that their organizations had been established because of the personal interests of the management, who are medical doctors, and had TTM knowledge passed down from their ancestors, which had been influential in the establishment of the organizations.

“Abhaibhubejhr (organization) did not start from the aim of a business model at all. It came from Dr. [name], a government official (The management), who started by herself with her personal interest. As we gradually did (it), it became a sub-division in the hospital to produce medicines for patients in the hospital.” (Staff member of The MoPH-Vendor)

5.2.3.4. Medical doctors secretly gave TTM to their patients

Some medical doctors have openly used TTM to treat their patients in their clinics, as mentioned above. In contrast, there were interesting findings from the private vendor-(2), who said that some medical doctors, who are in favour of using TTM, would like to prescribe TTM to their patients in their clinics. They asked her to make TTM look similar to conventional medicines because they did not want to explain to the patients why they were using TTM, due to the fact that some patients lacked trust in its efficacy and safety.

“Some doctor customers request us to make TTM in colorful capsules. They said their patients will not know whether it is herbal medicine and they do not need to explain. Types of herbal medicines, which are usually ordered in colorful capsules, are Creyat Root (Fah-Ta-Lai-Jone), Turmeric, Cinnamon, and Chan-Lee-La (combination herbs).” (Vendor in the Private Sector- 2)

Similarly, a medical doctor at the MoPH explained that when he used TTM as a substitute for Paracetamol he could not explain this to the patients, because they did not trust the efficacy of

TTM and that it could act as a substitute. This showed the conflict of knowledge and communication by both users/patients and medical doctors when using TTM.

5.2.4 THEME 3 Practice of TTM by consumers: TTM is an alternative choice

With respect to the questions when asking the health professionals, “*If the consumers do know about TTM, how (if at all) will they use it?*”, this section reviews the findings in regard to the practice on using TTM by consumers, followed by the rationales and limitation of their practice, based on the health professionals’ viewpoints. It is important to note that the findings of this theme have been used to compare and contrast findings from the consumer focus groups. Thus, all aspects concerned with the behaviours in TTM use by consumer in their roles as users, and by health professionals in their roles of supporters, were identified.

5.2.4.1 The practice of TTM by the consumers

This section reports the ways in which consumers have used TTM based on health professional viewpoints. It was found that Thai citizens have used TTM as preventive and alternative medicines to treat their minor illnesses and certain other conditions. However, the findings also revealed that sometimes they had secretly used TTM when they were receiving Western treatments.

i) TTM are preventive and alternative medicines to be used for minor illness and for certain conditions

Referring to the purposes of using TTM I found the findings from consumer focus groups were similar to findings from in-depth interviews with health professionals. The other similarities were in terms of the perceptions of efficacy of TTM that can be concluded in two areas: 1) TTM are preventive and alternative medicine, and 2) TTM had fewer to no side-effects.

All informants acknowledged that TTM was a preventive medicine used to cure minor illnesses. A private Vendor-(1) mentioned that the use of TTM in his area (the same part of the country where focus groups were conducted), is where people believe that use of the “traditional form of TTM treatment” after childbirth is better than any modern treatments. Moreover, he mentioned that women’s drugs (TTM for sexual health) are always marketable

and are widely used to maintain health by local people. A private Vendor-(2) and The FDA staff mentioned that the “finished form of TTM” was better for sore throats, coughs, and fevers than conventional medicines. This fact indicated that the findings from both methods had yielded the same results.

A TTM doctor for the government claimed that the belief that TTM has few to no side-effects and is safe, had increasingly made Thai citizens turn to (or return to) using TTM as alternative medicines. An FDA staff member specifically mentioned that the new generation had switched to using herbal medicines because they were concerned with the chemicals used in conventional medicines. Therefore, they had the feeling that TTM is a better option for them according to the perception that it is a natural product with no side-effects.

A government academician-(1) stated that from his own experiences and observations of patients, individuals who use TTM fall into one of two groups: 1) those using TTM for minor illnesses, and 2) those using TTM for serious illnesses, such as cancers. Moreover, he stated that people, who have become dissatisfied with conventional medicines will turn to using traditional treatments and TTM. Similarly, a vendor from the private sector-(1) also claimed that TTM are an alternative choice when conventional medicines are no longer helpful.

“From my perspective, the people who use TTM since the beginning are divided into two groups. The first group is the people who have minor illnesses, and the second group is the people who have found that (taking) conventional medications for their illnesses, such as cancers, has not worked. Whenever they are sick, 50% of them prefer to have conventional treatments rather than (using) TTM until they give up on conventional treatment. Or, in the last stage of their treatment, they will return to using Thai traditional treatments and TTM.” (Academician for the Government-1)

In summary, based on health professionals’ viewpoints, users/patients have used TTM as a preventive medicine for curing minor illnesses, including certain conditions (e.g. after childbirth), and as an alternative medicine for treating cancer and maintaining their health, similar to the findings from focus groups accordingly.

ii) TTM was being used secretly when receiving Western treatment

Despite the fact that TTM has been widely accepted by the community, I found that TTM was being used secretly, similar to the findings from focus groups. One of the MoPH mid-level staff members-(4), as well as one private Vendor-(2), claimed that based on their experiences

in their fields “TTM was being used secretly”: *“Around 40%. From my work experience, some patients still return to use herbal medicines. When they get an illness, (they use TTM), but they do not inform the (Medical) Doctors.” (Mid-level Official at the MoPH-4)*

A private Vendor-(2) claimed that usually the patients would use TTM secretly in conjunction with conventional medicines when they had cancer. In fact, they noted that some patients have used TTM without telling modern doctors, because modern doctors have denied the efficacy of TTM:

“Actually we have drugs to cure cancer, but we need to integrate the medication. For example, (if) you have chemotherapy simultaneously with TTM and you get better. However, medical doctors still refuse to admit (this), so drugs have to be used secretly.” (Vendor in the Private Sector-2)

To conclude, based on the views of the health professionals, with respect to the consumer practices, they had used TTM to treat their minor illnesses and/or to treat their cancers. However, it was found that while some users/patients may openly use TTM, others may use TTM secretly without telling their medical doctors. In particular, this takes place when TTM is being used in conjunction with conventional medicines to treat cancer. Therefore, the conflict about knowledge and communication by both users/patients and medical doctors still exists.

5.2.4.2 The rationales for using and rejecting TTM by the consumers

Regarding TTM usage, based on health professional views, the consumer behaviours of Thai citizens can be divided into the four following themes: 1) culture and individual beliefs in TTM’s efficacy; 2) knowledge and attitude about TTM; 3) demographics of the individuals, and 4) accessibility and convenience of TTM.

i) TTM’s usage depends on culture and individual beliefs

In regard to ‘consumer behaviours in using TTM’, the purposes of using TTM were to utilize them as preventive and alternative medicines. Findings from the in-depth interviews showed that one rationale for TTM usage depended upon culture and individual beliefs about its efficacy. This is similar to the results from focus groups. The majority of health professionals in both sectors noted that the local people were still using herbs to make decoctions and

medicinal pots. Because they had seen previous generations use or give TTM to them, their present actions had sprung from their culture and traditional beliefs.

Of the people who did not use TTM, a private Vendor-(1) strongly mentioned that members of the middle and high classes were unaccustomed to TTM, because it was not a part of their culture *'to be born with herbs'*, which was similar to a statement from a Male user participant of a focus group, who specifically used the word, *'culture'* to explain the reason for people not using TTM. In addition, a private Vendor-(1) stated that the people in both groups (middle & higher classes) would prefer to see doctors who would give them conventional medicines.

“Middle class people will probably see medical doctor first as (a part of) their culture. I would like to use the word, ‘Culture’, in that people have their own perceptions which will lead their ways of life to take care of their health in different ways. I cannot imagine how to change their ideas because the middle and high class people were not born with herbs. I may (believe) that they have different culture and way of life form rural people.” (Vendor in the Private Sector-1)

This scenario differs from people in rural areas. Thus, he noted that the middle and higher classes may use the “finished form of TTM” as “supplements”, but unlike the local people they do not utilize raw herbs, which are used for making decoctions and medicinal pots as it is their culture and Thai way of life that had been passed down from generations.

ii) TTM’s usage depends on knowledge and attitude of the consumers

With respect to consumers, the findings from health professionals revealed that their knowledge and attitude about TTM were significantly related to TTM usage, which was similar to the findings from focus groups. All of the professional healthcare informants claimed that in respect to their knowledge about using TTM products, consumers currently had personal limitations.

A government academician-(2) provided an explanation of the people’s limitations in using TTM by underscoring the differences between Thailand and Myanmar citizens in their beliefs about the efficacy of traditional treatment and medicines. Based on her experiences, she mentioned that Thai people are afraid of TTM, whereas the Burmese are not. She noted that this fear was the reason that TTM knowledge and practices had been discontinued in Thailand, as previously mentioned. Once again the discontinuance and disappearance of TTM

knowledge from Thailand were mentioned by participants from both focus groups and in-depth interviews.

“We have inherited TTM from ancient times, but it disappeared in the King Rama V period, and its study was discontinued. For example, in Myanmar, this knowledge has never been disconnected, so the knowledge has been continuously inherited from their ancestors. Even the doctors in Myanmar also show respect to Thai local medicine and have never had conflicting attitudes. While in Thailand, when the study had been discontinued, the formularies were destroyed. This caused Thai traditional doctors to have never seen the Thai formularies and (they) do not dare to use what they do not know. It has been said by the Burmese that Thai people are afraid of herbal medicine, while the Burmese believe that it can cure” (Academician for the Government-2)

A private vendor-(1) strongly stated that people who do not use TTM can be divided into two groups: 1) people who have a bias against it, and 2) people who have a lack of knowledge and, therefore, lack the confidence to use it. He mentioned that consumers currently did not know about TTM dosages, as well as their side-effects:

“We cannot indicate how many doses we should take for treatment. It is different from modern medicine which we already know (about). But in the case of TTM, such as Turmeric treatments, we are not sure about the recommended use, Adverse Drug Reaction (ADR), and the side-effects after use.” (Vendor in the Private Sector-1)

A strong statement that emphasizes the current conflict of understanding and beliefs about TTM by consumers, and a frequent question that he had been asked by his customers was ‘*Will I die if I take TTM?*’ He claimed that limitations by consumers included the following: 1) exclusively using the TTM products that they had previously known about, and 2) with respect to safety, only using TTM that they had confidence in. This showed me that the knowledge and attitude of TTM leads to the decision to negotiate TTM for the consumer choice.

During the interviews with respect to the side-effects of TTM, I found that even though Thai users exhibited personal limitations in using TTM, interviewees from both sectors noted many Thai people still strongly believe that TTM has few to no-side effects, compared to conventional medicines, and is safe. Five (out of 11) government interviewees (three academicians, a MoPH vendor, and a mid-level MoPH staff member-(4)) strongly concluded that Thai citizens suffered from an incorrect perception that “*TTM has no side-effects*”. Therefore, they suggested that the government should foster the knowledge, trust and

confidence of Thai citizens about using TTM and should accordingly support research studies to enhance TTM's reputation.

iii) TTM's usage depends upon demographics (economics & social status, age, location, education)

With respect to the demographics of consumers, the results from health professionals indicated that the economic status, social status, age, location and level of the education of the Thai consumers, as related to their usage of TTM in Thailand, can be summarized as follows:

a) 'Economics and social status'

Based on the discussion with four informants from both sectors (two governmental and two private sector), the findings indicated that 'Economics and Social Status' was related to usage and purposes for using TTM, including the patterns or forms being used. In this sense, I found that TTM were less valued and only for poor people.

One MoPH staff member expressed that despite the fact that both forms had come from the same herbs, the "*herbs and traditional forms belonged to the villagers*", whereas the "*finished forms were considered to belong to the middle and higher classes*", due to the cost of finished forms being more expensive.

"Thai people have many protocols and specified procedures for thinking. For example, herbs are considered to belong to villagers, but when they are contained in capsules and packed in colorful packages, they are considered (as) belonging to the people of the middle class or high class. It seems to me that the protocol is very important to cause herbal medicines to be 'dressed up'. Indeed, all various packaged products are made from the same herbs, but when they are in capsules, they have much more added value." (Mid-level Official at the MoPH-3)

Once again I found the rationale for using TTM is related to economic conditions. A government academician (3) claimed that based on research studies that he has recently found, the consumers who have high incomes use cheaply-priced TTM less frequently and prefer to use high-priced TTM instead.

"If we read the research or the interviews with respect to attitudes regarding the use of herbs, we will see that people having higher incomes will inversely use herbal medicines, which means they have more income, but use less of the low-priced herbal

medicines. Meanwhile, the high-priced herbal medicine will be used more (often) by this group.” (Academician for the Government-3)

Lastly, a private TTM doctor stated that the patients, who mostly come to his clinic, were around the age of 60. The statistics of his patients showed that the rich patients were asking about TTM for nourishment, whereas the poorer patients were asking for TTM to treat their illnesses. Therefore, I claimed that based on the health professionals’ viewpoints, the economic situation is related to the use of TTM and thus, TTM for treatment (not for nourishment) is only for the poor people.

b) ‘Age’

Aside from ‘Economics and Social Status’, the findings from an interview with one government Academician-(3), who used the research to support his statement, found that the use of TTM and the purposes for using it depends upon the ‘Age’ of the users. The elderly use the traditional form of TTM with greater frequency than younger people (which is related to the private TTM doctor mentioned above when he noted that the specific age of his patients tended to be around 60). This finding yields the same perception from focus groups that TTM is for the elderly.

In contrast, a FDA staff member stated that based on her experiences, a new generation of young workers (30 years of age and above) will begin using herbal medicines (finished form) due to concerns about the chemicals being used in conventional medicines. However, a government academician-(2) argued that the finished form of TTM used by younger people is supplements rather than medicines for treatment.

c) ‘Location’

Based on comments from two government academicians-(2&3), I found that ‘Location’ is also related to TTM usage. They claimed that people living in cities use less TTM than rural people. In addition, a private vendor-(2), living in Bangkok, mentioned that her sales volumes to the marketplace and to public hospitals had shown that people in Bangkok use less TTM, whereas in the Northeastern portion of the country, she had sold more:

“We have sales volume throughout Thailand, the highest is in the (public) hospitals of Northeastern Thailand, followed by the Central and Southern regions.” (Vendor in the Private Sector-2)

Another private vendor-(1), who lives in Sakonnakorn in Northeastern Thailand (where the focus groups were conducted), also claimed that based upon his observations of TTM usage by local people in Northeastern Thailand, the use of TTM there is increasing more than in other parts of the country.

d) 'Level of education'

Lastly, I uncovered that the 'Level of Education' of consumers affected usage of TTM. A government TTM doctor stated that the local people in rural areas had used TTM because they followed the word-of-mouth recommendations, given by people who had had good results after using TTM. However, it was noted that sometimes local people were spreading information without first analyzing it.

In contrast, the city dwellers, urbanites, were well-educated (particularly the Bangkok people). Almost all participants from both sectors agreed that the well-educated people had needed further information to support TTM before they would use it. For instance, even though two of the private vendors live in different areas and parts (one in Bangkok and the other in Sakonnakorn, Northeastern Thailand), they both mentioned that before using TTM, the urbanites needed to have more information and proof about it because they were relying on scientific research to help them make decisions. The findings significantly showed that rural people, who have less education than city people, use TTM more often than the well-educated group.

"I have been working in this field for ten years. Talking about provincial communities, people accept (TTM) because they still see their parents using (it). It is different from early urban (members of) society that asked for the research for certification." (Staff member of The MoPH-Vendor)

As previously mentioned, TTM lacked research to support its efficacy, therefore, this may cause a lack of trust when using TTM for well-educated people, resulting in a decline in the use by them.

iv) TTM's usage depends upon accessibility and convenience

Regarding the consumers' side, informants from both sectors specifically mentioned only "the finished form of TTM" in terms of "accessibility and convenience" with respect to costs,

distribution channels, and the TTM products that are available to be used. In regard to the finished form of TTM, the data indicated that currently difficulties are being faced by consumer participants because they cannot gain access to it. To re-state, the findings from the health professional informants have yielded the same results as those from the consumer focus groups, which can be summarized as follows:

a) *'A lack of affordable finished TTM products'*

Almost all participants from both sectors (9/14 informants) strongly agreed that the finished form of TTM has a high cost of treatment for both “individual payments”, as well as for “the government’s hospital expense”. This significantly showed the conflict between structure and economic conflict when using TTM in Thailand’s healthcare system.

“The unit cost of herbal medicines is still higher than modern medicines. I mean in the case of we have to spend by ourselves. When we compare between Paracetamol and Creyat, the unit cost of Paracetamol is around 5 Thai Baht, while Creyat is 20 Thai Baht.” (Mid-level Official at the MoPH-4)

“If we go to the hospital, we can see herbal medicines, but there are only a few. As I said, they must be concerned about the cost for treatment. Suppose that we are the administrators, we do not do something that makes our hospital get in trouble. Even though the government seriously supports and wants this policy to be done, but the other factors do not help. We can only do this. If herbal medicines are produced and the price is higher than conventional medicines, the hospital definitely will not order to use because the people do not pay for this. Besides, the hospitals receive monetary support from the government. This money is the same budget and the same amount. Therefore, the price can be looked as one of the factors that can influence the use of TTM.” (Academician for the Government- 3)

However, a private vendor-(2) explained that this was because the raw materials for producing TTM were more expensive than for conventional medicines. Thus, she concluded that TTM cannot compete with conventional medicines in terms of costs of treatments. The government TTM doctor and FDA staff also agreed with this statement. All three informants claimed that these points of concerns have affected the usage of TTM in Thailand, particularly in the public hospitals, and has caused them not to meet the national target usage of TTM.

b) *'A lack of distribution channels for the consumers to gain access to finished TTM products'*

The results showed that the majority of health professionals noted that the consumers had perceived the barriers to using the finished form of TTM with respect to distribution channels

to buy TTM. The findings from the consumer focus groups were similar to those from the healthcare professionals.

One member of the MoPH staff-(3) stated that based on the statistics in his hospital and the areas surrounding, when people are sick they seek treatment for themselves. Moreover, these individuals can be divided into three groups according to the places they seek treatment: 1) pharmacies (30%); 2) private clinics (30%), and 3) the public hospital (30%), all of which use conventional medicines. The remaining 10% take care of themselves by using TTM that they have at home. He also strongly claimed that people will use TTM “*only in case they have TTM at home or in their hometowns*”.

The government academicians-(1) mentioned that the villagers preferred using herbal medicines as a first treatment if they are convenient and can be easily found, whereas the middle class people used TTM moderately, but if they have easy access to TTM, they will use it:

“The villagers prefer using herbal medicine first because they are convenient and easily found. Middle class people will believe by first relying on the principles of science, so I think the percentage of use among the middle class people may be moderate, but not frequent. If they have a choice, which means some TTM are easy to access and (there is) enough clear information, they may make the decision to choose TTM more often.” (Academician for the Government-1)

A private vendor-(2) mentioned that recently Thai society has been changing from a slower lifestyle to a fast-paced lifestyle. As a result, when people are sick, they need to recover quickly and have easy access in order to return to work. Therefore, they rely on conventional medicine because they can find them easier than TTM products. This includes the conventional medicine can cure the illness faster than TTM. Once again this finding is similar to the finding from focus groups, which indicated that TTM does not suit the current healthcare treatment in Thailand because of the economic situation in a modern fast-paced lifestyle.

Therefore, three of them claimed that consumers were using TTM less frequently because it was easier to gain access to conventional medicines than TTM. This factor was due to the fact that TTM products have only a few distribution channels.

c) ‘Finished TTM products are limitedly available to be used for the consumers’

With respect to TTM product items available to be purchased in the ‘marketplace’ and used in ‘public hospitals’, I revealed that one factor influencing the usage of TTM is how many available TTM items/products there are and how many can be used from the National List of Essential Medicines. Both private vendors, in particular a private vendor-(2), who owns a manufacturing business, stated that based on the National List of Essential Medicines set by the government, she had produced TTM to sell on the market, including selling to hospitals. She also stated that the government hospitals could order or purchase TTM from vendors only if the TTM appeared on the list.

The government Academicians-(3) further noted that there are many herbs/TTM on the national list. However, there were only a few available items that could be used, because only a third of all herbs on the list have been made into TTM products. Even if they have been produced, it does not mean the hospitals order them to be used in their institutions. This matter has also affected the usage of TTM.

“Herbs, which can be used or taken, must be on the list of National List of Essential Medicines that has developed medicines from around 24 out of 77 herbs. First, I would like to inquire as to the following. Have the manufacturers produced all herbs in the list because as for the announcement of the national list, not all of herbs have been produced? Have the hospitals ordered all herbs to use? I am not sure whether they have or not.” (Academician for the Government- 3)

Thus, a shortage of TTM products in both the marketplace and in public hospitals has caused the uptake of TTM to be far less than the informants’ expectations. Once again this view is similar to the findings of consumer participants from the focus groups, who claimed that TTM was in short supply and they could hardly find any places to buy them.

In conclusion about the practice of consumers using TTM based on health professional viewpoints in their role of supporters, the data indicated that Thai users have used TTM as a preventive and alternative medicine to treat their minor illnesses and certain conditions. However, some have used TTM secretly without telling the medical doctors when they received Western treatment.

The rationales for consumers using and/or rejecting TTM depends on four factors: 1) culture and individual beliefs; 2) individual knowledge and attitudes; 3) demographic and, 4) accessibility and convenience.

5.2.5 THEME 4 Communication and media of TTM: an unsuitable and inaccurate promotion of TTM

According to the ‘Promotion of TTM’, the findings revealed that the interviewees from both sectors strongly agreed that it is the most important in respect to TTM usage. The findings from in-depth interviews found similar results from focus group discussions, with respect to the unsuitable promotion from the government sectors and inaccurate promotion from the private sectors, summarized as following:

5.2.5.1 An unsuitable promotion by the government sectors

With respect to the governmental promotion of TTM, major findings from both sectors found only ‘negative viewpoints’ concerned with the strategies, trend and media channels. The findings reveal two major problems regarding promotion of TTM by the government sectors, summarized in the following:

i) Trendy promotion for TTM

Based on the informants’ voices, I found communication conflict that affected knowledge when promoting the benefits of TTM by the government sectors. The government vendor strongly stated negative views in that the DTAM department had been working without direction and without having strategies. An FDA staff member and a private vendor-(1) also mentioned that the manner in which the department was promoting TTM by using current trends was not proceeding in the proper direction; in particular, the FDA staff member claimed that herbs/TTM products that had been promoted were not a national issue because many of them had just been “trendy women sexual products”. In contrast, the use of herbal medicines to prevent illnesses within the Thai population had not been promoted and, as a result, TTM’s image had been damaged and trust in it had diminished.

“I want them to support the right part because in my opinion I do not want it to be eye-catching as I had said. You should not make certain herbs boom only, such as Cowhage or Centotheca lappacea (L) Desv. (REPAIR), because these only have a short boom period. It is not the national problem to pay attention to (what) I think. There are some agencies that have tried to propose new projects and the senior

officers have quite agreed because they are eye-catching, but the main problem is the inconsistency of the work. Yet, they do not realize about three aspects of information (safety, quality, and efficiency) in order to produce the products. According to the regulations they must be safe. They cannot promote (them) without consideration.” (Staff Member of the MoPH- FDA)

Consequently, three claimed that the government had promoted herbs by determining which TTM were trending, and had done so without having any supporting information or proof to back up TTM’s efficacy and safety. Later, they noted that the promotion of the TTM had stopped. Due to this scenario, these trendy TTM experienced only a short boom period. This reliance on TTM trendiness has tarnished the image of individual herbs and TTM, leaving the Thai people in a state of distrust.

“Another weakness of government’s advertising is Centotheca lappacea (L) Desv. (REPAIR). For example, it is a very famous product used in soaps, but how can the government confirm which is better, the soap products or raw REPAIR materials? Even the research has not confirmed that yet. That means we have defeated herbs individually because the government promotes (the herbs) and then stops because there are no research studies to support the information or properties then people will be suspicious. This might cause a bad image for TTM.” (Vendor in the Private Sector-1)

One of the government’s academicians claimed that it happened because at all levels of the MoPH’s staff there exists a limited knowledge of TTM and limited beliefs about how to promote TTM. This factor caused their working performance not to meet expectations.

“Every media must get attention and short statement to make the readers be impressed. However, does the person who creates this have believability? People, who are in charge, have to be trustworthy in the topic of creation. They must not just follow the policy from high authorities or just show their accomplishment. This cannot help to increase the use of TTM.” (Academician for the Government-1)

ii) Useless media channels for the promotion of TTM

According to the government’s current campaign, the finished form of TTM is being widely promoted under the theme: *“First use herbal medicines for minor illnesses before going to see medical doctors.”* All interviewees from both sectors had mostly received news regarding the government’s activities via two channels, print media and exhibitions, due to the fact that the MoPH had asked for their cooperation. For instance, two government Academicians-(2&3) and all three Vendors (from both sectors) were asked to join the booth at the exhibition, whereas the TTM doctor received a letter asking if he would like to visit the exhibition.

I found the public agenda and media conflict by the government affected the promotion of TTM. A private vendor mentioned that this theme was suitable only for groups of local people. In addition, he questioned how to best promote TTM to middle and higher class groups:

“Now I think that (when) having an illness and using herbal medicines first before going to see medical doctors is the way of life of local people. As for the government’s campaign, it is ok, but how about middle and high class?” (Vendor in the Private Sector-1)

Apart from the trendy promotion mentioned above, participants from both data collection methods (focus groups and in-depth interviews) shared the same views in regard to the negative points of government sector’s promotion, by expressing that it was not a suitable means for promoting TTM uptake, in particular “the exhibition”.

Three informants, the MoPH vendor, an academician-(3) and a private vendor-(1), mentioned that the exhibitions lacked the necessary public relations to promote TTM and reach more people. Regarding his recent experience in opening a booth in the exhibition, a private vendor-(1) claimed that the visitors who came to the exhibitions were usually the staff members from the organizations that had booths.

“As an illustration of Herbal Expo Exhibition, the public relations are very weak. You could see from this event, there were not any signs at the entrance, so people did not notice and rarely came, this is what we lack. The visitors are mostly the staff members from each of the organizations. We cannot see the advantages that people receive from the above-mentioned exhibition.” (Vendor in the Private Sector-1)

An explanation provided by a government Academician-(3) stated that the outcome of the exhibition was not because of a small budget, but because the MoPH could not properly manage its budget, and thus there was a lack of Public Relations for promoting exhibitions. A MoPH vendor also explained this phenomenon based on her own experience of having a close working relationship with the DTAM department and joining the booth in the Exhibition”. She claimed that the success of the exhibition is measured only by the actual number of targeted people it reaches, without setting a target for TTM use and without measuring the degree of value that people should receive from attending.

A private vendor-(2) claimed that at the exhibition there were only the Key Performance Indicators (KPI) of the MoPH and the DTAM Department. A MoPH vendor, a private vendor-(2), and government academician-(2) claimed that promoting TTM through

exhibitions was not good enough, in particular the government-2 stated *“In my opinion, the private sector can do better than this”*.

A mid-level Official at the MoPH-(3) also mentioned print media and claimed that it is not a good channel to disseminate TTM.

“I think it does not work because the leaflet is an uninteresting advertisement. In my opinion, a useless (form of) media is the leaflet. It wastes money.” (Mid-level Official at the MoPH- 3)

Eventually, the majority of informants from both sectors claimed that both media (exhibitions & print media) were being used to promote TTM and that these were not interesting. The informants felt that they were useless and could not see the advantage that people receive from these kinds of promotion channels, particularly ‘Exhibitions’.

“It (the exhibition) is not necessary. It is useless because people are not interested to attend unless we change the format of events. The event does not have many attendees. The exhibition does not have the problem about the budget because they allocate the budget about a million baht per event. The problem is how they can arrange the budget to the target successfully because they follow the policies. However, they are not concerned about the results. In my opinion, the private sector can do better than this. Considering the budget, they set the big budget for each event (hundreds of thousands or millions), but it is not an effective budget for the real work.” (Academician for the Government- 2)

Based on the discussions, suggestions to encourage Thais to use TTM were made by stating that the government should carry out TTM promotion by supporting accurate information and backing that up with proof based upon research. With respect to ‘Exhibitions’, two governmental interviewees suggested getting people’s attention by changing the exhibition themes. A vendor at the MoPH suggested changing to a modern theme, whereas one of the government academicians suggested that there should be a TTM discussion panel in each Exhibition’s program.

5.2.5.2 The exaggerated claims in advertising by the private sectors

Based on the discussions and interviews, the findings from health professionals’ views and from the consumers’ views (focus groups) were similar to each other regarding their focus on advertisements, with exaggerated claims used by the private sector. All health professional participants claimed that the advertising made by the private sector had used exaggerated claims about TTM.

Indeed, I found more communication conflict to promote TTM by the private sectors. The focus group participants used words and phrases, such as “*unbelievable*”, “*beyond the truth*”, “*overstated*”, and “*fake interviews*” to express their sentiments about advertisements with exaggerated claims, whereas health professional informants used words and phrases, such as “*beyond reality*”, “*propaganda*”, “*direct sales*”, and “*fake patients*” to describe this kind of advertising. The results reveal that this advertising could mostly be found on radio stations, because it was easy to gain access to people.

Informants from both the government and private sectors claimed that the advertising provided by the private sectors was “*beyond reality*” because they found it to have misleading content and touted exaggerated claims about TTM’s properties that can cure all symptoms. They had also used “*direct sales*” and interviews with “*fake patients*” to approach the users in rural areas. One government Academician-(2) further noted that the overstated claims sounded like “*propaganda*” and that this factor had caused many people to misunderstand the properties of TTM.

“Radio and TV sometimes use ‘fake patients’ to present, but it is successful because the villagers listen every day. The radio is a good media because the villagers can listen to it while they work. The radio also gives the telephone number for contact so that they will reach the villagers after that, which is like propaganda.” (Academician for the Government- 2)

The government academician-(1) also noted that some products were found with “fake” ingredients and they also had expensive prices. The government TTM doctor noted that local people in rural areas had sometimes shared the information from the exaggerated claims without making a proper analysis of TTM products. In turn, all mentioned that it had led to TTM having a tarnished image and had fostered distrust about TTM. In particular, TTM had lost its credibility among educated people.

“According to the background of the believability, many people have trusted and accepted TTM for a long time, but there may be some points that make educated people reluctant to use (them), such as exaggerated claims advertisements, ‘fake’ drugs, and fungi or other diluted substances inside product and the fake TTM are expensive, too.” (Academician for the Government- 1)

Thus, I conclude that all of the aforementioned may have led to the conflict of TTM’s knowledge by users/patients when they constructed the medical benefits of TTM, to make their decision about using TTM, which caused the decline in its use. I argue that currently the

promotion of TTM by the government and private sectors has tarnished the image of individual herbs and TTM, which has discredited TTM itself.

CONCLUSION

With respect to the meaning of TTM, based on findings from the user participants, TTM is plant-based medicine and a decoction/medicinal pot, whereas health professional informants agree that TTM is a household treatment and that TTM is a holistic treatment incorporating knowledge from both China and India, plus established moral and ethical principles from Buddhism. Participants from both methods mentioned that TTM represents Thai wisdom, traditions and cultural beliefs, as well as individual beliefs.

The results from both methods found that TTM plays a vital role as preventive medicines used for curing minor illnesses and certain conditions. This includes its use as an alternative medicine when treating diseases like cancer. In addition, TTM maintains the health and well-being of its users.

According to the government's current campaign, "the finished form of TTM" is being widely promoted under the theme: "*First use herbal medicines for minor illnesses before going to see medical doctors.*" Nonetheless, the findings reviewed that the consumer participants have had a high level of awareness of TTM in its traditional form, whereas 61.4% were unaware of the new form of TTM (finished form). The percentage of participants who had used the finished form of TTM themselves was 21.1%. Moreover, the results unveiled that members of the user's and non-user's groups had mostly thought that the finished form is in short supply and only available from hospitals. Only 10.5% had realized that the finished form of TTM was available in the marketplace.

In regard to the Knowledge, Attitudes and Practice of TTM by both consumers and medical doctors, results from both methods concluded that the following conditions currently exist:

1. Knowledge of TTM: The figures show that consumers currently have a superficial knowledge with respect to TTM treatments and TTM products that causes their decision to use TTM. Time and again, conventional doctors who play the vital roles in supporting the usage of TTM lack a body of TTM knowledge and skills with respect to TTM treatments and products. Therefore, the medical doctors had prescribed some types of TTM supported by research studies in order to ensure the safety of the patients. This

circumstance happened because of the discontinuance and disappearance of Thailand's TTM knowledge.

2. Attitude towards TTM: It was found that due to the negative attitude and bias against TTM, consumers shun the benefits of herbs. The biased attitude against TTM by the medical doctors caused TTM products to have been overlooked and used only for massage treatment. The findings significantly show that for both participants (consumers and health professionals) the perception is that TTM is inferior to modern medicines in all aspect areas, except the side-effects.
3. Practice of TTM: The findings from both methods uncover that the user participants still believed in TTM as it is from Thai culture and their traditional and individual beliefs. However, most had a higher awareness of the traditional form of TTM (medicinal pots/decoctions), than the finished form of TTM. It is found that they have used TTM as preventive medicines for curing minor illnesses and certain conditions. This includes its use as alternative medicines to treat diseases like cancer and maintaining health and well-being. Unfortunately, TTM is only a second choice and/or last choice for the consumer participants after they have become dissatisfied with conventional medicines, because there are concerns about the quality and efficacy of TTM products, and their accessibility and convenience of use. A lack of knowledge and attitude towards TTM by medical doctors resulted in the practice of TTM to be dispensed less frequently, because the doctors have accepted traditional treatment only for massage, as the results can be easily seen.
4. The communication for the promotion of TTM by both sectors: The results revealed that currently the promotion of TTM by the government and private sectors was not suitable in order to promote TTM usage and that it has tarnished the image of individual herbs and TTM, which has tarnished TTM's image.

These phenomena have caused Thailand to fall short of its national target for TTM usage by a wide margin. To improve TTM uptake, the findings revealed that the Thai government should promote TTM to both Thai citizens and Thai practitioners by “developing the knowledge” to assist in raising awareness among consumers and practitioners, as well as to aid in promoting understanding and developing trust about using TTM.

The subsequent chapter, Chapter 6, provides a discussion of the findings obtained from the two phases of data collection. The chapter will highlight a number of parallels that can be

drawn from the findings yielded from the focus groups and from the in-depth interviews. Together with a comparison of the empirical findings with the relevant literature, interpretations of the data are offered in order to inform development of an effective communication strategy to promote the uptake of TTM, as one of Thailand's unique characteristics (Sompopcharoen & Sresumatchai, 2015).

CHAPTER 6 DISCUSSION AND IMPLICATIONS

This chapter presents a discussion generated from the important themes, sub-themes, and concepts to answer the central research question, “*What is the role and meaning of TTM for Thai people in their lives?*” Related to this question are three major queries: 1) *How do Thai people view TTM as it relates to their consumption?*, 2) *What is the current understanding of TTM by Thai Consumers?*, and 3) *What is the current awareness of TTM by Thai medical doctors?* These questions sought to develop a broader and more holistic understanding of TTM to facilitate its promotion in Thailand.

In alignment with the study’s aims and based on its data analysis, the findings are investigated within the context of the current understandings, beliefs, and behaviours, with respect to TTM, from the participants’ viewpoints. This includes the factors that influence TTM usage in Thailand, which are components in the KAP theoretical framework. Finally, the causes and effects based on the participants’ voices are highlighted and presented.

THE ROLE AND MEANING OF TTM FOR THAI PEOPLE IN THEIR LIVES BASED ON THE KAP FRAMWORK

In seeking to answer the central research question, “*What is the role and meaning of TTM for Thai people in their lives?*”, analysis was carried out using two methods (focus groups and in-depth interviews).

This discussion draws from a synthesis of the analysis of the focus group themes and the interview themes, the evidence gathered from the experiences and opinions of both sets of participants (consumers and health professionals), and the relevant literature. In the discussion of major findings, all contexts relevant to the knowledge, attitudes, and practices have been raised, including any agreements or disagreements noted between the theoretical context and this study’s findings.

6.1 The understanding of definitions and meaning of TTM

This section presents a summary of the meanings of TTM, including the current roles of TTM in: 1) the Thai healthcare system, and 2) the culture and lifestyles of Thai citizens. An analysis of the findings from both methods indicated that the meanings of TTM are a

household treatment and medicinal pots/decoctions that represent the Thai way of life. TTM is seen as a holistic treatment that can be used for prevention and as an alternative medicine. The information is summarized below:

6.1.1 TTM is a household treatment

Based on an analysis of the findings, TTM consists of household items (plants, vegetables, or foods) that are found growing in local areas and that can be used for cooking and for treatments. Only one consumer participant mentioned that TTM can include some animal parts. Peltzer (2009) mentioned that traditional remedies can include diverse health practices incorporating plant-based, animal-based, and/or mineral based medicines, spiritual therapies, manual techniques, and exercises that can be applied singularly or in combination to maintain well-being (Peltzer, 2009, p.1).

Many participants from both methods, significantly mentioned that the most commonly used TTM treatments, used for their illness, are Turmeric and Creyat. This is consistent with Sumngern (2011), who noted that most Thai foods utilize herbs, spices, and fruits that are used in cooking, such as Turmeric (curcumin), mentioned as a healthful ingredient, especially in curries, which are eaten throughout the country. Curries have been mentioned as helping to prevent and/or to treat some age-related degenerative disorders (Sumngern, 2011, p.38). Hence, the medicinal plants are a part of Thai daily life because Thai people regularly consume various types of medicinal herbs as foods and spices to balance the basic elements of their bodies and souls in order to stay healthy (Chokevivat & Chuthaputti, 2005).

6.1.2 TTM is medicinal pots/decoctions that represent the Thai way of life

In Thailand, the historical evidence shows that TTM has long been a part of Thailand's healing culture (Mahidol University, 2012). Thai people had begun to use TTM for health promotion and to treat various symptoms and diseases before the Sukhothai Period (before 1238 A.D.) (Chokevivat & Chuthaputti, 2005; World Health Organization, 2009). Thai traditional doctors often used herbal medicines consisting of mixtures of many kinds of plants boiled in water. This technique is called 'decoction' (Kummalue, 2012). Despite this history, TTM was shunned for over 60 years, until its revival began in the late 1970s (Chokevivat & Chuthaputti, 2005). By analyzing the findings from the interviews, conducted in three parts of

Thailand, including Bangkok, I found that from a historical perspective, the traditional form of TTM (in particular, the medicinal pots/decoctions) had not been lost. In addition, an investigation of the focus groups findings from Udonthani in Northeastern Thailand (the largest part of the country) revealed that the user participants had “*a high awareness of TTM in the traditional form*” as medicinal pots/ decoctions, because this part of Thailand has the highest availability of TTM services (Jehso, 2015). It was considered to be for the poor, living in rural areas (Chokevivat & Chuthaputti, 2005; Liamputtong & Kitisriworapan, 2014; Sumngern, 2011) where modern medicines were not easily accessible (Chokevivat & Chuthaputti, 2005; Sumngern, 2011). Almost all of the consumer participants and health professional informants noted that TTM represents the Thai way of life and Thai wisdom. This is similar to Chokevivat and Chuthaputti (2005) and Mahidol University (2012) who noted that TTM is congruent with Thai culture and with the Thai way of life. Therefore, I concluded that TTM has been a part of Thai culture and the Thai way of life since ancient times to the present day as part of Thailand's culture of healthcare.

6.1.3. TTM is a holistic treatment for preventive and alternative medicines

Another term for TM is holistic medicine (World Health Organization, 2004a; Chilson, 2014), which uses natural remedies to treat and prevent diseases of multiple health conditions and has been the standard of care for centuries (Chilson, 2014; Rivera, Loya, & Ceballos, 2013), by almost every known culture (Rivera, Loya, & Ceballos, 2013, p. 1).

According to the health professionals, TTM is a holistic treatment for preventive and alternative medicines, however, the consumer participants were not calling TTM a holistic treatment. An analysis of the findings from both groups revealed a similar purpose: using TTM in the first steps of curing minor illnesses. This relates to similar findings from a study conducted in India by Akram, et al. (2015), who found that most participants had preferred to use herbal remedies for minor illnesses. I further noted that TTM can be used as a preventive medicine to cure minor illnesses, particularly in treating fevers or wounds.

In addition, some consumers and health professional participants believed that for certain conditions, the traditional form of TTM is better than conventional medicines, especially after childbirth or accidents. They believed it could offer a faster recovery than modern medicines

under similar conditions. I found that the significant purpose of selecting TTM for healthcare choices had been constructed from culture, traditions, and individual beliefs. In particular, there had been a strong impulse to use TTM after giving birth. Similarly, Liamputtong, et al. (2005) conducted a study in Chiang Mai (Northern Thailand), concluding that the social meaning of childbirth in Thai culture is part of the larger social system, involving the woman, her family, community, society, and the supernatural world.

It is believed that TTM can be used as an alternative treatment for cancer patients. My findings indicated that people, suffering from cancer, had recognized that TTM should be used in conjunction with conventional medicines. Four studies from Akyol & Oz, (2011), Farooqui et al., (2012), Loquai et al., (2017), Micke et al., (2009) also found that traditional remedies were being widely used by the patients who have cancer, and in particular, by females who have breast cancer (Micke et al., 2009). Some of them intended to use traditional remedies after finishing chemotherapy or radiotherapy (Farooqui et al., 2012). This is due to the fact that the patients were unsatisfied with conventional drugs (Wachtel-Galor and Benzie, 2011).

Armstrong (2017) found that when patients used conventional medicines, they had felt a sense of powerlessness, helplessness, desperation, as well as had also felt that they were suffering from a lack of choices. All of these conditions had led the patients to develop a sense of vulnerability and anxiety. The reason for this stems from the approaches or outcomes, services, relationships, and the expertise of conventional medicines, which collectively compel some individuals to search for alternative healthcare solutions. Hence, in treating their problems, they felt that TM would be more effective than conventional medicines (Thomson, et al., 2014). This sense of dissatisfaction had arisen from the fact that conventional medicines can be ineffective in treating certain diseases, particularly the advanced stages of cancer and new infectious diseases (Wachtel-Galor and Benzie, 2011).

Based on a review of the literature, it was found that ‘dissatisfaction with conventional medicines’ (Akyol & Oz, 2011; Armstrong, 2017; Farooqui, et al., 2012; Thomson, et al., 2014; World Health Organization, 2013) had been the primary reason for the uptake of TM (Armstrong, 2017). In particular, Thomson, et al. (2014) concluded that many studies had reported incidences of people with chronic diseases, who had once again turned to TM after experiencing dissatisfaction with conventional medicines and treatments.

However, it has been argued in some studies that solely being dissatisfied with conventional medicines alone would be insufficient to cause individuals to use TM (Armstrong, 2017). In contrast, it is not due to a degree of dissatisfaction with the modern care system that can cause people with chronic diseases to perceive that using TM can enhance their chances of survival (Faroogui et al., 2012). I uncovered the fact that among consumers, a strong belief exists about cancer. Based on the fact that they wanted to strengthen their immune systems and their own forces/bodies (Loquai, et al., 2017, p. 75), the consumers believed that they must use TTM to compromise their illnesses, to restore balance, to boost their energy levels, and to foster wellness (Akyol & Oz, 2011).

Sirisupluxana et al. (2009) explained the reason for this phenomenon: the patients with cancer had perceived TTM to be a complementary therapy: 1) a mentally-strengthening treatment; 2) a cancer-controlling treatment; 3) a natural therapy; 4) a form of self-determination; 5) a mind and body therapy; and 6) a method of integrating with conventional therapies (Sirisupluxana et al, 2009, p. 64). Therefore, I specifically noted that the consumer participants had constructed their beliefs and practices around the concept that when they have cancer, they must significantly use TTM with Western medical treatments.

People seek to take an active role in their health (Armstrong, 2017) by reducing some of the physical symptoms, especially side-effects arising from their medical treatments (Akyol & Oz, 2011). When the participants used TTM to negotiate their healthcare, they had exhibited a strong sense that TTM had made them *feel safe* due to their advantages of: 1) maintaining people's health, and 2) offering plant-based treatments free from side-effects. Similarly, Aphisamacharayothin noted that his participants had continued to consume TTM to maintain their health and to believe that TTM could help them to live longer than modern medicines (Aphisamacharayothin, 2014). Consequently, it is significant to note that my participants had formed their TTM practices based on their culture, traditions, and individual beliefs, which included the following knowledge that TTM were: 1) preventive medicines, which could cure minor diseases and relieve symptoms; and/or 2) alternative medicines, which could maintain their good health and treat their cancers.

Given that Sumngern's study solely focused on the TTM consumption of Thai elderly, Sumngern's findings are, nonetheless, similar to this study's findings. It was revealed that a high percentage of the elderly believed that herbal medicines could help to cure diseases;

relieve symptoms, such as pain; provide nourishment; add flavor to foods; and maintain good general health (Sumngern, 2011).

6.2 Cultural and national identity conflicts of TTM to negotiate health choices

Most countries in the world have two systems of healthcare: traditional practices and medicines, and Western treatments and medicines (Tomar, 2016). To justify consumer behaviours when having multiple medical systems, we must understand their beliefs in specific medical practices and the attribution of the meanings to their health behaviour (Schreiber, 2005). Based on the KAP framework, the current understanding and beliefs about TTM for both sets of participants was evaluated to identify what is known and what needs to be done in Thailand (Gumucio, 2011) to inform the programs/activities needed to promote TTM within the Thailand context (Ministry of Health, Rwanda & UNICEF Rwanda, 2014).

The usage of TTM was reduced from 3.5% in 2011 (Thungkhampien, 2012) to 2.6% in 2015 (Peltzer & Pengpid, 2015), and the national target of 5% has not been reached since its implementation to present day (Vadhnapijyakul, 2011). Accordingly, anti-consumption focuses on the phenomena, which are against the acquisition, use, and dispossession of certain goods (Lee, et al., 2011, p. 1681), including a resistance to, a distaste for, or even a more general resentment or a rejection of consumption by the consumer (Zavestoski, 2002, p. 121). Based upon these phenomena, it can be claimed that TTM in Thailand have accordingly been facing the situations of anti-consumption.

The findings revealed the central category from thematic analysis, which indicated **a cultural and national identity conflict of TTM**. Such circumstances have led to anti-consumption of TTM, which can be explained by three major conflict categories: 1) intergenerational knowledge and attitude conflict; 2) socio-economic conflict, and 3) communication conflict and may represent potential obstacles to adopting TTM in Thailand.

What is happening regarding TTM in Thailand? Why is TTM usage so very low? To explain, I argue that currently people's understanding and beliefs are the stage of **cultural and national identity conflict with respect to TTM**, which reflects the negotiation of health choices leading to Thai behavioural changes and a downturn in TTM usage. Therefore, TTM usage has not yet reached the minimum national target.

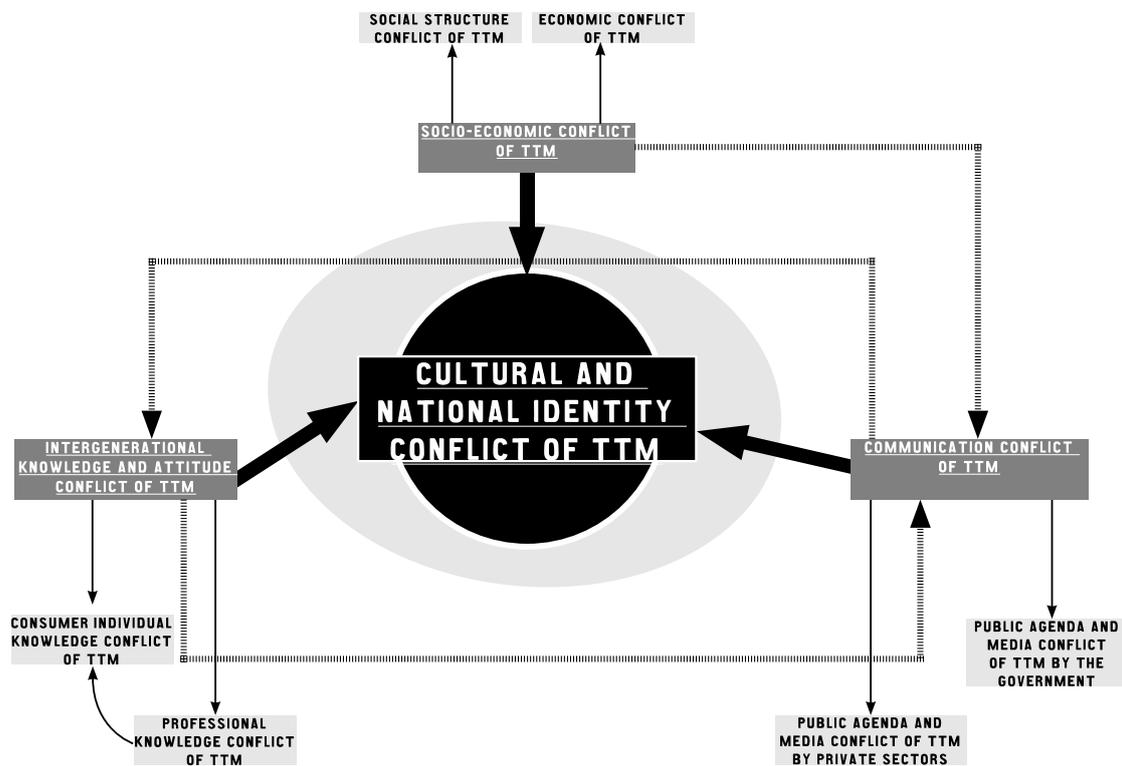


Figure 6.1 *The current understanding and belief of TTM based on the KAP framework and Thematic Analysis*

Figure 6.1 shows the rationale of the central category and the cultural and national identity conflict of TTM.

Intergenerational knowledge and attitude conflict

It was found that the knowledge, understandings, and beliefs about each medicine (conventional medicines and TTM) by both consumer participants and healthcare professionals have led to the construction of a culture of healthcare practice. Before making their decisions on whether or not to use TTM, both types of participants were found to have evaluated their culturally-bound knowledge of health and TTM to strategize the practice of TTM. The findings indicated that both participants had faced discrepancies regarding the **intergenerational knowledge and attitude conflict**, which had resulted in differences in how the value of TTM was held by different generations of consumer and health professional participants. The intergenerational knowledge and attitude conflict arose from a time in the

history of Thailand when TTM had been outlawed and the knowledge had disappeared for a 60-year span (Kudngaongarm, 2011). Thus, the findings indicated that both types of participants had exhibited negative attitudes towards TTM. Finally, when both types of people have an insufficient knowledge of health problems and/or the benefits of TTM treatments, they can put up barriers that impede behavioural changes (Haloi, Ingle & Kaur, 2014, p.100). Furthermore, the result can be a decline in TTM consumption.

Socio-economic Conflicts

Socio-economic conflicts are factors that have caused a decline in TTM usage. It was found that the modern fast-paced Thai lifestyle, as well as the economic situations of the consumer participants, had impacted their culture of healthcare. These two determinants had led the consumer participants to decide to rely upon Western treatments and medicines instead of traditional treatments and TTM. They had determined that Western treatments and medicine were best suited to their current lifestyles and economic situations. Regarding the traditional form of TTM, the consumer participants perceived the following barriers in negotiating their healthcare choices: 1) the inconvenience of use, 2) the slower rate of recovery, and 3) the taste and smell. All of these had affected their decision-making processes. Given that the finished form of TTM was limitedly available and accessible for them, it was the cost of the TTMs, which had particularly and significantly affected the usage of the finished form. Finally, when the consumer participants had constructed their healthcare choices by using the socio-economic criteria, both forms of TTM were not found to suit their medical needs in light of their modern-day Thai lifestyles and their economic situations. For this reason, within in the urban Thai context, TTM has gradually lost its authoritative status (Liamputtong, and Kitisriworapan, 2014).

In order to prescribe the finished form of TTM to the users/patients in public healthcare system, the medical doctors were also faced with the burden of cost, because traditional treatments and TTM were not covered by the hospitals and health insurance (Farooqui, et al., 2012). Many hospitals had to reduce spending by cutting several social and welfare programs (Sermisri, 2002), which included the costs for TTM. Consequently, the burdens resulting from the use of the finished forms of TTM have had to be accordingly carried by individuals and by

public hospitals. This may have represented an obstacle blocking the finished form of TTM usage by both types of participants.

Communication Conflict of TTM

The actual TTM promotion, carried out by both the governmental and private sectors, has also lead to TTM being consumed less. This happened when the people, who have had the roles to promote TTM, have had an intergenerational knowledge and attitude conflict. Without having a sufficient degree of knowledge and positive attitudes towards TTM, they set the public agenda and created media to promote TTM. From the resulting communication conflict about TTM caused by the governmental sector, there was a diminished awareness among the consumers and healthcare professionals about TTM. Meanwhile, the communication conflict, caused by the private sectors, meant that TTM's image was tarnished over time (Wongyai, 2004).

In summation, conflicts both of culture and national identity surrounding TTM have occurred for both consumers and healthcare professionals alike. These arose from conflicts regarding intergenerational knowledge and attitudes about TTM and uncertainties about how to best assimilate TTM into their healthcare practices. Furthermore, socio-economic conflicts have also constructed behaviours encompassing the culture of healthcare for both types of participants, which has actually led to less TTM being consumed. The once relaxed Thai lifestyle has morphed into a modern fast-paced lifestyle. This shift has made TTM no longer suitable for consumers. One of the issues making TTM unsuitable is the burden of cost. In order to negotiate their healthcare choices, if the individual consumers and healthcare professionals would like to adopt TTM, they would then have to pay for TTM themselves. Finally, the conflicts, which had been associated with intergenerational knowledge and attitude of TTM, were found to be related to the communication conflict of TTM stemming from both the governmental and private sectors. Under the influence of the intergenerational knowledge and attitude conflict, which encompassed TTM, these two sectors have mistakenly promoted TTM without an appropriate public agenda and an adequate media coverage.

The following section presents the three conflicts surrounding TTM, which have resulted in cultural and national identity conflicts for TTM in Thailand.

6.2.1. Intergenerational knowledge and attitude conflict

TTM was neglected for over 60 years, until its revival began in the late 1970s (Chokevivat & Chuthaputti, 2005). Despite this fact, TTM was revived due to national Thai policies. Based on a review of literature, TTM/Folk knowledge has become structurally inferior to Western knowledge (Aphisamacharayothin, 2014; Sermsri 1989).

Lawrence (2013) explained that the circumstances surrounding TTM are that it continues to be passed on by word-of-mouth. Moreover, there is no centralized teaching because these herbal remedies are considered closely held secrets. Even when certain recipes are written down, some of the most potent ingredients might be deliberately left out so as not to disclose the full treatment. UNESCO (2013, p. 7) also reported that knowledge of traditional remedies was often specifically kept secret. In fact, some believed that the information was transferred orally to selected individuals that were believed to have been chosen to receive the information by a supernatural being.

Similarly, the findings from the health professional informants significantly revealed that surrounding TTM's knowledge, there had been conflicts carried forth from the past. Three factors were identified: 1) the transfer of TTM knowledge was only by word-of-mouth and had not been written down; 2) the knowledge was kept secret by folk doctors, and 3) the actions taken by Thailand's government. Consequently, in contrast to the flourishing of Western knowledge, TTM knowledge did not continue to develop over time, which eventually resulted in its disappearance.

Presently, the inferiority of TTM knowledge stems from a lack of scientific research to back-up its claims (Aphisamacharayothin, 2014; Chokevivat & Chuthaputti, 2005; Jehso, 2015; Thongruang, 2014). Based on an analysis of the findings from the health professional informants and, in particular, the academicians, who were researchers (two pharmacists and one medical doctor), they significantly claimed that currently TTM lacked existing research and proof to support its efficacy in several areas, particularly, in clinical research. Some research studies had been conducted on superficial topics, while others were neither complete nor had been aligned with TTM's holistic treatment methods.

Chokevivat and Chuthaputti (2005) cited that based on current medical knowledge, some content may be considered to be erroneous or outdated. They concluded that a lack of scientific proof about TTM knowledge and its efficacy was the point that made it inferior. Thongruang (2014) also noted that there is a lack of TTM research and academic support for its practices. In particular, he noted that when physicians are deciding to apply TTM service delivery, a lack of clinical research studies can affect their confidence. Furthermore, when it comes to adopting TTM into healthcare policies and practices, this factor becomes a barrier.

This project's findings support the observations of the WHO, which reported that one of the major challenges of the Member States is coping with a lack of knowledge about TM (World Health Organization, 2005b). In 2013, the WHO further reported the difficulties being faced by the Member States regarding the regulatory issues related to the practices of TM. The figures cited in the WHO report showed a lack of sufficient research to support TM, which was the primary problem. The figures showed that of 120 countries, 105 reported a current lack of research on TM (World Health Organization, 2013).

As a result, the discontinuance and disappearance of TTM knowledge from Thailand has created an intergenerational knowledge and attitude conflict. Consequently, it reflects a conflict of cultural and national identity for TTM in Thailand, causing a lack of TTM awareness and trust by both consumers and medical doctors, which is summarized below.

6.2.1.1 Consumer individual knowledge and attitude conflict

TTM has long been a part of Thailand's healing culture. However, when Westerners brought their goods, medicine, values, culture and their cannon-mounted caravels to Thailand about 100 years ago (Mahidol University, 2012), the status of TTM in the healthcare system began to decline (Chokevivat & Chuthaputti, 2005; WHO, 2009). Based on the synthesis of the analysis of findings from both methods, it was found that currently the consumer participants have four major individual knowledge and attitude conflicts: 1) an insufficient knowledge and bias to use the traditional form, 2) a lack awareness of the finished form of TTM and its availability, 3) a conflict of knowledge and attitudes about both forms of TTM when negotiating healthcare choices, and 4) perceptions of poor production processes and a lack of medical/health hygiene.

i) Insufficient knowledge of and biases against the use of the traditional form

I sought to delve deeply into how, in their interactions, the participants had actively constructed their meanings of TTM with their resource environment. With respect to the consumer participants' everyday lives, I was able to ascertain the roles and meanings that TTM had had for them and recognized that all of the participants had been aware of the traditional form. The findings from both methods revealed that presently, some consumer participants still use herbs and the traditional form. However, when treating some minor illnesses in their daily lives, they used simple processes, such as consuming them fresh or boiling them. None had employed a complex method using many herbs to make the traditional form or had produced the final product by a series of many steps. Due to the discontinuance of TTM knowledge and its disappearance, they did not use traditional medicinal pots/decoctions unless their family members or folk doctors made it for them. Therefore, they did not know how to produce the traditional medicinal pots/decoction themselves. Consequently, they had decided not to use TTM in its traditional form because using it was too complex and complicated.

During data analysis of the perspectives of my participants, foregrounding gave me the opportunity to experience their lives with respect to TTM. It served as a way to understand the meaning of their health practices, how they negotiated problems, and possible solutions about health (Chang & Basnyat, 2014) and offered the space in which they co-constructed and adapted TTM to their health meanings. I realised that once the understanding and beliefs about TTM by consumer participants had been based on the traditional form, it was found that aside from the fact that consumer participants had a superficial knowledge of TTM. In fact, some non-users were found to dislike herbs, to have a bias against them, and to shun the benefits of herbs and TTM. These conditions resulted in them rejecting TTM.

Chaichompoo, et al. (2012), O'Connor and White (2009), and Omar and Putit (2012) noted that that if the consumers' attitudes towards traditional remedies are more favourable, then people will more likely purchase them. People are more likely to use traditional treatment when they believe that there will be some benefits for their health. Unfortunately, an analysis of the findings revealed the attitude of the consumer participants towards the *traditional form of TTM*. From their vantage points, this form, with its complex methods of use (decoctions and medicinal pots) is considered to be the ideal expression of the '*roots of Thai-ness and Thai wisdom treatments*'. Moreover, in the past it had been highly valued, but is presently

devalued. It was found that the consumer participants had specifically used words, such as 'better', 'quicker', and 'faster' to emphasize their ideas when comparing the value conventional medicines to TTM's values (the traditional form).

The findings indicated that in many areas, the participants had changed the value of the traditional form of TTM. Regarding the traditional form, they had constructed their own values by using modern medicines as their evaluating standard. The following were compared and contrasted: 1) the medical benefits of TTM, particularly the duration of the recovery period; 2) side-effects, and 3) the quality of the products and their safety. The positive aspects of the traditional form, side-effects, had mostly given a higher weight to TTM than to conventional medicines. However, the value of the traditional form of TTM is significantly less than that of conventional medicines. The end-users perceived three major barriers, related to the traditional forms: 1) slower recovery period, including the taste and smell of the traditional form; 2) inconvenience of use, and 3) the cleanliness of the production process. It was significantly shown that these three factors have caused a decline in TTM usage.

The data analysis found a conflict in regard to knowledge, attitudes, and perceptions when it came to refusing the traditional form of TTM. It was found to be related to the age of the user, and connected to a perception that the traditional form is only for the elderly, and not for younger people. Thus, by using age as a basis for making decisions about whether or not to use TTM, some consumer participants had not even considered consuming the traditional form of TTM because they had created a thought construct based their own belief: it does not belong to them. Akyol & Oz (2011) and Micke et al. (2009) reported that age-related factors had affected TM usage. My findings from the consumer participants in the focus groups also indicated that age is one of the factors that influences attitudes toward using the traditional form of TTM. Moreover, some consumer participants thought that TTM is for those who have serious illnesses. Consequently, they had also believed that TTM does not belong to them.

According to the K-A-P sequence, which often happens (Haloi, Ingle & Kaur 2014, p. 100) specific to the traditional form, it was found that the consumers' decision-making processes had followed the sequence. Even though the consumer participants had indicated that they had a high level of awareness of the traditional form, in fact, they had very little knowledge of their usage. From this, it was evident that they had consumed the traditional form via a simple process. Moreover, I strongly claim that at present the consumers' attitudes towards the traditional form of TTM are: 'it is obsolete, devalued, no longer proper to use and for the

elderly and/or the people who have serious illnesses, not belonging to them'. As a KAP consequence, they rejected it. Thus, I argue that the traditional form of TTM has a knowledge and attitude conflict based on the users' perceptions.

ii) A lack awareness of the finished form of TTM and its availability

Regarding the finished form of TTM, it was noted that 61.4% were unaware of the new finished form. The percentage of participants who had used the finished form was 21.1%. Even if some had seen or used them before the interviews, no one mentioned the finished form when explaining their understanding of TTM treatments.

The studies of Chokevivat and Chuthaputti (2005) and Thongruang (2014) noted that the knowledge of TTM was lost from Thailand for a period of 60 years, causing a decline in TTM usage. Based on my findings, I also considered that the decline in usage happened because TTM knowledge had been discontinued and had disappeared. I further noted that the knowledge of TTM has also been extracted, causing the consumer participants' unawareness of the new finished form, given that their perceptions of TTM had been solely based on the old traditional form, which primarily require boiling before use. For instance, a high-level official at the MoPH-1 noted that:

“Thai society has a certain characteristic which is called ‘excerpt of knowledge’. When we excerpt, they will understand that herbs in modern form are not Thai medicines and when people see the products again they will not know the origin of them. They understand that herbal medicine (finished form) is just supplementary food which is sold like collagen or fish oil.”

This related to a statement from a Male consumer participant about the extraction of herbs, *“It (finished form) is not different from conventional medicine and does not imply ‘herbs’”*. Therefore, the majority of consumer participants might not have thought that it was one form of TTM.

The results also unveiled that members of the user and non-user groups had mostly thought that the finished form is in short supply and only available from hospitals. Only 10.5% had realized that the finished form of TTM is available in the marketplace. Finally, I also found that the participants lacked proper knowledge of the properties and dosages needed for treatment. Thus, based on the findings from both methods, it can be concluded that currently the consumer participants lacked awareness and knowledge of the finished form of TTM.

However, once the participants had seen the sample, almost all of them expressed the following: *'It is easy and convenient to use the finished form. (It is) similar to modern medicines.'* Yet, a form of TTM (tablets and capsules, etc.) revealed itself and represents a shift in the perception of TTM (from the negative viewpoints about the traditional form) to more positive expressions. This shift has led to a better acceptance of TTM's new form because the major groups have placed the following values on the finished form of TTM: 1) cleanliness, 2) ease of use, and 3) convenience. It is important to note that these values are similar to those placed on conventional medicines.

As previously mentioned, the majority of the consumer participants had been unaware of the finished form. Hence, the attitudes mentioned above had been established before they had gained knowledge and used the finished form. I was able to uncover the fact that both positive and negative attitude towards the finished form had been constructed by the consumer participants' knowledge and attitude towards the traditional form and conventional medicine.

It is significant that the finished form of TTM has gained greater acceptance because it has shown superiority over the traditional form in terms of the form of use, meaning that like modern medicines, it is ready to use, and compared to the traditional form, the preparation time could be reduced. Consistent with Luo, Grundling, and Steynberg (2013), their findings reported that having access to usable resources was one of five factors that had influenced their participants' behaviours in using traditional remedies. Likewise, the new modern form of TTM retains a high level of credibility due to having few to no side-effects, which according to the participants' understanding, is similar to the traditional form. This is based upon the belief that the finished form has fewer to no side-effects as related to their existing values, and past experiences of the traditional form (Rogers, 2003, p. 15).

Despite the incorrect nature of this belief, it has led to the majority of the group members wanting to use the new form to replace modern medicines. Farooqui et al. (2012) and Kongrerak (2013) highlighted the fact that consumer concerns about the undesirable side-effects of modern medicines has led to a preference for natural therapies. The belief that herbal drugs are free from side-effects is one of the significant factors that is contributing to the impressive rate of market growth for herbal medicines worldwide.

Based on the consumer participants' knowledge, understanding, and beliefs regarding the finished form of TTM, it was found that its sequence had neither been K-A-P nor P-A-K. In

contrast, the decision-making process regarding TTM's finished form had been constructed from positive attitudes, in particular when they perceived the relative advantages of the finished form over the traditional form. Consequently, they had considered using the finished form to treat some of their minor illnesses instead of conventional medicine. It can, therefore, be noted that the sequence for the finished form was A-P-K, whereas the traditional form had followed the K-A-P sequence.

However, when all three choices of healthcare treatment (traditional form of TTM, finished form of TTM, and conventional medicine) were compared, it was found that the finished form was slightly different than conventional medicine in term of cleanliness, ease of use, and convenience. However, they showed a significant relative advantage over the traditional form. Nonetheless, there was poor knowledge of and negative attitudes toward the finished form in terms of quality, efficacy, and accessibility when compared to conventional medicine, which had significantly affected their attitude towards the finished form. Consequently, the finished form of TTM cannot show its relative advantages over the conventional medicines, causing the finished form remain a second choice after conventional medicines. Once again, the user participants claimed that the finished form was unable to compete with modern medicines. Thus, I claim that from the users' perceptions, the finished form of TTM has also had a conflict.

iii) Conflict in knowledge and attitude towards both forms of TTM in order to negotiate healthcare choices

Based on a common consumer misconception that traditional remedies are 'natural' and as such, are safe and free from adverse side-effects (Akram et al., 2015; Mahady, 1998; UNESCO, 2013; Wachtel-Galor & Benzie, 2011; World Health Organization 2004c; World Health Organization, 2013), problems are springing from increased TM usage of TM (Lu & Lu, 2014). My findings from both methods significantly indicated that user participants had suffered from an incorrect perception: TTM has no side-effects. Therefore, they had used both forms of TTM without concern for side-effects. The phenomenon happened because they had formed their own beliefs based on their actual knowledge, beliefs, and the power of their observations: 1) TTM are made from plants and come from nature; 2) TTM has a long history of use which can be traced back to their ancestors, and 3) their own observations of the results of TTM had been based upon their own usage and that of their family members and friends. I

claim that these three factors had been utilized to form the basis of their own individual beliefs, which they had used as a guide when making individual decisions about the safety of TTM and whether it is safer than modern medicines.

Based the literature review, I found that many studies in Thailand had revealed that Thai citizens think that TTM is a natural product with fewer side effects (Bhokanandh, 2001; Chungsomjatepaisarn, 2013; Putiyanan & Winijkul, 2008; Ruenkon, Likitkeitkhajorn, & Siththemthong, 2003; Sompopcharoen & Sresumatchai, 2015). As a result, possible toxic build-up was often less of an issue when consumers were taking TTM (Putiyanan and Winijkul, 2008; Sumngern, 2011). Consequently, Sompopcharoen and Sresumatchai (2015) concluded that several studies illustrated that most users had not acquired an adequate knowledge of the medication's side-effects.

WHO also reported that many consumers have turned to TM products and practices on this assumption (World Health Organization, 2013), because TM is widely perceived as natural and safe, meaning non-toxic. This is also not necessarily correct (Wachtel-Galor & Benzie, 2011; WHO, 2013); some TM are known to be harmful and fake forms ("Traditional medicine," 2011) are believed to contain high levels of toxins or chemicals (Danubrata & Daga, 2013).

The consumer participants of my study were unconcerned about the possible side-effects of using TTM. Some even thought that 'allergic to TTM' meant that detoxification was taking place. This evidence showed that currently the consumer participants have poor TTM knowledge. Consequently, it can be strongly concluded that Thai citizens currently have a poor knowledge of TTM and they have misperceptions about the medical benefits of TTM and that TTM has no side-effects.

However, when the participants were establishing their patterns of self-care practices, they were able to apply their culturally-bound knowledge of health. In addition, they had demonstrated the ability to strategize their use of various medicinal approaches in different situations. They had constructed their health choices among three choices of medicines (traditional form of TTM, finished form of TTM, and conventional medicine). I found that the consumer participants had assessed the strengths and limitations of the three choices of medicines. To construct their decision to use each medicine, they had applied their knowledge and beliefs in terms of the medicine's intrusiveness, effects, benefits, and side-effects.

Anecdotal evidence shows that some patients use all forms of medical help simultaneously (Lawrence, 2013). Riley and Sermisri (1974) identified Thai behaviour in seeking healthcare as a 'switching healthcare pattern'. An analysis of the findings from both methods, including an observation during the discussions with the consumer participants, revealed that the users had brought modern medicines into their current culture of healthcare. This mode is practical for their daily lives, yet they are not part of the culture that has been raised with herbs. Instead, their culture is a culture of conventional medicines, which they have grown accustomed to. It was found that the knowledge and perception of each individual consumer participant had led to utilizing the traditional form as a second choice, when they were dissatisfied with conventional medicines and/or as a secret choice when they chose to take traditional form without telling their conventional doctors (i.e., as a cancer treatment). Lastly, traditional form of TTM was an alternative choice to maintain their health and wellbeing.

In some cases, the finished form of TTM was the consumer participants' first choice for treating illnesses, but only minor illnesses, such as fevers and sore throats. Yet, when compared to modern medicines, most participants retained their perceptions that the quality of the finished forms resulted in a slower recovery time compared to conventional medicines. Similarly, Thongruang (2008) noted that the Thai users were uncertain about TTM's effectiveness and quality.

iv) Perceptions of poor production processes and a lack of medical/health hygiene

It was found that the negative attitudes and perceptions of the finished form of TTM had been constructed through association with two facts: 1) some herbs had been placed on the floor, rather than having a proper and hygienically clean production process based upon proper storage, and 2) the physical appearance of the private TTM doctors/Folk doctors, who were working with the traditional form, was untidy and unkempt. These perceptions of an "unclean" traditional form have led a downturn in trust with respect to the quality of the new forms (finished form). A few participants still questioned the quality of the production processes of the new finished forms because the quality of these products does not always meet international standards and market requirements (Sukhabot, 2013).

The health professionals revealed that currently the quality of finished forms (particularly the product packaging and design) is unattractive, looks cheap, and is unclean. These factors had impacted the confidence of the middle class and well-educated people in regard to using

TTM. According to the results, they had indicated that packaging was one of the factors that strongly influenced their decision to purchase the finished products. Chungsomjatepaisarn (2013) found that 51.4% of Thai people had stated that TTM's packaging looked cheap, which they believed had affected and reduced the reliability of the products themselves.

Thongruang (2008) noted that before making the decision to purchase, 93.3% of consumers had felt it was necessary to find information on the TTM product, and 83.3% thought it was necessary to read the labels before purchasing. The study also revealed that products with complete labels, products with legal licensing, and good indications, were all factors on which the subjects had based their decisions to purchase herbal medicines. Consistent with my findings from the health professionals, it was found that when the consumers, in particular middle class and well-educated people, have to make their decisions about using TTM, they will pay particular attention to the following: 1) drug registration, 2) quality of the packaging, 3) the trademark, and 4) pricing. However, it is important to note that the middle and upper classes of the TTM users were using the finished form as a supplement for the purpose of maintaining their health, not as a medicine for treatment. This due to the fact that the middle class and well-educated citizens lack confidence in the production process of TTM's finished form.

Putiyanan and Winijkul (2008) reported that some of their sample group, who live in Northern and Central Thailand, including Bangkok, felt that improvement of the packaging needed to be considered. I further noted that if the product design and packaging of the finished form of TTM products were developed, the levels of consumer trust and confidence may increase for the consumers in Northeastern Thailand. These results are similar to Chungsomjatepaisarn (2013), Roekruangrit, Sumpaonthong and Itharat (2010), and Wongyai (2004). All three studies showed that improving product design, including repackaging, could help TTM gain acceptance, given people's concerns about TTM's trustworthiness (The Senate Kingdom of Thailand, 2011).

I realized that to maximize effects, the consumer's sense of reciprocity for each medicine had been reflected in their negotiation of medical choices. Moreover, in order to daily apply their self-care choices, their decisions had also been based on evaluating the totality of their knowledge and the scope of their understanding of and beliefs about each medicine. Taubman, (2010) noted that modern treatments and traditional treatments need not clash.

Indeed, it was found that some participants had believed that some medicines could complement others. From this belief, they mixed both conventional and TTM (both forms) to cure minor illnesses and/or to maintain their health, without consulting medical doctors. Putipan, Nongnuj, and Panjachat (2012) found that 60.9% of Thai patients with chronic illnesses, particularly cancer patients, have used TTM as an alternative medicine and 58.3% of them had chosen not to disclose their TTM usage to their doctors, because 65.9% of patients felt that informing their doctor was not necessary.

Elolemy and Albedah (2012) noted that most participants of the Riyadh region were reluctant to share and discuss traditional remedy information with their physicians. Zollman, Vickers, and Richardson (2008) further explained that conventional healthcare practitioners can sometimes be sceptical about traditional treatments. Therefore, the consumers/patients had not informed them and had chosen to hide their TTM use (in particular, the traditional form) from their medical doctors, because they were afraid that their doctors would blame them.

Armstrong (2017) emphasized the fact that some people will consume traditional remedies due to a lack of two-way communication between patients and practitioners. This shows the perceived conflicts and gaps in knowledge, as well as the understanding and beliefs between the two medical systems. Due to this, some participants had felt apprehensive about discussing their use of both treatment modalities with conventional doctors.

The findings indicated that people's knowledge, understanding, and beliefs about medicine have constructed their culture of healthcare practice, background and belief (Akyol & Oz, 2011). Many participants spoke about the cultural importance of the traditional form and their attachment to it, based on their childhood when their family member helped them to use it or they saw their family member use it. Some participants had developed trust in the traditional form of TTM based on memories of interacting with older family members. When the family member roles stop evolving knowledge and understanding of health and healing by means of traditional form of TTM. This included the disappearance of TTM knowledge from Thailand for over 60 years (Chokevivat & Chuthaputti, 2005), resulting in conflicts between the Thai cultural identity and the national identity of treatment. Their understanding and beliefs about the traditional form of TTM has been reconstructed and thus, I argue that for the consumer participants, currently traditional treatments and remedies are the idealistic Thai wisdom treatment from the past, but their current culture of healthcare is Western treatments and medicines.

Specific to the finished form of TTM, the consumer participants perceived them as similar to conventional medicines. Therefore, their knowledge and understanding of conventional medicines reflected their perceptions with respect to the finished form of TTM. The finished form of TTM is similar to conventional medicines, but cannot compete with them given a lack of knowledge of both the benefits and the risks the finished form of TTM, particularly a knowledge of the properties and dosages to cure their illnesses. Regardless of the reasons, neither form of TTM could become the consumer participants' first choice.

The cultural meanings of medical practices change over time (Chang & Basnyat, 2014). There is a strong link between health and environment, which is indicated in people's health practices (Payyappallimana, 2010) and which is crucial to the construction of health choice goals (Thompson & Troester, 2002). Based on the KAP framework, the findings from my study suggested the knowledge that counted and that which did not, due to a wrong assumption that there is a direct relationship between knowledge and behaviours (Launiala, 2009). Consequently, I argue that both forms of TTM have faced discrepancies in how their value has been held by different generations of consumers. People's insufficient knowledge of health problems and/or TTM treatment benefits can create barriers that impede behavioural changes (Haloi, Ingle & Kaur, 2014, p.100). The conflicts, which go beyond having different conceptions of TTM, arose from a time in Thai history when TTM was outlawed and the knowledge disappeared, for sixty year span (Kudngaongarm, 2011).

According to the WHO, the proper use of traditional remedies by consumers is a relative term, influenced by the local culture and context. Moreover, it primarily depends on the individual's knowledge and ability to minimize risks and maximize the benefits of traditional treatment and medicine use (World Health Organization, 2004b). Many research studies conducted in Thailand and worldwide indicated that to improve the usage of traditional remedies, improving consumer knowledge is significantly required (Chetley, et al, 2007; Chungsomjatepaisarn, 2013; Luo, Grundling & Steynberg, 2013; Roekruangrit, Sumpaonthong & Itharat, 2010).

Similarly, findings of both methods indicated that Thai consumers need to develop their awareness and knowledge of TTM in order to improve uptake and proper usage. In particular, there is a lack of awareness about dosages that may hinder market growth (Zion Market Research, 2017).

The act of respecting people's beliefs starts action to build a bridge towards a new understanding that can lead to change (Chetley et al, 2007), and can serve to fulfill the concept of 'Health' for the physical health and well-being of the individual, as well as for communities (Swan & Raphael, 1995). The literature supports the idea that if people had more positive attitudes towards TM (Omar & Putit, 2012) and if people believed that TM could benefit their physical health (O'Connor & White, 2009), then they would be more likely to use it in the future (Bharucha, Morling, & Niesenbaum, 2003).

The adoption of TTM in Thailand not only includes the adoption of novelty, but also involves modifying the attitudes and behaviours of individuals or groups of people (Lien & Jiang, 2016). Thus, it is necessary to change the decision-making processes of Thai patients/users by improving their attitudes about TTM in all aspects, because their attitudes are the key factors supporting the use of TTM (Roekruangrit, Sumpaonthong, & Itharat, 2010). The findings indicated that communication and marketing plans should be based on attitudes and beliefs about TTM, such as its long history, and should be supported by research studies examining the efficacy of TTM. In order to encourage TTM uptake in Thailand, I propose that the attitudes of the Thai users be modified in all areas, in particular their '*sense of belonging*' regarding Thai wisdom medicine.

6.2.1.2 Professional knowledge and attitude conflict

This portion of the chapter reviews three meta-themes based on the health professionals' viewpoints: 1) a lack of TTM insight by medical doctors (i.e., a limitation of knowledge and skills, including attitudes and perceptions of TTM treatment), 2) a reputation credibility conflict about TTM, and 3) TTM treatment is only for massage and superficial treatments, which presents the TTM practices of medical doctors that affect the growth of TTM usage in Thailand. This section also presents the main suggestions to improve the knowledge and attitude of medical doctors.

i) A lack of TTM insight by medical doctors

During the discontinuance of TTM between 1916-1978 (Kudngaongarm, 2011), the systematic teachings of TTM were abandoned in the medical schools, which sparked a decline in TTM acceptance, especially among well-educated people (Chokevivat & Chuthaputti, 2005). Even though TTM has officially been re-assimilated into Thailand's healthcare system,

modern medicines still garner more power than TTM because its scientific knowledge has long been fostered (Aphisamacharayothin, 2014). Consequently, TTM/Folk knowledge has become structurally inferior to Western knowledge (Aphisamacharayothin, 2014; Sermsri, 1989).

Based on findings from health professionals of both sectors, it can be significantly claimed that medical doctors had little to no knowledge of TTM treatments and products. The reasons are: 1) these doctors had only accepted knowledge originating from the West; 2) this knowledge had been exclusively garnered by conducting research; 3) TTM was lacking with respect to research, and 4) the slower recovery time for holistic treatments with TTM than with conventional medicines. All of these conditions had caused conventional doctors to lack trust in the efficacy of TTM.

Even though Thongruang (2014) had conducted his study in a community hospital in Phitsanulok Province in Northern Thailand, a different province and region than the one used in my study, the results are similar. Both studies showed that for TTM there is a lack of academic proof and evidence-based research to support its efficacy. This lack of proof includes a longer treatment time, which, with respect to prescribing TTM services and products, has made conventional doctors lose confidence in TTM (Thongruang, 2014).

The findings from health professionals (particularly those from the government sectors), it can be claimed that the medical doctors significantly lacked rich insights into TTM's effectiveness. Thongruang (2014) explained that the majority of medical doctors have neither studied nor been trained in TTM principles. Moreover, they do not understand the traditional language of TTM (Aphisamacharayothin, 2014). Therefore, TTM are most likely to be viewed by medical doctors as folk beliefs or solely as augmentative treatments (Mahidol University, 2012) because they do not believe in the knowledge of traditional medicines and treatments (Aphisamacharayothin, 2014). Such circumstances have occurred because all Thai medical doctors have been educated about modern medicines which have completely different notions of diagnosis, etiology, and treatment than those of TTM (Brun, 2006; Mahidol University, 2012). Suntonvipart, Chantachon & Koseyayothin (2014) concluded that the medical doctors have had limitations about prescribing TTM because for them, their formulation processes are complicated. Roekruangrit, Sumpaothong, and Itharat (2010) also noted that most physicians have not prescribed TTM because they are not confident about

TTM's effectiveness in providing cures. In the Kingdom of Bahrain, Hilal and Hilal (2017, p. 330) also found that physicians have had a fear of formal liability about utilizing TM.

The medical doctors should support the national health policy to use TTM (at the minimum of 5% in the public healthcare system) by taking on a supporting role and encouraging TTM use. Conversely, their authority has been used to block their patients from using TTM. A study of Mahidol University in Thailand claimed that medical doctors are likely to espouse the biases of modern medicine from the belief that they can be scientifically proven, which is better, more genuine and accurate (Mahidol University, 2012, p. 71). Many research studies have found that some medical doctors have had biases or bad attitudes towards TTM (Jehso, 2015; Mahidol University, 2012; Thongruang, 2014; Vadhnapijyakul, 2011). Consequently, medical doctors seldom refer patients to the government TTM doctors for further treatment (Thongruang, 2014; Vadhnapijyakul and Suttipanta, 2014).

ii) Reputation Credibility Conflict: 'Modern' evidence-based medicine vs. 'traditional' or 'myth'-based

The findings from health professionals were that the medical doctors had a bias against TTM because they felt ashamed or had “lost face and dignity” when they had to present TTM topics in Board meetings and had to prescribe TTM. For example, one of the negative aspects was cited by a high-level member of the Management staff at the MoPH-(1), who is also a medical doctor. He stated that his medical doctor friends had called his department the “Exorcist Department” and had complained that he was insane to work with massage therapists. Such comments imply an explicit bias towards TTM, as well as a devaluation of TTM knowledge, treatments, and products.

Despite the fact that this study was conducted in Thailand, the results were found to be similar to two other studies in different countries. In Korea, Lee, et al. (2002) indicated that Korean Western Medicine-trained Doctors (WMDs) and Oriental Medicine-trained Doctors (OMDs) had shown significant differences in knowledge, attitudes, beliefs, and practices toward traditional treatment and medicine. It was found that the OMDs had held more favorable attitudes, had a deeper understanding of, and had greater experience with traditional remedies than the WMDs, who had shown negative attitudes toward them. It is reported that nearly half of the WMDs had strongly agreed that traditional treatments, for which there was scientific proof, should be discouraged by legal means. In Indonesia, Simatupang, Djojoputro, and

Nugroho (2012) revealed that the medical doctors who were found not to be practising or prescribing TTM to their patients had stated that they had never learned about them and thus, they were doubtful about their efficacy, safety and quality. Most of them had stated that TTM information was lacking.

Given that the K, A, and P are all interrelated (Rav-Marathe, Wan, & Marathe, 2016, p.4), the medical doctors' education in modern medicines had resulted in completely different notions about TTM (Brun, 2006; Mahidol University, 2012), which they found to be incompatible and confusing (Chokevivat & Chuthaputti, 2005). In the eyes of the medical doctors, TTM included '*superstition and nonsensical treatments*', which have contributed to a negative image. Thus, they exhibited negative and devalued TTM knowledge, treatment and products, resulting in a lack of practice of TTM for the users/patients. Based on my findings, it can be concluded that among the medical doctors, there is a current professional knowledge conflict.

Yet, my findings yielded the same results for the consumer participants: the knowledge of TTM faces discrepancies in the value of medicine held by different generations of medical doctors. For TTM to be successfully integrated into the practices of Thai medical doctors, it is significantly important to have both a sufficient and accurate TTM knowledge and a positive attitude towards them.

There were interesting findings derived from the in-depth interviews with the health professionals; some medical doctors, who were in favour of using TTM, would sometimes prescribe TTM in conjunction with modern medicines. Prasansuk also reported that the medical doctors would occasionally prescribe TTM together with modern medicines (Prasansuk, 1996). However, they had to ask the vendors to make the finished form of TTM look similar to the conventional medicines because they did not wish to explain to the patients why they were using TTM. In contrast, regarding the finished form of TTM, the user participants indicated that they would prefer for the medical doctors to ask them if they would like to use the finished form. Based on the literature review, it was found that the Thai users had agreed that before writing prescriptions, the doctors should ask their patients about their opinions and needs (Prasansuk, 1996; Roekruangrit, Sumpaonthong, & Itharat, 2010).

However, regarding the use of the traditional form, I found different attitudes and practices. The user participants had hidden their use of the traditional form from their medical doctors

while receiving Western medical treatments. Their reasoning stemmed from the fear that the medical doctors would blame them if they took both medicines together. Therefore, it can be noted that a knowledge, attitude and communication conflict exists between consumers and medical doctors when consumers choose to use both forms for their healthcare.

Hilal and Hilal (2017, p. 330) found that the hierarchy of communication of TM was a hindering factor and that a lack of effective communication with health authorities was of the least importance to utilizing TM. I argue that the communication between medical doctors and users/patients would not be ranked as “the least important” given that TTM usage (particularly, the finished form) really depends on the medical doctors. Moreover, they also are the first source of consumer information before consumers make their decisions to purchase TTM (Chungsomjatepaisarn, 2013; Thongruang, 2008). Thus, there should be open channels of communication with patients, and healthcare professionals should be encouraged to ask their patients about their usage of herbs and TTM (Rivera, Loya, & Ceballos, 2013; WHO, 2004c). Therefore, communication between medical doctors and users needs to be further improved in order to encourage TTM usage, to accordingly meet the national target.

iii) TTM treatment is only for massage and superficial treatments

Presently, the healthcare system in Thailand is becoming more complex due to its association with a range of social and environmental factors (Chinnawong, 2007). The provision of TTM in hospitals is related to governmental rationales and policies. Nonetheless, the pivotal role of managing and making decisions regarding all health problems is relegated to the professional doctors. Thus, when TTM is provided in the hospital, medical doctors play a vital role in making decisions and influencing TTM delivery (Aphisamacharayothin, 2014). Vadhnapijyakul and Suttipanta (2014) specifically reported that in most hospitals, herbal drugs were prescribed by physicians (97.4%) rather than by TTM doctors. The results from this study significantly noted that 75% of participants, who had used the finished form themselves, had had them prescribed by medical doctors more than any other channel.

Based on my findings from the health professionals, which is similar to the consumer participants, the medical doctors have also evaluated their knowledge, the scope of their understandings and beliefs about TTM before adopting them to their practices, and have prescribed TTM to their patients. Unfortunately, the findings revealed that conventional doctors accept TTM treatment only for ‘massage’ because it is practical and the results can be

easily seen. Aphisamacharayothin (2014) also noted that the roles and meanings of Thai traditional treatments was as just a single type of Thai massage therapy. This also related to the Bureau of Policy and Strategy of National Health Security Office in 2011, which reported that Thai massage is the most popular TTM service provided in health facilities (Thongruang, 2014). Yet, other TTM treatments, including medicines, had been accepted to a lesser degree, due to the fact that it is harder to understand the holistic treatments of TTM and that they offer a slower recovery.

Once again, I realized that the discontinuance and disappearance of TTM knowledge had created conflict in the medical doctors' professional knowledge and attitudes about TTM, resulting in the conflict of cultural and national identity of TTM. The Thai wisdom of treatment from the past has been turned into only a massage treatment, because the results are easily seen, whereas other treatments and products were too complex for them. Therefore, the professional knowledge and attitude conflict of the medical doctors has blocked the adoption of the finished form of TTM in the public health care system of Thailand.

Therefore, with respect to TTM in Thailand, the following conclusions can be made: 1) TTM's dispensation is solely in the hands of medical doctors; 2) these doctors have neither an adequate knowledge nor a proper understanding of TTM, and 3) some are biased against it. Consequently, it can be concluded that medical doctors are one of the major barriers to adopting TTM into Thailand's healthcare system. Thongruang (2014) also concluded that medical doctors obstruct the delivery of TTM services in hospitals and negatively influence the popularity of TTM practices among patients, given that the formulation processes are complicated for them (Suntonvipart, Chantachon & Koseyayothin, 2014). These actions make the implementation of TTM practices in hospitals more difficult.

As a result, TTM are being dispensed less frequently, and the national target for usage has not been met as expected (Vadhnapijyakul & Suttipanta, 2014). Yet, TTM is not congruent, and the problem of integrating it into the public healthcare system of Thailand does exist (Aphisamacharayothin, 2014). A study in Korea by Lee, et al. (2002), and the results by Simatupang, Djojoputro, and Nugroho (2012) in Indonesia, noted that the medical doctors had not made any significant efforts to incorporate traditional treatments and medicines into Western medicine in their countries.

The acceptance of TTM by medical doctors are related to the knowledge of health promotion (Aphisamacharayothin, 2014) including the scientific basis of this service, which is congruent with the principles of modern medicine (Thongruang, 2014). Moreover, TTM knowledge and attitudes depend upon personal interests and individual beliefs. The results of the study noted that the medical doctors, who were in a favour of TTM, had studied it by themselves, and had gained experience in using it. Later, they had applied their knowledge and experience to their practices in their hospitals and clinics. Sometimes these doctors would prescribe TTM in conjunction with modern medicines.

In term of medicines, the most powerful people in Thailand are the medical doctors. The patients give respect to their professional knowledge so they call the medical doctors “the boss” (Serm Sri, 1989). Therefore, the patients have become dependent on the medical doctors and no one will argue with them. The need for TTM in hospitals is related to the knowledge and attitude of medical doctors. If they could accept TTM, then more people would start using TTM and its status would be improved.

In summary, an intergenerational knowledge and attitude conflict exists for both consumer participants and health professionals related to characteristics of TTM treatment and products, which are currently being underserved in the healthcare practices in Thailand. This conflict has led to a cultural and national identity conflict of TTM. Knowledge of Thai wisdom involving treatments from the past is now just an idealistic way of representing the Thai way of life and massage treatments. When negotiating health choices, this has led to the declining use of traditional treatments and TTM. The importance of providing TTM knowledge to both consumers and medical doctors is a significant concern of the first order for the Thai government.

6.2.2 Socio-economic conflict

There is an increasing recognition within the international aid community to have an adequate understanding of socio-cultural and economic aspects of the context in which public health programs are implemented (Launiala, 2009, p. 1). This information can tell us how we are dealing with the diversity of norms, values, laws, religions, ideologies, and political issues that can influence the adoption of innovations and the long-term prognosis of related to public health (Greenberg, 2006, pp. 1–2).

Accordingly, TTM is considered to be a solution for overcoming the healthcare costs in Thailand (Thongruang, 2014), given that the Thai Government is likely to limit the budget for its medical insurance schemes in the future (Saengpassa & Sarnsamak, 2013). In order to examine the current understanding and beliefs about TTM related to usage, we must understand the socio-economics surrounding TTM, because socio-economic resources facilitate people's access to information, exposure, and ability to pay for TTM (Chao & Wade, 2014, p. 66).

The KAP framework can identify socio-economic status (Addis, et al., 2002; Agbaje & Babatunde, 2005; Wassie, et. al., 2015) and the economic situation of the Thai people with respect to TTM (United States Agency of International Development, 2008). Based on the KAP framework, the narrative data shared by the participants highlight the experiences of marginalization within the constrained environment. The ability or inability to access TTM is played out within the limits set by the structure on the life experiences of the participants, and is summarized as follows:

6.2.2.1 Social structure conflict

Specific to social structural conditions, Thai lifestyles have been modified to become integrated into modern society through modernization, social changes, political problems, and economic problems, all of which have contributed to modifying the Thai lifestyle (Chinnawong, 2007), including the culture of healthcare treatments.

It was found that social structural reflects TTM in order to negotiate the consumer participant's healthcare choices. When some participants mentioned that, '*each medicine has their own properties*' it refers to the social expectations of each medicine. My study found that the medical benefits of TTM consisted of the following: 1) duration of the recovery period, 2) accessibility and availability, 3) convenience of use, 4) efficacy and quality of the TTM products, and 5) side-effects. These five factors had affected the participants' decisions about their medical treatments. It was significantly shown that all factors had caused a decline in TTM usage with the exception of side-effects.

Gyasi et al. (2011) also found that the socio-religious structure of the Indigenous societies had reflected TM use because TM had been co-developed, together with the values, behaviours, and practices within the community. Accordingly, Thailand's healthcare system and

environment have changed, and TTM is no longer mainstream (Thongruang, 2014). When the consumer participants navigate between both systems of treatment, they reported a variety of lifestyles related to self-care practice. I found that the situation or type of lifestyle had affected their buying decisions.

The results showed that currently both forms of TTM are not suited to a modern, fast-paced Thai lifestyle, because the participants wanted a powerful treatment that they could more easily manage and would be more convenient. The findings indicated that the participants had perceived barriers when using both form of TTM to treat their illnesses. *'Their perception was that using TTM had made their lives more complicated and difficult'*. With respect to self-care treatments, they had experienced conflicts arising between both forms of TTM and their modern lives, which had caused them to use TTM less frequently.

The findings revealed that the problems in using traditional form had been related to convenience and its slower recovery time. In contrast, for the consumer participants, the limited availability of the finished form had affected their decisions to use, which is summarized below:

i) The traditional form is inconvenient to use and offers a slower recovery

Based on a review of the literature, it was found that Thai users currently have the perception that the traditional form of TTM is inconvenient to use (Muangsai et al., 2014; Suntonvipart, Chantachon & Koseyayothin, 2014). The results of this study also indicated that the major problem in using the traditional form was its inconvenient and complicated process, which wastes time to produce. Due to its inconvenience, the traditional form of TTM has been unable to drive consumers to use them as a replacement for modern medicines. As previously mentioned, from their vantage point, the traditional form of TTM represents the ideal expression of the roots of Thai-ness and Thai wisdom treatments from the past. In contrast, conventional medicines represent the current practical and actual treatment form. Consequently, Liamputtong and Kitisriworapan (2014) claimed that the traditional form of TTM has largely and gradually lost its authoritative status in the urban Thai context, but its status remains intact in the rural and remote areas. I noted that due to the perception that TTM has few to no side-effects, the traditional form, is, therefore, used for health maintenance, but it is not used for treatment purposes.

Aside from its convenient nature, the findings from this study significantly indicated that one of the major problems encountered when using the traditional form had been the slower recovery times offered by holistic TTM treatments compared to conventional medicines. Thus, it had been deemed as unsuitable for the consumer participant's current lifestyles. These findings were similar to those of Chungsomjatepaisarn (2013) and Prasansuk (1996). Both studies concluded that the traditional form of TTM offers a slower recovery rate.

Moreover, the majority of consumer participants stated that the taste and smell of the traditional form (in particular, the medicinal pots) was harsh and bitter and smelled bad. Therefore, some user participants had refused to use traditional form of TTM due to difficult and inconvenient consumption. Putiyanan and Winijkul (2008) also reported that most of their sample groups from Northern and Central Thailand (including Bangkok) had thought that the taste of TTM (11.0%) needed to be improved.

Therefore, it is significant to claim that one of the major barriers to using the traditional form of TTM are their: 1) inconvenience of use, 2) slower recovery time, and 3) taste and smell, which is not suitable for Thailand's modern fast-paced lifestyle.

ii) The finished TTM products have limited availability for consumers

Self-care among Thais is a common practice and a first step in seeking treatment is to buy medicines from drugstores (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lawrence, 2013; Sermsri, 2002). The results are similar to those of this study. When the participants have common illnesses, such as fevers or headaches, they will buy conventional medicines or take drugs that they already have at home. Furthermore, they will only go to the hospital or see a doctor if they have an accident or a serious illness.

However, consumers have more options available in both traditional and Western treatments for their self-care practices than before (Usifoh & Udezi, 2013). Specific to the finished form of TTM's distribution channel, Chaichompoo, et al. (2012) reported that herbal shops were the most convenient and the second choice was the hospital's shop. However, one of the barriers to its use seems to be places to access the new form. One user participant noted that, '*Conventional medicine is available at the pharmacies whereas TTM is not*'. It was found that only one participant had previously bought the new finished form from the drug store,

whereas many had thought that the new form was available only from hospitals. They had failed to notice that TTM is widely sold in the marketplace.

Chungsomjatepaisarn (2013) claimed that almost half of Thai people (49.5%) from the four parts of Thailand (except Bangkok) also said that it was hard to find places to buy TTM products, because there were few locations to buy the finished form. Kongrerak (2013) also noted that the distribution channels were the weakness point and were a concern for TTM producers. Rattanapikul and Fusiri concluded that more finished forms should be sold in pharmacy shops (Rattanapikul & Fusiri, 2012). Consumer participants are faced with the problem that, unlike modern medicines, there are not many available types of TTM (finished form), and they do not cover the range of treatments for curing all diseases. Similarly, Chungsomjatepaisarn (2013) concluded that consumers (59.7%) wanted more ready-to-use TTM products.

Nonetheless, Rattanapikul and Fusiri (2012) noted that in terms of marketing factors place to purchase the TTM products was ranked as the second greatest influence on the use of TTM for consumers in Bangkok. Even though this study was conducted at a different place and time, the findings from both methods reveal that distribution channels and consumer motivation to use the finished form of TTM are related. Therefore, some consumer participants would personally prefer to rely on conventional medicines, because finding a place to buy the finished form is more complex. As a result, the national target for TTM usage was set to 5% in the public healthcare system (Vadhnapijyakul & Suttipanta, 2014) and 25% of the overall total medicine usage in Thailand by 2011 (Ministry of Public Health 2008). However, that target has not yet been reached (Vadhnapijyakul & Suttipanta, 2014) based on the complexity of using the finished form given that it is not currently suitable for the lifestyles of the users/patients. Thus, I suggest that more TTM items should be sold in pharmacy shops.

6.2.2.2 Economic conflict

Accordingly, the finished form of TTM is being widely promoted by the MoPH, especially for self-care at the family level (Thongruang, 2014). With respect to the 'Price' of the finished form for individuals and hospitals, both consumer and health professional participants significantly agreed that compared to modern medicines, some finished forms

have higher prices for individuals and for hospitals (2–4 times more). Micke et al. (2009) concluded that in Germany, the costs for TM per month had made them more expensive than conventional medicines.

Thongruang (2014) noted that for the same treatment, the costs per unit for some finished forms are more expensive than modern medicines in some cases. Satyapan, et al. (2010) also noted one of the constraints in herbal use among a population in Bangkok was the high cost of the finished form. Kongrerak (2013) noted that the weakness in use of the finished form of TTM could be explained by its high cost of production. Consequently, Rattanapikul and Fusiri (2012) suggested that the finished forms should be reasonably priced and that there should be some form of cost control, relative to economic conditions, to make them competitive in the medicinal marketplace. Farooqui et al. (2012) reported that the significant barrier to using TM in Malaysia was the issue of Malaysians being able to financially afford them. In contrast, many studies have found that the finished form is cost-effective (Aphisamacharayothin, 2014; Chinnawong, 2007; Chungsomjatepaisarn, 2013; Sumngern, 2011), in particular Chungsomjatepaisarn (2013) noted that the prices of some finished forms have been lowered about 4 times.

Based on the findings, I argue that the finished forms are more expensive for the individual and hospital to carry the burden when using the finished form. Only the traditional forms have a lower cost based on the fact that people have planted the raw materials, which can be used to produce medicines, at home. This is relevant because the focus groups for this study were conducted in Northeastern Thailand, where the highest incidence of poverty and the largest population of poor people exist (McGregor, 2008). I found that economic conditions had had a direct relationship to healthcare treatment and medicines. Sermsri (2002) importantly noted that most of the problems had affected patients of low socio-economic status and patients with health insurance, including health cards and welfare systems. The reason for this was that traditional treatments had not been covered by the hospitals and health insurance (Farooqui, et al., 2012).

A review of the literature suggested that income (Akyol & Oz, 2011; Thomson, et al., 2014) and health insurance (Akyol & Oz, 2011; Thompson & Troester, 2002) both have an effect on TM usage. My findings also significantly indicated that economic conditions had been related to the use of the finished form. The participants spoke about the limitations of the economic situation related to their healthcare and TTM (finished form). Cost-effective measures and

insurance coverage appear to have affected the participants' decisions about their medical treatment. They strongly mentioned that the medical subsidies from their social security card could better cover Western treatments than TTM.

An analysis of the consumer participants' findings revealed that some had perceived cost barriers to using the finished form because the costs were high when purchasing the finished form of TTM from drugstores or public hospitals. This stems from the fact that nearly all of them were using their social security cards to cover the costs of their healthcare. Therefore, some decided not to buy the new finished form, but instead chose to consume or to boil raw herbs, because many of the herbs found in the finished forms had been planted at homes, and this could help them save on healthcare expenses.

The lack of access to the finished form to cure illnesses is due to an absence of resources for securing access to treatment. For instance, one female non-user said, *'Herbal medicine is alright. If the doctor prescribes (it) for me, I will take. But if I have to pay for (it) myself, I will not buy it'*. This expression shows the constraints posed on access to the finished form of TTM by the economic conditions; the consumer participants did not want to carry the burden if they had to pay for the finished form of TTM. The inability to access the finished form of TTM was set by the economic structure placed on the participants. Thus, economic conditions were accordingly reflected in their decision-making process for using the finished form.

Rattanapikul and Fusiri (2012) noted that one of the external factors, which most frequently related to TTM use was economics as related to health insurance, including health cards and welfare systems (Sermisri, 2002). Nonetheless, when my participants had gone to the hospitals, they may or may not have used their social security cards when paying. Furthermore, when using their social security cards, they may or may not pay for their treatments. Therefore, given that some particular finished forms of TTM are expensive, they may or may not receive TTM (finished form), because many hospitals may be less likely to make a profit and may have to reduce spending by cutting several social and welfare programs (Sermisri, 2002). Thus, the burden for using the finished form TTM has to be accordingly carried by individuals and by public hospitals.

With respect to more economic conflicts in Thailand (Aphisamacharayothin, 2014), the finished form of TTM cannot compete with conventional medicines in terms of treatment costs. This factor is one of the obstacles to integrating the finished form into the public

hospitals and the marketplace and represents the conflict of economic conditions in using the finished form.

However, I discovered interesting findings constructed from the price of the finished form, which has contributed to raising the value of the new form (finished form) among Thai citizens. An analysis of the narratives from the health professionals found that the meaning and value of both forms of TTM was also defined by the social status of those using them: *“Raw herbs and the traditional form are for the rural people because they are cheaper.”* In contrast, *“the finished form is more expensive and is, therefore, for the middle and upper classes”*, who can actually afford to use them.

Unfortunately, my findings revealed that the middle and upper classes, with moderate to high incomes, had consumed both forms of TTM with less frequency. This finding showed the conflict between socio-economics and TTM (particularly the finished form), which is the government’s target market to promote their usage. This conflict may represent one of the reasons why TTM usage has not yet reached the minimum 5%, due to the fact that the finished forms are not well-suited to the social structure of the middle-high classes.

The strong link between environment and health are indicated in the health practices of the people (Payyappallimana, 2010). Results of the KAP framework indicated that socio-economic status (Addis, et al., 2002; Agbaje & Babatunde, 2005; Wassie, et. al., 2015) and economic situations (United States Agency for International Development, 2008) are related to health negotiation with respect to TTM. For the consumer participants, to seek a treatment, they had had to consider the structural and economic conditions when making their decisions. Furthermore, it is from within a cultural frame of reference (Thompson & Troester, 2002) and from their backgrounds and beliefs (Akyol & Oz, 2011) that consumers always construct their notions of their healthcare choices. This deliberation was to take into consideration the cultural meaning of health and their medical needs. This is similar to findings from Chang and Basnyat (2014), who conducted research in Singapore, which indicated that the structural factor, in particular medical benefits, were related to decisions made by elderly Chinese Singaporean women in using TCM. Addis, et al. (2002) reported that socio-economic status was related to the use of TM in Ethiopia; their respondents had used TM when they could afford and access them.

The healthcare system in Thailand is becoming more complex due to its association with a range of social and environmental factors (Chinnawong, 2007). Although the participants knew about the benefits of TTM on some points, the discussions had reflected a sense of monitoring one's health within limited health resources, and the socio-economic factors had limited what was available to the participants. The participants had significantly claimed that they felt safe when using TTM due to their beliefs that both forms of TTM offered fewer to no side-effects. However, I found that the evaluation of their illnesses, duration of recovery periods, accessibility and availability, convenience of use, cost, efficacy, and the product quality had influenced their decisions to use TTM. In particular, 'Time' is a critical socio-economic barrier that is intertwined with the basic need of earning a living through work in a modern lifestyle, and that affects decisions on TTM usage. To negotiate their health choices, they had applied their understanding and beliefs about each medicine's capacity by using the socio-economic criteria. Consequently, neither form of TTM had suited their medical needs based on the modern Thai lifestyle, which meant that TTM could only be their second choice and/or alternative choice.

Thus, given that Thai lifestyles have been modified to become integrated into modern society (Chinnawong, 2007), it can be concluded that there is a socio-economic conflict when using both forms of TTM. This has contributed to modifying the slow Thai lifestyle of the past into a modern fast-paced lifestyle, leading to changes in the culture of healthcare treatments. The consumer participants strongly reported that TTM is at the root of Thai-ness and represents the time-honoured Thai way of life. Currently, they were born into a culture of Western treatments and medicines, and would rather remain accustomed to them because they suit their way of life. It can be concluded that socio-economic conflicts have caused a downturn in the use of TTM.

6.2.3 Communication conflict

The results, arising from culture, help to provide the context for communication campaigns (i.e. ideologies, approaches, strategies, and procedures). Moreover, it measures each campaign's effectiveness in order to solicit attitudinal and/or behavioural changes within a community of people (Wang 2004). Drug advertisements are intended to educate consumers and should support and encourage the improvement of healthcare through the rational use of drugs (Kittisopee, Anantachoti & Tangcharoensathien, 2005). However, based on Corcoran (2007), theories and models in communicating health messages for public and mass media

communication have been misunderstood resulting in a TTM communication breakdown in Thailand and causing TTM's cultural and national identity conflict. Based on my findings, I discovered that there are public agenda conflicts and media conflicts for the promotion of TTM in Thailand for both sectors.

6.2.3.1 Public agenda and media conflict of TTM by the Thai government sector

Public information about traditional treatments and medicines serves the purpose of spreading knowledge about the health benefits and potential risks (World Health Organization, 2004b). Both methods in this study found that communication for the promotion of TTM is one of the factors influencing TTM usage. Rattanapikul and Fusiri (2012) also reported that promotion, particularly TTM communication and information, had the greatest influence on the use of TTM. As previously mentioned, the Thai government promoted TTM as 'Ancient and Local Wisdom with a Long History of Usage' (Chokevivat & Chuthaputti, 2005, p.7). The finished form of TTM is being widely promoted by the government sectors and many plans are being implemented to improve the knowledge of TTM through R&D (World Health Organization, 2009).

In 2013, the National Statistical Office of Thailand conducted a survey on individual healthcare behaviours found that the overall TTM usage was about 21.9 % of total medicine used in Thailand. Moreover, it was found that almost a half of Thai people (41.6 %) did not know about TTM and therefore, had never used it. Another 36.5% stated that they had known about TTM, but they had never used it (Ganghair, 2014).

Presently, The MoPH is setting the public agenda by using a slogan, 'First use herbal medicines for minor illnesses before going to see medical doctors', to invite Thais to use TTM. Based on findings from both methods, the media channels to promote TTM had been mostly exhibitions and print media. (This present study was conducted in 2015.) However, an analysis of the findings from the consumers significantly indicated that the percentage, who had used the finished form was 21.1%, which was equal to that reported from the national survey mentioned above. This was based on the fact that the consumers had a high awareness of TTM in its traditional form, whereas 61.4% were unaware of the new form (finished form). Moreover, the results indicated that members of the user and non-user groups had mostly thought that the finished form was in short supply and was only available from hospitals.

Only 10.5% had realized that the finished forms were available in the marketplace.

The findings from both methods (particularly the in-depth interviews with the health professionals) indicated that there is an intergenerational knowledge and attitude conflict about the promotion of TTM inside the MoPH departments and/or the staff members, resulting in an internal communication conflict. The 2013 National Office of Statistics survey mentioned above revealed that 86.3% of respondents had claimed that the government has disseminated little information to promote TTM to society (Ganghair, 2014). Similarly, an investigation of consumers was also noteworthy: only 14.0 % (8/57 participants) had learned about TTM through the government's promotion efforts.

The Thai government has an important role - to disseminate TTM knowledge and to promote its use to the people. Chaichompoo et al. (2012) noted that a policy should be made to promote and encourage more TTM usage among citizens of every income group to treat illnesses and to be used as an alternative method of health maintenance. Activities and/or trainings should be provided for disseminating information about medicinal herbs in order to build positive attitudes towards using TTM in everyday life (Chaichompoo, et al., 2012). In addition, the WHO noted that to ensure consumers are better informed (World Health Organization, 2004b), messages should be tailored to suit the recipients (World Health Organization, 2004c).

Yet, based on the findings from both the consumer and health professional participants, some degree of TTM promotion and knowledge dissemination does exist. However, the results of attempts to disseminate and promote TTM wisdom appear to be inadequate, and as such, have been deemed as unimportant. Based on the health professionals' viewpoints, they questioned this public agenda, indicating that this slogan was only suitable for rural people and left the middle and upper classes with greater incomes behind. This stands in contrast to suggestions from Chaichompoo et al. (2012), who mentioned above that the government should encourage TTM usage for every income group. Thus, I specifically noted that the slogan, 'First use herbal medicines for minor illnesses before going to see medical doctors', was not suitable for every user income group.

The participants deemed that the MoPH's strategies for TTM promotion were useless and improper. According to the health professional participants, the MoPH had been working without direction and without strategies. The manner in which the department was promoting

TTM had been based on current trends, such as women's trendy sexual products. In contrast, the use of herbal medicines to prevent illnesses within the Thai population has not been promoted. Moreover, there had been no supporting information or proof to back up TTM's efficacy and safety. Therefore, the promotions, which did proceed, failed to advance in the proper direction. Later, these TTM promotions were stopped, and TTM experienced only a short-term boom. This reliance on TTM trendiness has tarnished the image of individual herbs, has damaged trust in TTM's image, and has eroded trust in TTM itself, leaving the Thai people in a state of doubt.

Media plays a central role in fostering development, as well as in empowering people with knowledge on health issues to achieve greater health (Diedong, 2013, p. 46). Based on the literature review, studies, which were conducted in Saudi Arabia by Elolemy and Albedah (2012) and Albedah, El-Olemy, and Khalil (2012) and one in Kuwait by Awad and Al-Shaye (2014), noted that mass media played a vital role in promoting the use of traditional treatments and medicines. In particular, Elolemy & Albedah (2012) specifically noted that TV, newspapers, and radio were the main sources that had provided information to consumer participants about traditional remedies. Albedah, El-Olemy, and Khalil (2012) reported that mass media was the source of the knowledge of TM for health professionals.

Unfortunately, of the 14.0% of the total consumer participants who had learned about TTM from the government through various channels and activities, only 5.3% had learned via mass media. The health professionals had primarily received TTM information from print media inviting their corporations to attend the seminars/events, but the print media offered no information about the medical benefits of TTM. An investigation of the findings from both methods in this study found that the two channels, which the government had been using to promote TTM (exhibitions and print media) were not interesting, were useless, and wasted money.

From the vantage points of both types of participants regarding exhibitions, it was found that only negative viewpoints were discovered. Firstly, exhibitions cannot gain access to many target groups (particularly rural people) due to the following: a) exhibitions are held in hotels, b) rural folks felt that hotels are not their style, and c) exhibitions are held far from their homes. Secondly, they are held infrequently and are sometimes discontinued. Thirdly, the

exhibitions were indeed for people who liked to buy herbal cosmetic products, as the products being sold in the exhibition were mainly cosmetics rather than TTM.

Details from interviews with the health professionals found limited TTM knowledge among the MoPH staff members and limited beliefs about how to best promote TTM. This included a lack of personnel to carry out the public relations tasks to promote the exhibitions. Finally, they claimed that at the exhibitions, there were only the Key Performance Indicators (KPI) of the MoPH, because the exhibition is measured only by the actual number of targeted people it reaches, without setting a target for TTM use and without measuring the degree of value that people should receive. The consumer participants strongly stated that the exhibitions, particularly the venues, did not match the targeted people's socio-economic status.

With respect to print media and given that many do not like reading and/or rarely read, it was noted that the consumer participants liked to only read a title, and if they were uninterested, would not continue reading. In fact, a survey of almost 3,500 Thai people in 12 provinces across the country was conducted between December 2014 and January 2015, with the aim of learning more about Thai citizens' reading habits (including electronic media), book buying, and the impact that social media has upon their purchasing decisions. In fact, Thai citizens spend just 28 minutes reading each day for various reasons: 1) a lack of time to read, 2) bad eyesight, and 3) a dislike of reading (Praneetlekha, 2015). As a result, the findings from health professionals claimed that the use of print media was uninteresting and a waste of money. Therefore, based on the findings from both types of participants, print media is also not a good method for TTM communication.

Consequently, I noted that there is a media conflict about disseminating public information for TTM by the MoPH. The findings indicated that the exhibition and print media were not the proper media channels to distribute the public agenda of TTM, in particular to rural people. As a result of the MoPH staff's lack of TTM knowledge and beliefs in them, media channels were used to promote TTM without analysing the suitability of their target market for promotion. Therefore, after the consumer participants had evaluated their knowledge about and understanding of the media's influence and communications for the promotion of TTM and had compared it to their current lifestyles, I uncovered a communication and media conflict about TTM from the government sectors. One female user mentioned that:

“I have seen the news about the exhibitions, but I have never been there. I personally think it should not be held because it wastes the budget and it can only gain access to a few of the targeted people. When an exhibition is held like this (one), it is difficult for people who are in rural areas to reach there. For example, when an exhibition is held at the hotel, I believe that no villagers from remote areas would come. Therefore, it cannot (provide) access to villagers.”

This shows the inter-connection of each conflict related to the communication for the promotion of TTM. When the MoPH staff experienced the intergenerational knowledge and attitude conflict, they promoted TTM without analyzing the socio-economic situation of the target market. Consequently, only 5.3% of the consumer participants had learned about TTM from the government through mass media. I suggest that the intergenerational knowledge and attitude conflict and socio-economic conflict reflect a conflict of communication for the promotion of TTM by the government. Moreover, I argue that the current public agenda set by the government (MoPH) to ‘First use TTM to cure minor illness before going to see doctors’ is not the proper TTM promotion. The slogan cannot elaborate the knowledge and usefulness of TTM for all Thai consumers in different socio-economic situations. The media coverage does not cover the public agenda of promoting TTM throughout Thailand. Satyapan, et al. (2010) also noted that the government’s media had not been effectively used to provide accurate and appropriate information to consumers. As a result, only a few of the consumer participants had learned about TTM from government activities and channels. This relates to a 2013 national survey, which reported that the majority of Thai people (86.3%) believed the government has few programs to promote TTM, resulting in a lack of awareness of TTM (Ganghair, 2014). Consequently, I conclude that the communication for the promotion of TTM by the government has shown many conflicts — knowledge, socio-structural and communication, and media conflicts.

6.2.3.2 Public agenda and media conflict of TTM by the private sector

This section reviews the promotion of TTM provided by the private sector, in order to compare and contrast the promotion of TTM and the media framework provided by the government sector. The communication gaps in TTM promotion by both sectors are explored and are hereby presented.

With respect to promotion of TTM by the private sector, it was revealed that the participants had learned about TTM more from the private sector than from the government sector.

However, the private companies had used different media channels than the government. Radio was the major media channel to distribute advertising to rural areas, which better suited the socio-economic level of the participants because radio can easily reach many people, especially in rural areas (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003) where people usually have an imbalance of information due to their socio-economic level and educational status (Sumngern, 2011).

Although, the media is considered to be a common source of information, the media may present the users/patients with sensationalized and unbalanced information (Akyol & Oz, 2011). My findings indicated that the private sectors have used many tactics to promote their TTM products. Based on the Compilation of Laws on Drugs in 1967, these advertisements sounded like propaganda because the herbal medicines were being advertised as ‘miracle drugs’ by claiming that all kinds of diseases could be cured (particularly cancers) (Ministry of Public Health of Thailand, 2007; Ruenkon, Likitkeithajorn & Siththeimthong, 2003), paralysis could be ended (Ministry of Public Health of Thailand, 2007), a very fast recovery period to cure illnesses could be offered, and health could be maintained. When both consumer and health professional participants evaluated their knowledge, understandings, and beliefs with respect to the content of the communication for the promotion of TTM by the private sector, they used words such as ‘unbelievable’, ‘beyond the truth’, ‘beyond reality’, ‘propaganda’ and ‘overstated’ to explain their evaluation. They also used their observation and evaluation skills to examine the strategies and tactics of the communication for the promotion of TTM by the private sector. Moreover, they deliberated and determined that these were fake interviews using fake patients/users to advertise TTM because they found the same interviews were being broadcast day after day. The majority of the participants had established a lack of trust for using the TTM products of private companies. For instance, one female user mentioned that: *‘Some advertising is scary because of the spoken words since the overstated claims are that it can cure immediately after taking. I think it is too fast and too scary. I think I will not buy it.’* This quote is evidence of a communication conflict, resulting in individual knowledge and practice towards TTM. Based on participants’ viewpoints, this had caused a decline in trust and had damaged image of TTM, because they are concerned with the trustworthiness of TTM products (The Senate Kingdom of Thailand, 2011).

Research has shown that 50% of private advertisements had false and/or exaggerated descriptions (Kittisopee, Anantachoti, & Tangcharoensathien, 2005; Lomas & Chanthapasa, 2012). In particular, there have been many illegal drug advertisements and exaggerated claims on the radio (Kittisopee, Anantachoti, & Tangcharoensathien, 2005). Some were even found to present advertising with content that was misleading and give inaccurate pharmaceutical properties of the drugs without obtaining permission from the government (Lomas & Chanthapasa, 2012). Satyapan, et al. (2010) also noted that inappropriate information about some TTM items had been obtained by Thai consumers. In Nigeria, advertisements in the mass media often propagate spurious claims of TM that ‘one product cures all’ (Usifoh & Udezi, 2013, p.18).

However, these exaggerated claims in advertising on the radio were responsible for leading the participants to buy the products because they believed that the products could help them to recover from their illnesses. Chandrawongse (2011) revealed that the majority of consumers believed in the drug’s efficacy as the advertisements had claimed, and believed that they needed to try the products. Ruenkon, Likitkeithajorn, and Siththeimthong (2003) noted that people in rural areas have been convinced by advertisements and have bought TTM products. Some, who were taking steroids, had side-effects after taking TTM. Kittisopee, Anantachoti, and Tangcharoensathien (2015) noted that the purchasing behaviours of users are often affected by drug advertisements.

Despite the private advertising and exaggerated claims, the public agenda set by the private companies is well-suited to the socio-economic situation of rural people, who need powerful medicines to cure their illness, so that that they can earn money to take care of themselves and their families. For instance, 54-year-old female housewife non-user strongly stated this specific reason concerned with her economic situation: *“Although patients know that it is dangerous, they need to be cured as fast as required so that they will be able to work to earn money.”* This statement shows that their health and healthcare choices were related to their social network and economic situations. There was a responsibility to be healthy in order to look after themselves and their dependents. For them, health is essential to their working lives. Thus, when private companies set the public TTM agenda as ‘miracle drugs’ that can rapidly cure all symptoms, the consumer participants were induced to buy their products, due to the marketing tricks being used to exploit consumers (Mahidol University, 2012).

Unfortunately, in Thailand, consumer protection from exaggerated claims seems to be poorly controlled (Kittisopee, Anantachoti, & Tangcharoensathien, 2015). Therefore, when NBTC of Thailand and the Foundation for Consumers recently randomly checked radio stations throughout Thailand, it was revealed that all TTM product advertisements were guilty of making misleading claims, and consequently, were in violation of the drug laws (National Broadcasting and Telecommunications Commission of Thailand, 2014).

It was found that the public agenda, set by the private companies, had reflected the intergenerational knowledge and attitude conflict for some consumer participants, who felt that TTM was untrustworthy. These advertisements had made some participants feel frightened and not want to buy TTM products. The phenomenon of exaggerated claims has also created a situation in which TTM are being consumed less than modern medicines. Because some products on the radio were fake products, the consumers had experienced side-effects after use, and TTM's image had become tarnished (Wongyai, 2004). This factor is expected to hamper the overall growth of the market in the forecasted period (Zion Market Research, 2017). Consequently, a cultural and identity conflict exists for TTM.

The KAP framework can identify TTM communication (Hilal & Hilal, 2017; Suleiman, 2014), and behavioural patterns that may facilitate understanding and the practices of Thai people towards TTM (DaBreo & Inniss-Springer 2016). These factors are often sources of misconceptions or misunderstandings representing potential obstacles to Thai behavioural changes (Haloi, Ingle & Kaur, 2014; Gumucio, 2011).

When comparing the public agenda and media coverage communications for TTM promotion by both sectors, I found that the government promotions had been created with an intergenerational knowledge and attitude conflict because the MoPH staff had not analyzed the socio-economic conditions of the target consumers. The promotion of TTM by private sectors had also created an intergenerational knowledge and attitude conflict and misunderstandings about TTM. However, they understood their target consumers' socio-economic situations. Therefore, most people have learned about TTM through promotion from the private sector rather than from the government.

According to Lavidge and Steiner (1961), there are 6 stages in the classic order of the hierarchy of the effects of communication: 1) Awareness, 2) Knowledge, 3) Liking, 4) Preference, 5) Conviction, and 6) Purchase. Hilal and Hilal (2017) found that the KAP model can determine the hierarchy of communication, which had affected the medical doctors in the Kingdom of Bahrain. With respect to utilising TTM, the doctors have had a fear of formal liability.

I also found that the hierarchy of communication for the promotion of TTM by both sectors had affected the consumer participants' knowledge, attitudes, and practices with respect to TTM. It was found that the communication for the promotion of TTM by both sectors had been unable to raise the consumer participants' TTM knowledge and awareness. The strategies to promote TTM by both sectors have resulted in the propagation of insufficient knowledge, inaccurate knowledge, and an incorrect understanding of TTM, particularly the promotions by the government. This was in spite of the fact that the finished form had been widely promoted by the MoPH. Nonetheless, the participants remained unaware of the new form of TTM.

Based on the findings from both the consumer and health professional participants, in the Liking, Preference, Conviction, and Purchase stages, only the private sector had been able to reach the goal of communication, whereas the government sector had not. The private sector has been able to employ some tactics to convince the participants to buy their products. However, because the private sector has advertised and sold fake TTM products, TTM has become discredited, and this has resulted in a reversal of the hierarchy of the effects of communication. Finally, I found that the pattern of the consumer participants' behaviors had changed towards TTM based on the communication for the promotion of TTM by the private sector. For instance, one of the female users said that: *'They advertise like this medicine can completely cure liver disease and cancers. They speak like this, (and) for me it is too overstated to believe.'* This statement shows that the participants highlighted the intertwining of marginal communication practices and healthcare choices. The majority of them reported that their conflict in using TTM had been based on the communication for the promotion of TTM by the private sector, which had denigrated the value of TTM. In essence, this had affected their adoption of TTM into their self-care practices.

Public information about traditional treatments and medicines serves the purpose of spreading knowledge about their health benefits, as well as their potential risks (World Health Organization, 2004b). However, the current promotion by both sectors has led to TTM becoming discredited. This directly points toward a communication conflict and a knowledge conflict, which affects the consumers' understanding of and beliefs about TTM. The marginalization of TTM, arising from both conflicts, is intertwined with the culture and national identity conflict.

The communication for promoting TTM (particularly from the private sector) has led to an intergenerational knowledge and attitude conflict, resulting in cultural and national identity conflict of TTM. Consequently, the K-A-P sequence occurred in the communication stage when both sectors disseminated incorrect TTM knowledge and information. Then the attitudes and beliefs about TTM were affected, resulting in the anti-consumption of TTM itself, particularly from the private sector.

According to Wang (2004, p.28), the “cultural environment is a key factor in the creation and sharing of meaning in campaigns with other members of their societies; if not taken into consideration a campaign becomes a *senseless occurrence*.” Therefore, culture is more important to the implementation of a communication campaign. Cultural participants actively engage with the world and make sense of the communication processes that surround them (Dutta & Basu, 2007). Thus, in regard to TTM communication and promotion, I suggest that there is a communication conflict between both sectors, resulting in a cultural and national identity conflict for TTM in Thailand.

In summary, culture is the shared beliefs and attitudes of a group, and thus, culture shapes ideas of what constitutes illness and acceptable treatments (Juckett, 2005, p. 2267). It is known that culture plays a vital role in the manner in which a given people use herbs, traditional treatments, and medicines (Andel & Westers, 2010; Baniya, 2014; Rivera, Loya, & Ceballos, 2013; Taubman, 2010; Torri, 2012; UNESCO, 2013; WHO, 2004b).

Based on my findings, the selection of TTM was part of the Thai people's everyday experience. The consumer participants showed a capacity for making decisions by switching the traditional and finished forms of TTM for different purposes. The data from the KAP framework places emphasis on the transmission of knowledge, understanding, beliefs, and the

communication of TTM from key points at the core of both types of participants. The data reflects the complex picture of the current understanding of and beliefs about TTM, indicating that currently there is a cultural and national identity conflict with respect to TTM, an interplay of intergenerational knowledge and attitude conflict, a socio-economic conflict, and a communication conflict, all of which are resulting in the anti-consumption of TTM.

CONCLUSION

Despite the fact that modern medicines have come to replace TTM as the mainstream agent in Thailand's public healthcare (Chokevivat & Chuthaputti, 2005), TTM has long remained a part of Thailand's healing culture (Mahidol University, 2012). With respect to the roles and meanings of TTM in the participants' daily lives, it was found that TTM serve as household treatments and holistic treatments. In particular, the traditional form (medicinal pots/decoctions), which can be used as preventive and alternative medicines, represents the Thai way of life, and has been used for hundreds of years until the present day (Mahidol University, 2012).

In Thailand, it is considered that Thai people use holistic TTM treatments, due to traditional and individual beliefs, as well as cultural and historical influences of use (World Health Organization, 2013, p.27). Moreover, an analysis of the study concluded that the factors influencing TTM's usage depended upon the consumer's individual TTM knowledge of, perceptions about, and attitudes towards TTM, social factors, accessibility, and convenience. The findings also indicated that the consumer's demographics were related to their usage of TTM. Lastly, the promotion of TTM and drug advertisements have significantly affected the use of TTM in Thailand.

However, the findings from the KAP framework elucidate the connection between the intergenerational knowledge and attitude conflict, the socio-economic conflict, and the communication conflict of TTM. These reflect the cultural and national identity conflict surrounding the marginalisation of TTM, resulting in anti-consumption.

Based on an analysis of the findings regarding the behaviours of consumers, it was found that the participants had exhibited a high level of awareness of the traditional form. However, their attitudes towards the traditional form had only been rooted in Thai-ness and the wisdom of the treatments, which was highly valued in the past, but is devalued today. Given that the

finished form is the major form for the Thai government to promote, the results indicated the following: 1) participants were unaware of the availability of the new finished form in both public hospitals and the marketplace; 2) they lacked TTM knowledge and had not developed attitudes towards finished form, and 3) some lacked trust in the quality and efficacy of the finished form. As a result, both forms of TTM were considered as a second choice and/or alternative choice for them.

Regarding the medical doctors' knowledge and awareness of TTM, the findings indicated the following: 1) a severe lack of awareness about the body of TTM knowledge and wisdom; 2) a lack of skills with respect to carrying out TTM treatments, and 3) a lack of understanding about TTM products. Consequently, only some types of TTM play a role in the public healthcare system in Thailand.

In order to improve the practice of TTM by medical doctors, an analysis of the findings indicated that if the medical doctors and TTM doctors were to work together, it would lead to an improved knowledge base and changes in the attitudes of the conventional doctors, resulting in changes to their practices with TTM. Moreover, it would facilitate a smooth working relationship between both types of practitioners. Furthermore, to improve their TTM knowledge and understanding, they must have personal experiences of using TTM, so that their experiences may lead them to develop positive attitudes about TTM. Then they may finally integrate TTM into their medical practices.

Jehso (2015) stated that the process of integrating TTM into the practices of medical doctors would need to include the following: 1) communication (presenting, meeting, sharing and distributing), so that after comprehending the TTM information they may recognize TTM's benefits, gain knowledge, possess positive attitudes, and gain understanding and trust in order that they may be led to integrate TTM into their practices; 2) training or coaching strategies to educate healthcare personnel about TTM knowledge and skills, as well as hands-on or direct experience with TTM treatment, which could be influential in changing perspectives about TTM; and 3) gaining experience, such as a) gaining direct experience from personal experiences with TTM services and becoming acquainted with them and b) gaining indirect experience by learning about the various aspects of TTM from others. Jehso also claimed that gaining good experiences with TTM treatments would create positive attitudes and develop trust in TTM, leading to acceptance and changes in perspectives. In turn, consciousness could

be raised among physicians regarding the integration of TTM into their practices and their hospitals (Jehso, 2015).

With respect to the “Medical students”, Thongruang demonstrated that in their curriculum, there was insufficient study and training based on TTM principles in health practices and concepts, which had affected the clinicians’ knowledge of TTM (Thongruang, 2014). The reasons were that the two principles were considered to be incompatible and confusing to medical students (Chokevivat & Chuthaputti, 2005). Therefore, Chokevivat and Chuthaputti (2005) and Khaphol et al. (2011) suggested including TTM subjects within the medical students’ curricula. Consistent with this, an analysis of the health professional informants revealed that when medical students and pharmacy students had received TTM knowledge, they had shown better attitudes in their classes. An analysis of the findings of this study significantly noted that the government should offer TTM courses in both the medical and pharmaceutical curricula of Thai universities, but most especially for medical students. Even short courses would assist them in learning the cultural heritage and holistic methods of TTM and would make TTM become more widely accepted.

Once again, this suggestion is similar findings by Lee, et al. (2002) in Korea; Simatupang, Djojoputro and Nugroho (2012) in Indonesia; Lu and Lu (2014) in the US; and two studies in Saudi Arabia by Al-Omar and Al-Arifi (2011) and by Albedah, El-Olemy, and Khalil (2012). All studies noted that to increase usage and safely promote TM, the subject of TM should be placed into the curricula of medical and pharmaceutical students in their countries. In particular, Simatupang, Djojoputro & Nugroho (2012) noted that regarding courses for medical students in Indonesia, 60% of their participants mentioned that TM should be studied for at least one semester.

The current communication for the promotion of TTM by both government and private sectors seems inadequate and improper. Therefore, to increase awareness through a variety of strategies, TTM development requires the government to make investments in the form of effort, time, resources, and energy with the goal of empowering health personnel to become knowledgeable, have positive attitudes, and to elevate their understanding of and trust in TTM.

Thus, the MoPH should focus on relational marketing to better understand consumers and build customer relationships by taking advantage of brand avoidance knowledge and

translating it into the appropriate strategies to help cope with consumers, who have pre-purchase negative attitudes and behaviours towards TTM (Asif Khan & Lee, 2014). Business practitioners and academicians should view acts of anti-consumption as opportunities to learn about our TTM products, our practices, and our society (Lee, Fernandez & Hyman, 2009, p. 145). Consequently, the MoPH should make the act of mitigating the prevailing negative feelings about TTM its long-term objective in order to improve TTM uptake in Thailand.

A public communications and educational strategy needs to be developed and TTM knowledge and services need improvement (Yothavijit, et al. 2013). Re-constructing meaning and managing strategic communication could play the role of an unseen power to increase the use of TTM. For the purpose of self-reliance, the promotion and use of TTM should be expanded into communities to complete the cycle of TTM development (Prasansuk, 1996). Educational efforts, directed at both healthcare providers and consumers, should be included to inform both groups of the benefits and dangers of herbs (Rivera, Loya, & Ceballos, 2013). Even though economic situations have unfortunately made TTM difficult to put into practice, the Thai government must be complimented on its efforts to fulfil their mandate (Sumngern, 2011).

CHAPTER 7 CONCLUSION

7.1 CONCLUSION

Owing to over 60 years of neglect, the overall quality of the TTM in the healthcare system is seriously in need of a major overhaul to preserve the local wisdom about healthcare and to protect consumers (Chokevivat & Chuthaputti, 2005). In order to achieve comprehensive and holistic health goals, the development of TTM should be upheld to be a professional service (Aphisamacharayothin, 2014). Accordingly, communication has an essential role in any action that aims to improve health (Corcoran, 2007). In order to survive and to flourish in the present day context of modern life in Thailand, TTM needs the proper communication to expand the Thai public's beliefs in TTM as a holistic treatment so that the national target usage of TTM can be achieved.

This qualitative research explores the role and meaning of TTM for Thai citizens in their lives. The findings review that the meaning of TTM is a household treatment, a holistic treatment and a decoction or medicinal pots that incorporates knowledge from both China and India combined with established moral and ethical principles from Buddhism. TTM represents Thai wisdom, traditions, and cultural beliefs, as well as individual beliefs.

Regarding its efficacy, TTM are preventive medicines used for curing minor illnesses and certain conditions. This includes its use as alternative medicines when used to treat diseases like cancer. In addition, TTM maintains the health and well-being of its users. In Thailand, it is considered that Thai people use a holistic treatment of TTM, due to the traditional & individual belief, cultural and historical influences of use and that this knowledge has been handed down from generation to generation through the centuries as Culture and Traditional beliefs.

According to the MoPH has recently created a slogan that invites Thai citizens to use herbal medicines for minor illnesses before going to see a doctor (Sompopcharoen & Sresumatchai, 2015). In order to encourage TTM use for illness prevention within the primary healthcare system (Sumngern, 2011), 'the finished form' is being widely promoted by the MoPH, especially as a form of self-care at the family level (Thongruang, 2014) to meet the national usage of TTM in Thailand.

However, it is significant to note that the participants had a higher degree of awareness of the ‘traditional form of TTM’, particularly in using medicinal pots/decoctions, than they had regarding TTM’s new finished form. In fact, the majority of the participants (61.4%) had been unaware of TTM’s new finished form, and only 21.1% of them had actually used it. Moreover, only 10.5% had realized that TTM’s finished form was available in the marketplace.

The results also indicate that currently traditional form of TTM become obsolete, devalued, and no longer proper to use for the consumer participants. While, the finished form of TTM had gained a relative advantage according to ease of use in terms of pattern form and convenience of use, and thus, the degree of acceptance of the finished form was found to be only slightly less than conventional medicines. However, the consumer participants had perceived barriers and limitations in regard to using the finished form of TTM that were limitedly available and inaccessibility for them. Thus the user participants have used both forms of TTM depends on situations and they have brought modern medicines into their current culture of healthcare. This mode is practical for their daily lives. Yet, dissimilar to their ancestors, they are not a part of the culture that have been born with herbs. In fact, from their vantage point, TTM in particular medicinal pots/decoctions is the ideal expression of the roots of Thai-ness and Thai wisdom treatments from the past.

The findings also indicated that currently the knowledge of TTM had been discontinued, had disappeared, and had been extracted, and thus the knowledge of TTM remained unclear today. Owing to this fact, these factors have caused a lack of knowledge and trust about using both form of TTM by the consumers as well as the conventional doctors to be lacking in TTM knowledge and trust in TTM products, in particular the quality and efficacy. Such circumstance happened because there is insufficient academic support to back up TTM’s effectiveness, particularly a lack of clinical research studies. In addition, for both the marketplace and public hospitals, there are currently barriers that impede TTM usage including their costs, their accessibility, and their convenience of use.

With respect to consumer participants, the findings reviewed that the consumers currently have had a superficial knowledge with respect to TTM treatments and TTM products that caused their decision on using TTM. Moreover, it is found that they have had the negative attitude and bias against TTM, shun the consumer’s knowledge of the benefits of herbs and

TTM. While conventional doctors, the results concluded that they suffered from the following: 1) a lack of awareness about the body of TTM knowledge and wisdom, 2) a lack of skills with respect to carrying out TTM treatments, and 3) a lack of understanding about TTM products. The bias attitude against TTM by the medical doctors caused TTM products have been overlooked and being use only massage treatment. Consequently, the findings significant to show that both participants (consumers and health professionals) have had the perception that TTM is inferior to modern medicines in all aspect areas except the side-effects.

In regard to the promotion of TTM, it is significant to note that the consumer participants had mostly learned about TTM from the private sector though the radio channels. Conversely, only a few (14.0%) had learned about TTM from the government. Nonetheless, the findings reviewed that presently the promotion of TTM by both government and private sectors are unsuitable promotions. Despite the fact that the Thai government tend to pass on the theme of TTM as ancient and local wisdom with a long history of usage (Chokevivat & Chuthaputti, 2005, p.7), but it seems to be less strategy and strategic to promote TTM and without having the appropriate supporting information or proof to back up TTM's efficacy and safety. Inaccurate promotions were found from the private sectors, with half of the advertisements analyzed containing false and/or exaggerated descriptions because the content was found to be unbelievable, beyond the truth, beyond reality, and overstated. Furthermore, they sounded like propaganda by using fake interviews or fake patients to advertise herbal medicines like Miracle Drugs by claiming that their products can cure all kinds of diseases, particularly cancer (Ministry of Public Health of Thailand, 2007; Ruenkon, Likitkeithajorn, & Siththeimthong, 2003), and end paralysis (Ministry of Public Health of Thailand, 2007), and they offered a very fast recovery period. Furthermore, some of the advertisements had been found to present advertising with content that was misleading without permission from the government (Lomas & Chanthapasa, 2012). Consequently, it is found that some of these products were fake products and thus, it has side-effects to the participants after using. Yet, these advertisements had made some citizens wanted to buy the private TTM products, due to patents as well as with regard to the marketing tricks to exploit consumers (Mahidol University, 2012).

There are the three major conflicts in order to adopt TTM into the Thais self-care practice. The discontinuance and disappear knowledge of TTM have caused the intergeneration

knowledge and attitude conflict on using TTM. The current modern life-style also reflected the socio-economic conflict on TTM usage. While, the communication for the promotion of TTM by both sectors, were found misleading the useful of TTM. The public agenda and media conflict that caused the understanding and belief of TTM. All three factors indicated the current obstacle in order to adopt TTM in Thailand. Currently, the understanding and belief of TTM is in the stage of a lack of awareness and trust on using them due to ‘cultural and national identity conflict of TTM itself’ that constructed from the three major conflicts. Thus, TTM can only be a second choice and/or alternative choice when the Thais negotiate with their healthcare.

People are influenced by many factors that affect their decisions about whether or not to adopt an innovation (Rogers, 1983). With respect to the relational factors that influence the use or the rejection of TTM, aside from traditional and individual belief, as well as cultural and historical influences of use. An analysis of the study concluded that the factors influence TTM’s usage depended upon the consumer’s individual knowledge of and perception & attitudes towards TTM, social factors and accessibility and convenience. The findings also indicated that the consumer’s demographics related to the usage of TTM. Lastly, the promotion on TTM and drug advertisements significantly affected the decision on using TTM in Thailand. These important factors have led to difficulties in the process of successfully adopting TTM and making progress in the marketplace, as well as in the public healthcare system of Thailand. Thus, this phenomenon has caused Thailand to fall short in its national target usage for TTM by a wide margin.

According to The MoPH has policy to promote the use of finished form of TTM. Therefore, The MoPH and the other government sectors, which are involved with the promotion of TTM, still have a lot of work to do in order to encourage an increasing percentage of TTM up take in Thailand.

7.2 THE LIMITATIONS OF THE STUDY

Despite the fact that the qualitative research approach was selected as the most appropriate design for this study and for reaching its objective of uncovering the roles and meanings that TTM has for Thai citizens in Thailand, several limitations do exist for this study. Therefore, these limitations should be duly noted.

The limitations, listed below, focus on weaknesses in the process data of collection itself: With respect to focus group interviews the following weaknesses have been noted: 1) The focus groups were exclusively conducted in Udonthani Province, which means that the data was solely collected from only one of Thailand's 77 provinces, and 2) there were only a small number of participants (57) who were interviewed in the focus groups. With respect to "in-depth interviews", the following weaknesses were also noted: 1) There were only two national policy-makers interviewed at this exclusive level; 2) The ability to obtain the mean data was limited to and based upon each interviewee's circumstances with respect to following: a) the various policies and objectives of the institutions or departments that each of the interviewees represented, and b) each interviewee's medical background with respect to TTM; 3) There were other potential stakeholders who were not considered for inclusion in the study, such as a) politicians, b) the elderly, and c) especially, the people living in Southern Thailand who were not included in the in-depth interviewing process.

Consequently, the following conditions have significantly limited the study's ability to generalize the findings with respect to Thailand's larger population: 1) the small number of participants and 2) the convenient nature of the focus groups and in-depth interviews (Thongruang, 2014). Therefore, the sub-cultures of the people and the healthcare professionals throughout Thailand's different regions may not be reflective of the perceptions of the participants sampled in this study.

Another limitation is the "thematic analysis". It is noted to have a poorly demarcated and limited interpretative power beyond mere description if it is not used within an existing theoretical framework that anchors the analytic claims that are being made (Braun and Clarke, 2006), including a possible bias on the part of the researcher (Thongruang, 2014). Nevertheless, an analysis of this study based on KAP (thematic analysis) offered an accessible and theoretically-flexible approach for analysing the qualitative data that searches for themes or patterns in relation to different epistemological and ontological positions of TTM within the culture, social structure, and context of Thailand (Braun and Clarke, 2006). By using focus groups and in-depth interviews in this study, qualitative research methods, including KAP framework and thematic analysis, were employed to capture and analyse the data. The selected research methods have been justified by myself, and moreover, my supervisors have been deemed them appropriate to the central objectives of the research questions including the

sub-questions. Furthermore, all parties have considered the inherent weaknesses of the research and have been aware of all of its limitations.

Nonetheless, in both theory and application, this study represents a valuable tool that can assist Thailand's healthcare systems. In relation to social reality, culture, and healthcare at both the individual and societal levels; the study has defined how our own individual TTM identities are created. Finally, new knowledge, gained from the study, can be used to help Thailand's "Sufficiency Health System" policy which has been developed based on the philosophy of King Bhumibhol Adulyadej's "Sufficiency Economy", which aims at achieving good health and good service, as well as helping to develop the country's macro-economics (World Health Organization, 2009, p.100) by "re-constructing meaning and managing strategic communication" in order to play a role as an unseen power to increase the use of TTM.

A best communication for the promotion of TTM has been formed in order to facilitate an understanding of TTM. Furthermore, it has been created to, in the best way possible, offer a gateway to reach Thai citizens in order to encourage them to comprehend the benefits that TTM offers for their physical health and well-being.

7.3 SUGGESTIONS FOR FURTHER RESEARCH

The discussions and recommendations of this research have brought to light some issues that will require further investigation. This study proposes for further research for both domestic and international TTM markets.

With respect to future TTM research concerning the "domestic marketplace", this research study has been built upon previous findings about TTM. Regarding its results, they could be used to explore the knowledge of the Thai consumers in Bangkok and in other regions of the country, as well as to examine their attitudes and to comprehend their understandings of TTM. This is especially important because the knowledge, attitudes, experiences, and practices of the interested groups in the different regions of Thailand may differ from those of the participants in this study. Moreover, these differences in experiences and in perspectives regarding the practice and implementation of TTM policy could provide researchers with a deeper understanding that would allow them to make valuable recommendations for the advancement of positive TTM policies and for the creation of communication targeted at promoting the development of TTM.

In order to obtain better results for further research by utilizing the findings from this study, future research should place emphasis on the purchasing behaviors of the consumers because such research could focus on the major market—the domestic market. Research studies should be conducted to examine consumer behaviors in regard to their consumption of herbal products and/or their levels of satisfaction with them. Furthermore, since the qualitative approach has been used for this research, the quantitative approach should be implemented for the next research study in order to confirm the reliability of the findings that TTM and herbal products have a competitive advantage in Thailand.

Finally, regarding the international market, aligning with the establishment of ASEAN Economic Community (AEC) in 2015 was a major milestone in the regional economic integration agenda in ASEAN (The ASEAN Secretariat Community Relations Division, 2015). Future research on TTM should be carried out in regard to the international marketplace, which could represent a further possible direction for TTM research. It is the researcher's recommendation that a study be constructed to examine Thailand's national competitive advantage in traditional herbal products because evaluating the nation's level of competitiveness as compared to other countries is of critical importance to the nation's economy.

REFERENCES

- Addis, G., Abebe, D., Genebo, T. Urga, K. (2002). Perceptions and practices of modern and traditional health practioners about traditional medicine in Shirka District, Arsi Zone, Ethiopia. *Ethiopian Journal of Health Development* 16, 19-29.
- Adib-Hajbaghery, M., & Hoseinian, M. (2014). Knowledge, attitude and practice toward complementary and traditional medicine among Kashan health care staff, 2012. *Complementary Therapies in Medicine.*, 22(1), 126-132. doi: 10.1016/j.ctim.2013.11.009
- Agbaje, E. O., & Babatunde, E. O. (2005). A KAP study of the attitude and practice of traditional medicine in a contemporary Nigerian community. *The Central African Journal of Medicine.*, 51(5-6), 58-62.
- Airhihenbuwa, C. O. (1995). *Health and culture: Beyond the Western paradigm*. Thousand Oaks London New delhi: SAGE Publications, Inc. New Dehli
- Akram, F., Salman, M. T., Khan, A., Krishnan, D. G., & Ahmad, N. (2015). Herbal drugs: Study of knowledge attitude and practices about their side effects, source of advice and conditions for preference among educated class. *European Journal of Biomedical and Pharmaceutical Sciences*, 2(2), 180-188.
- Akyol, A., & Oz, B. (2011). The use of complementary and alternative medicine by patients with cancer: in Turkey. *Complementary Therapies in Clinical Practice*, 17, 230-234. doi: 10.1016/j.ctcp.2010.12.003
- Al-Busaidi, Z. Q. (2008). Qualitative research and its uses in health care. *Sultan Qaboos University Medical Journal*, 8(1).
- Al-Ghamdi, E., Qureshi, N., Krekman, L., Al-Ghamdi, A., & Al-Bedah, A. (2016). Traditional medicine and modern medicine: Knowledge, attitude and practice of medical students and their Mothers in Tabuk City, Saudi Arabia. *British Journal of Medicine & Medical Research*, 16(8), 1-12.
- Al-Omar, H. A., & Al-Arifi, M. N. (2011). Pharmacy students' use, knowledge, and attitudes toward complementary and alternative medicine at Riyadh region, Saudi Arabia. *International Journal of Green Pharmacy*, 5(1), 16-23. doi: 10.22377/ijgp.v5i1.168
- Al-Yahia, O. A., Al-Bedah, A. M., Al-Dossari, D. S., Salem, S. O., & Qureshi, N. A. (2017). Prevalence and public knowledge, attitude and practice of traditional medicine in Al-Aziziah, Riyadh, Saudi Arabia. *British Journal of Medicine & Medical Research*, 20(9), 1-14.
- Albedah, A. M., El-Olemy, A. T., & Khalil, M.K. (2012). Knowledge and attitude of health professionals in the Riyadh region, Saudi Arabia, toward complementary and alternative medicine. *Journal of Family and Community Medicine.*, 19(2), 93-99. doi: 10.4103/2230-8229.98290

- Andel, T., & Westers, P. (2010). Why Surinamese migrants in the Netherlands continue to use medicinal herbs from their home country. *Journal of Ethnopharmacology*, 127(3), 694-701. doi: 10.1016/j.jep.2009.11.033
- Ang-Lee, M. K., Moss J., & Yuan, C. S. (2001). Herbal medicines and perioperative care. *The Journal of the American Medical Association*, 286(2), 208-216.
- Aphisamacharayothin, P. (2014). Discursive practice of Thai traditional medicine in Hospital: Case Study of a District Hospital in Nakhon Pathom Province. *International Journal of Behavioral Science*, 9(1), 11-25.
- Armstrong, K. (2017). Consumer vulnerability and the transformative potential of the consumption of complementary alternative medicine (CAM). *Journal of Consumer Behaviour*, 16(3), 207-236. doi: <https://doi.org/10.1362/147539217X15071081721099>
- Asif Khan, M., & Lee, M. S. W. (2014). Pre purchase determinants of brand avoidance: The moderating role of country-of-origin familiarity. *Journal of Global Marketing*, 27(5), 329-343. doi: 10.1080/08911762.2014.932879
- Atieno, O. (2009). An analysis of the strengths and limitation of qualitative and quantitative research paradigms. *Problems of Education in the 21st century*, 13, 13-18.
- Austin, Z. (2014). Qualitative research: Getting started. *Canadian Society of Hospital Pharmacists*, 67(6), 436-440.
- Awad, A., & Al-Shaye, D. (2014). Public awareness, patterns of use and attitudes toward natural health products in Kuwait: a cross-sectional survey. *BMC Complementary and Alternative Medicine* 14(105). doi: 10.1186/1472-6882-14-105
- Balasubramaniam, K. (n.d.). *Traditional medicine*. Retrieved from <http://www.politicsofmedicines.org/articles/traditional-medicine>
- Baniya, R. (2014). Traditional healing practices in rural Nepal. *Journal of Patan Academy of Health Sciences*, 1(1), 52-53.
- Bashir, M., Tanveer, A., M., & Azeem, M. (2008). Reliability and validity of qualitative and operational research paradigm. [Research]. *Pak.j.stat.oper.res.*, 5(1), 41.
- Basu, A., & Dutta, M. J. (2009). Sex workers and HIV/AIDS: Analyzing participatory culture-centered health communication strategies. *Human Communication Research* 35. doi: 10.1111/j.1468-2958.2008.01339.x, 86-114.
- Bender, E. D., & Ewbank, D. (1994). The focus group as a tool for health research: issues in design and analysis. *Health Transition Review*, 4(1), 63-79.
- Beyene, B., Beyene, B., & Deribe, H. (2016). Review on application and management of medicinal plants for the livelihood of the local community. *Journal of Resources Development and Management* 22, 33-39.

- Bharucha, D. X., Morling, B. A., & Niesenbaum, R. A. (2003). Use and definition of herbal medicines differ by ethnicity *Ann Pharmacother*, 37(10). doi: 10.1345/aph.1C421
- Bhokanandh, V. (2001). *Marketing communication of Abhaibhubejhr herbal medicine and the behavior of consumers' decision making*. (Master thesis), Dhurakij Pundit University, Thailand. (ISBN 974-281-778-2)
- Bourke, B. (2014). Positionality: Reflecting on the Research Process *The Qualitative Report* (Vol. 19). United States: Murray State University.
- Boyce, C. (2006). Conducting In-depth interview: A guide for designing and conducting In-depth interviews for Evaluation Input. In *Pathfinder International Tool Series Monitoring and Evaluation – 2*. United States: Pathfinder International.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in psychology Journal*, 3(2), 77-101.
- Brun, V. (2006). Traditional Thai medicine. In H. Selin (Ed.), *Medicine across cultures: History and practice of medicine in non-Western cultures*. United States: Kluwer Academic Publishers.
- Catterall, M., & Maclaran, P. (1997). *Focus group data and qualitative analysis programs: Coding the moving picture as well as the snapshots*. Retrieved from <http://www.socresonline.org.uk/2/1/6.html>
- Chaichompoo, S., Shuaytong, P., Waseewerasi, W., & Sonkosum, S. (2012). Factors related with people's behavior towards using medical herbs for illness treatments among people in region 11, Ministry of Public Health. *Kuakarun Journal of Nursing*, 19(2).
- Chandrawongse, M. (2011). *Situation and impacts of drug and health product advertisements with legal problems on community radio broadcasts toward consumers in Chiangmai Province*. (Master thesis), Chiang Mai University, Thailand.
- Chang, L., & Basnyat, I. (2015). Negotiating biomedical and traditional Chinese medicine treatments among elderly Chinese Singaporean women. *Qualitative Health Research*, 25(2). doi: 10.1177/1049732314551991, 241-252.
- Chao, M., & Wade, C. (2014). Socioeconomic factors and women's use of complementary and alternative medicine in four racial/ethnic groups. *The PubMed Central*, 18(1), 65-71.
- Chao Phraya Abhaibhubejhr Hospital. (n.d). *Sharing the herbal heritage of Thai wisdom*. Company profile. Chao Phraya Abhaibhubejhr Hospital. Thailand. Retrieved from http://asia.procasur.org/wp-content/uploads/2012/10/Case-Study-2_Abhaibhubhejhr-Hospital-Foundation.pdf
- Chao Phraya Abhaibhubejhr Hospital (n.d). *Chao Phraya Abhaibhubejhr Hospital* [Brochure]. Thailand.

- Charmaz, K. (2001). Qualitative interviewing and grounded theory analysis. In F. Gubrium, J., & Holstein, A., J. (Ed.), *Handbook of interview research: context & method*. United States, United Kingdom and India: SAGE Publications Limited.
- Chetley, A., Hardon, A., Hodgkin, C., Haaland, A., & Fresle, D. (2007). *How to improve the use of medicines by consumers*. Geneva, Switzerland: World Health Organization.
- Chilson, M. (2014). *Holistic medicine: 5 examples of cultures where it rules*. Retrieved from <http://www.newsmax.com/FastFeatures/holistic-medicine-cultures/2014/10/12/id/597222/>
- Chinnawong, T. (2007). *The influences of Thai Buddhist culture on cultivating compassionate relationships with equanimity between nurses, patients and relatives : a grounded theory approach*. (Doctoral thesis), Southern Cross University, Australia.
- Chokevivat, V., & Chuthaputti, A. (2005). *The role of Thai traditional medicine in health promotion*. Paper presented at 6th Global Conference on Health Promotion, Bangkok, Thailand.
- Chungsomjatepaisarn, P. (2013). The development model for the promotion of Thai traditional medicine used in the family healthcare in Thailand. *Medical Service Journal*, 32(1), 31-43.
- Coninck, J. (2016). *Promoting herbal medicine in Uganda: Traditional health practitioners and government working together*. Retrieved from <http://www.ichngoforum.org/promoting-herbal-medicine-uganda/>
- Corcoran, N. (2007). Theories and models in communicating health messages. In *Communicating health strategies for health promotion* (1 ed.). United States: SAGE Publications Limited.
- Crotty, M. (1998). Introduction: The research process. In *The foundations of social research meaning and perspective in the research process*. London, Thousand Oaks and New Delhi: SAGE Publications Limited.
- DaBreo, S., & Inniss-Springer, E. (2016). Knowledge, attitudes and practices study: Baseline for the SMART health care facilities in the Eastern Caribbean project –phase II. United Kingdom: World Health Organization.
- Danubrata, E., & Daga, A. (2013). *From street stalls to bourses, South East Asia's traditional medicine makers promise panacea*. Retrieved from <http://www.reuters.com/article/us-asia-health-herbalmedicines-idUSBRE9BJ0BK20131220>
- Davies, R. (n.d.). *Focus groups in Asia*. Retrieved from <http://www.orientpacific.com/focusgroups.htm>
- Daymon, C., & Holloway, I. (2011). *Qualitative research methods in public relations and marketing communications* (2 ed.). [Book]. United States and Canada: Routledge.

- Dearing, J. (2009). Applying diffusion of innovation theory to intervention development. *Research on Social Work Practice, 19*(5). doi: 10.1177/1049731509335569
- Dennis, J. (2012). *2012 International herb & botanical trends*. Retrieved from http://www.nutraceuticalsworld.com/issues/2012-07/view_features/2012-international-herb-botanical-trends/
- Diedong, L. A. (2013). Covering health issues: The role of newspapers in Ghana. *International Journal of Humanities and Social Science, 3*(12), 46.
- Douglas, E. (2006). How social marketing works in health care. *British Medical Journal, 332*. doi: 10.1136/bmj.332.7551.1207-a
- Dowd, M. (2014). Types of research paradigms and interpretivism. Academic article Retrieved from http://www.ehow.com/info_8601497_types-research-paradigms-interpretivism.html
- Dutta, M. J. (2008). *Communicating health: A culture-centered approach*: Policy Press. United States.
- Dutta, M. J., Basu, A. (2007). Health among men in rural Bengal: Exploring meanings through a culture-centered approach. *Qualitative Health Research, 17*(1), 38-48. doi: 10.1177/1049732306296374
- Ehrlich, D. S. (2011). *Herbal medicine*. Retrieved from <https://umm.edu/health/medical/altmed/treatment/herbal-medicine>
- Elolemy, A. T., & AlBedah, A. M. (2012). Public knowledge, attitude and practice of complementary and alternative medicine in Riyadh region, Saudi Arabia. *Oman Medical Journal, 27*(1), 20-26. doi: 10.50010/omj.2012.04
- European Commission, B. (2011). *Traditional herbal medicines: more safety for products put on EU market*. Retrieved from http://europa.eu/rapid/press-release_IP-11-510_en.htm
- Farooqui, M., Hassali, M., Abdul Shatar, A., Shafie, A., Seang, T., & Farooqui, M. (2012). Complementary and alternative medicine (CAM) use by Malaysian oncology patients. *Complementary Therapies in Clinical Practice, 18*(2), 114-120. doi: 10.1016/j.ctcp.2011.09.003
- Firenzuoli, F., & Gori, L. (2007a). European traditional medicine – International congress – Introductory statement. *Evidence Based Complementary and Alternative Medicine, 4*(supplement 1). doi: 10.1093/ecam/nem134
- Fitzgerald, L., Ferlie, E., Wood, M., & Hawkins, C. (2002). Interlocking interactions, the diffusion of innovations in health care. *Human Relations, 55*(12), 1429-1449.
- Freitas, H., Oliveira, M., Jenkins, M., & Popjoy, O. (1998). *The focus group, a qualitative research method: Reviewing the theory, and providing guidelines to its planning*. Paper presented at the WP ISRC United States.

- Ganghair, G. (2014). *46% of Thai people did not know traditional Thai medicine*. Thailand: Thai Health Promotion Foundation
- Gawde, S. R., Shetty, Y. C., & Pawar, D. B. (2013). Knowledge, attitude, and practices toward ayurvedic medicine use among allopathic resident doctors: A cross-sectional study at a tertiary care hospital in India. *Perspectives in clinical research*, *4*(3). doi: 10.4103/2229-3485.115380, 175-180.
- Gilbert, N. (2012). Chinese herbal medicine breaks into EU market Retrieved from <http://blogs.nature.com/news/2012/04/chinese-herbal-medicine-breaks-into-eu-market.html>
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research (T. O. I. f. S. Education, Trans.) *The Qualitative Report* (Vol. 8, pp. 597-607). Canada: University of Toronto, Ontario.
- Green, C. E. (2001). Can qualitative research produce reliable quantitative findings? *Field Methods*, *13*(1), 3-19.
- Greenberg, M. (2006). The diffusion of public health innovations. *American Journal of Public Health*, *96*(2). doi: 10.2105/AJPH.2005.078360, 209-210.
- Gubrium, F. J., & Holstein, A. J. (2001). *Handbook of interview research: Context and method*. United States: SAGE Publications Limited.
- Gumucio, S. (2011). Data collection: quantitative methods the kap survey model (knowledge, attitude & practices). Franch: iGc communigraphie, 3-73.
- Gunjan, M., Naing, T. W., Saini, R. S., Ahmad, A. B., Naidu, J. R., & Kumar, I. (2015). Marketing trends and future prospects of herbal medicine in the treatment of various disease. *World Journal of Pharmaceutical Research*, *4*(9), 132-155.
- Gyasi, R. M., Mensah, C. M., Osei-Wusu Adjei, P., & Agyemang, S. (2011). Public perceptions of the role of traditional medicine in the health care delivery system in Ghana. *Global Journal of Health Science*, *3*(2). doi: 10.5539/gjhs.v3n2p40
- Haasnoot, P., Boeting, T., Kuney, M., & Roosmalen, J. (2010). Knowledge, attitudes, and practice of Tuberculosis among Maasai in Simanjiro district, Tanzania. *American Society of Tropical Medicine and Hygiene*, *83*(4), 902-905. doi: 10.4269/ajtmh.2010.10-0061, 902-905.
- Haloi, R., Ingle, N., & Kaur, N. (2014). KAP surveys and oral health: a detailed review. *Journal of Contemporary Dentistry*, *4*(2), 99-105.
- Heffernan, C. (n.d.). What is focus group? Toolkit Retrieved from <http://www.drcath.net/toolkit/focus.html>
- Herman, P. M., Craig, B. M., & Caspi, O. (2005). Is complementary and alternative medicine (CAM) cost-effective? a systematic review. *BMC Complementry and Alternative Medicine*, *5*(11). doi: 10.1186/1472-6882-5-11, 1-15.

- Hilala, M., & Hilal, S. (2017). Knowledge, attitude, and utilization of herbal medicines by physicians in the Kingdom of Bahrain: A cross-sectional study. *Journal of the Association of Arab* 24, 325-333. doi: <https://doi.org/10.1016/j.jaubas.2016.11.001>
- Hixon, A., & Maskarinec, G. (2008). The declaration of Alma Ata on its 30th anniversary: relevance for family medicine today. *Family Medicine*, 40(8), 585-588.
- Holmes, A. (2014). *Researcher positionality – a consideration of its influence and place in research*. Retrieved from http://www.researchgate.net/publication/260421552_Researcher_positionality_-_a_consideration_of_its
- Hulderson, P. (1994). *Qualitative research for health programmes*. Geneva: Division of Mental Health, World Health Organization.
- Hussein, A. (2009). The use of triangulation in social sciences research: Can qualitative and quantitative methods be combined? [Abstract]. *Journal of Comparative Social Work*, 1, 1-12.
- Hutchison, J. A., Jonston, H. L., & Breckon, D. J. (2010). Using QSR - NVivo to facilitate the development of a grounded theory project: an account of a worked example. *International Journal of Social Research Methodology*, 13(4), 283-302. doi: 10.1080/13645570902996301
- Jehso, K. (2015). *Raising consciousness: The process of integrating Thai traditional medicine into current health care systems from physicians' experiences*. (Doctoral thesis), Prince of Songkla University, Thailand.
- Juckett, G. (2005). Cross-cultural medicine. *American Academy of Family Physicians*., 72(11), 2267-2274.
- Jugder, N. (2016). *The thematic analysis of interview data: an approach used to examine the influence of the market on curricular provision in Mongolian higher education institutions*. Hillary Place Papers, University of Leeds, 3.
- Kaliyaperumal, K. (2004). IEC; Expert, Diabetic Retinopathy Project: Guideline for conducting a knowledge, attitude and practice (KAP) study. *Community Ophthalmology*, 4(1), 7-9.
- Kashani, L., Hassanzadeh, E., Mirzabeighi, A., & Akhondzadeh, S. (2013). Knowledge, attitude and practice of herbal remedies in a group of infertile couples. *Acta Medica Iranica*, 51(3).
- Keller, K. (2002). *Herbal medicinal products in the European Union*. Paper presented at The 26th International Conference on Internal Medicine, Kyoto, Japan. Retrieved from <http://apps.who.int/medicinedocs/pdf/s4950e/s4950e.pdf>
- Khanal, K. (2012). Concept of paradigm shift in public health research. *Kathmandu University Medical Journal (KUMJ)*, 10(40), 1.

- Khaphol, N., Thosa-ngun, K., Thavornchareanshap, M., Suksombhun, N., Kulpeng, W., Thanthivet, S., & Thirawattananon, Y. (2011). Views of health professionals on herbal medicine and policy for promotion of herbal medicine use in healthcare setting. *Journal of Thai Traditional & Alternative Medicine*, 10(1), 1-75.
- Khothammthat, W. (2004). *Market value of herbs SCB 2547*. Retrieved from <http://www.gotoknow.org/posts/201073>
- Kittisopee, T., Anantachoti, P., & Tangcharoensathien, V. (2005). *Radio drug advertisement situation and regulation in Thailand*. Paper presented at Health Economics & Financing Programme (HEFP), United Kingdom.
- Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 23(1), 69.
- Kongrerak, T. (2013). *A study of the competitive advantage of Thai traditional medicine and herbal products* University of the Thai Chamber of Commerce, Thailand.
- Krishnan, A. (2012). *Integrated Marketing Communications*. Retrieved from <http://www.slideshare.net/ananthkrishnan2/4integrated-marketing-communications>
- Krungthepturakij Online, Thailand. (2006, 4 Aug). Abhaibhubejhr branding from word of mouth, News, *Krungthemturakij Online, Thailand*, p. 2. Retrieved from http://www.tistr-foodprocess.net:8080/vegetable/news_vegetable/news_vegetable3.htm
- Kudngaongarm, P. (2011). Thai traditional medicine protection (Part I). *Thailand Journal of Law and Policy*, 14(2), 1.
- Kummalue, T. (2012). Difficulties of drug development from Thai herbal medicine. *Pharmaceutica Analytica Acta*. doi: 10.4172/2153-2435.S15-002, 1-3.
- Kuper, A., Reeves, S., Levinson, W., & Eton, J. (2008). An introduction to reading and appraising qualitative research. *BMJ*. doi: <http://dx.doi.org/10.1136/bmj.a288>
- Lambert, H., & McKevitt, C. (2002). Anthropology in health research: From qualitative methods to multidisplinary. *BMJ*, 235. doi: <http://dx.doi.org/10.1136/bmj.325.7357.210>
- Launiala, A. (2009). How much can a KAP survey tell us about people's knowledge, attitudes and practices? some observations from medical anthropology research on malaria in pregnancy in Malawi. *Anthropology Matters Journal*, 11(1).
- Lawrence, G. (2013). Traditional medicine and healing practices of Northern Thailand. In *Thai Massage & Thai Healing Arts: Practice, Culture and Spirituality*. Thailand, 1-3.
- Lee, M., Fernandez, K., & Hyman, M.R. (2009). Anti-consumption: An overview and research agenda. *Journal of Business Research*, 62(2), 145-147.

- Lee, M., Roux, D., Cherrier, H., & Cova, B. (2011). Anti-consumption and consumer resistance: Concepts, concerns, conflicts, and convergence. *European Journal of Marketing*, 45(11/12), 1680-1687. doi: <https://doi.org/10.1108/ejm.2011.00745kaa.001>
- Lee, S. L., Khang, Y. H., Lee, M. S., & Kang, W. (2002). Knowledge of, attitudes toward, and experience of complementary and alternative medicine in western medicine- and oriental medicine-trained physicians in Korea. *American Journal of Public Health*, 92(12), 1994-2000.
- Leung, L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of family medicine and primary care*, 4(3), 324-327. doi: 10.4103/2249-4863.161306
- Lewis, S., & Dickson, D. (2010). *The imperatives for traditional medicine*. Retrieved from <http://www.scidev.net/global/systems/editorials/the-imperatives-for-traditional-medicine.html>
- Liamputtong, P., & Kitisriworapan S. (2014). Authoritative knowledge, folk knowledge, and antenatal care in contemporary Northern Thailand. In P. Liamputtong (Ed.), *Contemporary socio-culture and political perspectives in Thailand*. Australia: Springer Dordrecht Heidelberg New York London.
- Liamputtong, P., Yimyam, S., Parisunyakul, S., Baosoung, C., & Sansiriphun, N. (2005). Traditional beliefs about pregnancy and child birth among women from Chiang Mai, Northern Thailand. *Midwifery*, 21(2). doi: 10.1016/j.midw.2004.05.002
- Lien, A., & Jiang YD. (2016). Integration of diffusion of innovation theory into diabetes care. [Editorial]. *JDI Journal of Diabetes Investigation*. doi: 10.1111/jdi.12568, 259-260.
- Liu, F., Dixon, M., & Murphy, J. (2002). Exploring online buying and online trust in China. *Asia Pacific Advances in Consumer Research*, 5, 336-342.
- Lomas, K., & Chanthapasa, K. (2012). *The situation of radio advertisement of drug and food claimed as drug in Phraibueng municipality, Sisaket province*. Paper presented at "The 4th Annual Northeast Pharmacy Research Conference of 2012 Pharmacy Profession in Harmony", Khon Kaen.
- Loquai, C., Dechent, D., Garzarolli, M., Kaatz, M., Kaehler, K., Kurschat, P., Meiss, F., Micke, O., Muecke, R., Muenstedt, K., Stein, A., Nashan, D., Stoll, C., Schmidtman, I., & Huebner, J. (2017). Use of complementary and alternative medicine: A multicenter cross-sectional study in 1089 melanoma patients. *European Journal of Cancer*, 71, 70-79. doi: 10.1016/j.ejca.2016.10.029.
- Lu, W. I., & Lu, D. P. (2014). Impact of Chinese herbal medicine on American society and health care system: Perspective and concern. *Evidence-Based Complementary and Alternative Medicine*, 6. doi: <http://dx.doi.org/10.1155/2014/251891>
- Luo, Z., Grundling, J., & Steynberg, L. (2013). *Attitudes, subjective norms and behavioural control towards traditional Chinese medicine in South Africa*. Paper presented at the

Proceedings of 8th Annual London Business Research Conference Imperial College, London, UK, 8 - 9 July, 2013, England.

- Macome, E. (2002). *The dynamics of the adoption and use of ICT-based initiatives for development: Results of a field study in Mozambique* (Doctoral thesis), University Pretoria, South Africa.
- Mahady, G. B. (1998). Herbal medicine and pharmacy education. *Journal of the American Pharmacists Association*, 38(274).
- Mahidol University (2012). Time for the first Thai traditional medicine hospitals. *Thai health: Outstanding health situation*, Bangkok, Thailand. 68-72.
- Manager Online, Thailand. (2010, 19 Apr). The importance of Thai traditional medicine, News, *Manager online, Thailand*, p. 1. Retrieved from <http://www.manager.co.th/Daily/ViewNews.aspx?NewsID=9530000053800>
- Manager Online, Thailand. (2013, 5 Apr). FDA warning " longanoid cream" over advert, News, *Manager Online, Thailand*, p. 1. Retrieved from <http://www.manager.co.th/QOL/ViewNews.aspx?NewsID=9560000041498>
- Maneerat, P. (2009). *Communication process to promote marketing of Abhaibhubejhr herb*. (Master thesis), Chulalongkorn University, Thailand.
- Marczak, M., & Sewell, M. (n.d.). *Alternative methods for collecting evaluation data: Using focus group for evaluation*. Retrieved from <http://ag.arizona.edu/sfcs/cyfernet/cyfar/focus.htm>
- Mays, N., & Pope, C. (2007). Qualitative research: Rigour and qualitative research. *BMJ*, 311. doi: 1995;311:109-112
- McGregor, J. (2008). Wellbeing, development and social change in Thailand. *Thammasat Economic Journal*, 26(2). 1-27.
- Medicinal and botanical products (Article). (2011). from Gale cengage learning <http://www.warc.com/Pages/Taxonomy/Results.aspx?q=&Area=&Page=9&Tab=&DVals=&SourceOR=&DRange=&Filter=&SubjectRef=14294>
- Micke, O., Bruns., F., Glatzel, M., Schönekaes, K., Micke, P., Mücke, R., & Büntzel, J. (2009). Predictive factors for the use of complementary and alternative medicine (CAM) in radiation oncology. *European Journal of Integrative Medicine*, 1(1), 19-25. doi: <https://doi.org/10.1016/j.eujim.2009.02.001>
- Miles, M., Huberman, M., & Saldana, J. (2014). Designing matrix and network displays. In *Qualitative Data Analysis: An expanded sourcebook* (3 ed.): SAGE Publications, Inc.
- Ministry of Health Rwanda & UNICEF Rwanda. (2014). *Knowledge, attitudes and practices assessment on early nurturing of children report*. Rwanda: Ministry of Health, Rwanda and UNICEF Rwanda.

- Ministry of Public Health of Thailand. (2007). *FAD warning about over claim of TTM advertising through local radio*. Retrieved from <http://webnotes.fda.moph.go.th/information2549.nsf/%A2%E8%D2%C7%CD%C2.%6592CD9E7AEDBCFB472572110021C7C7?opendocument>
- Ministry of Public Health of Thailand. (2008). *The MoPH policy to increase the use of traditional Thai medicine*. Retrieved from http://www.moph.go.th/ops/iprg/include/admin_hotnew/show_hotnew.php?idHot_new=15616
- Mohamed, A. S. (2004). *Factors influencing intention to consume herbal supplement* (Master thesis), University Sains Malaysia, Malaysia.
- Monde, M. (2011). *The KAP Survey Model (Knowledge, Attitudes, and Practices)*. Retrieved from <http://www.spring-nutrition.org/publications/tool-summaries/kap-survey-model-knowledge-attitudes-and-practices>
- Moore, J. (2012). *A personal insight into researcher positionality*. Retrieved from <https://journals.rcni.com/doi/abs/10.7748/nr2012.07.19.4.11.c9218>
- Morgan, P., & Voola, R. (2000). Integrated Marketing Communications (Imc) In a social marketing context: An application to practice - drug and alcohol treatment services. *st ANZMAC 2000 Visionary Marketing for the 21 Century: Facing the Challenge*.
- Muangchai, C., Nunthiprapa, W., Napaporn, J., & Vadhnapijiyakul, A. (2014). A survey of marketing data and developing marketing plan of herbal medicines for U_Medical. *Isan journal of Phamaceutical Sciences* 9;(Supplyment).
- Muench, J., & Hamer, A. M. (2010). Adverse effects of antipsychotic medications. *American Family Physician*, 81(5), 617-622.
- Mulvey, K., Huang, J., Hubbard, S., & Hayashi, S. (2002). *Tailored design method, response rates and systematic limitation: A comparative study*. Paper presented at European Evaluation Society Conference in Seville.
- National Broadcasting and Telecommunications Commission of Thailand. (2014). *Suppression illegal advertisement*. Retrieved from http://www.nbt.go.th/wps/portal/NTC!/ut/p/c4/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gTf3MX0wB3U08nxzATA09nJ2cLL1NDo2AnE_2CbEdFAOMpLEU!/?WCM_GLOBAL_CONTEXT=/wps/wcm/connect/library+ntc/internetsite/04newsactivi/0402news/wspaper/040201press/040201press_detail/f42ed0004617544e801d8d29ff355c3c
- Nordqvist, C. (2015). *What are the benefits of garlic?* Retrieved from <http://www.medicalnewstoday.com/articles/265853.php>
- Nowak, G., Cole, G., Kirby, S., Freimuth, V., & Caywood, C. (1998). *The application of integrated marketing communications to social marketing and health communications: organizational challenges and implications*. Paper presented at the Social marketing quarterly, Special issue : innovations in social marketing conference proceedings.

- Nzuki, D. (2016). *Utilization of herbal medicine among children under 5 years of age in Tharaka Nithi country, Kenya*. (Master Thesis), Kenyatta University, Kenya.
- O'Connor, L. E., & White, M. K. (2009). Intentions and willingness to use complementary and alternative medicines : What potential patients believe about CAMs. *Complementary Therapies in Clinical Practice (CTCP)*, 15(3), 136-140. doi: 10.1016/j.ctcp.2009.03.003.
- Omar, H., & Putit , L. (2012). Consumer behavioral intention to use omplementary alternative medicine. *International Proceedings of Economics Development & Research*, 46(22). doi: 10.7763/IPEDR. 2012. V46. 22, 116-120.
- Ormston, R., Spencer, L., Barnard, M., & Snape, D. (2014). The foundations of qualitative research. In J. Ritchie, Lewis, J., Nicholls, C., & Ormston, R. (Ed.), *Qualitative research practice: A guide for social science students and researchers* (2 ed.): SAGE.
- Palinkas, L. A., Horwitz, S.M., Green, C.A., Wisdom, J.P., Duan, N., & Hoagwood, K. (2016). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, 42(5), 533–544. doi: 10.1007/s10488-013-0528-y
- Paramasivam, P., Raghavan, P., Srinivasan, P., & Kuma, G. (2010). Knowledge, Attitude, and Practice of dyeing and printing workers. *Indian Journal of Community Medicine*, 35(4), 498-501. doi: 10.4103/0970-0218.74358
- Payyappallimana, U. (2010). Role of traditional medicine in primary health care: An overview of perspectives and challenges. *Yokohama Journal of Social Sciences*, 14(6), 57-77.
- Peltzer, K. (2009). Utilization and practice of Traditional/Complementary/Alternative Medicine (TM/CAM) in South Africa. *African Journal Traditional Complementary and Alternative Medicines (AJTCAM)*, 6(2), 175-185.
- Peltzer, K., & Pengpid, S. (2015). Utilization and Practice of Traditional/Complementary/Alternative Medicine (T/CAM) in Southeast Asian Nations (ASEAN) Member States. *Ethno Med*, 9(2), 209-218.
- Petrakard, P., Limpananon, J., Witayanartpaisarn, S., Autasit, R., Kulsomboon, S., Chantraket, R., & Kriangsinyos, W. (2007). Integration of Thai Traditional Medicines into Biomedical Health Service System. Thailand: Usa Printing, Bangkok.
- Praneetlekha, K. (2015). Internet usage cuts time spent on books, *The Nation*. Retrieved from <http://www.nationmultimedia.com/news/national/aec/30254712>
- Prasansuk, N. (1996). *Opinions of patients on using herbal medicine received from Kutchum hospital, Yasothon province*. (Master thesis), Chiang Mai University, Thailand.
- Putipun, P., Nongnuj, S., & Panjachat, R. (2012). A survey of complementary and alternative medicine use in cancer patients treated with radiotherapy in Thailand. *Evidence-Based Complementary and Alternative Medicine*, 1(1).

- Putiyanan, S., & Winijkul, D. (2008). Screening for undeclared synthetic drugs in Thai traditional medicines for life style. *KMITL Science Journal*, 8(2), 66.
- Qi, Z. (2000). *Traditional medicine: Definitions*. Retrieved from <http://www.who.int/medicines/areas/traditional/definitions/en/>
- Raina, S. (2013). Assessment of knowledge, attitude, and practice in health care delivery. *North American Journal of Medical Sciences*, 5(3), 249-250. doi: 10.4103/1947-2714.109226
- Rattanapikul, P., & Fusiri, P. (2012). Motivation in choosing traditional medicines of consumers in Bangkok. *Thai.ejournal*, 2(2).
- Rav-Marathe, K., Wan, T.H., & Marathe, S. (2016). A systematic review on the KAP-O framework for diabetes education and research. *KEI Journals*, 3(9).
- Rice, P. (1989). Thai conceptions of illness. *Research in Science Education*, 19.
- Rickwood, S., Kleinrock, M., Nunez-Gaviria, M., & Sakhrani, S. (2013). The global use of medicines: Outlook through 2017. United States: IMS Institute for Healthcare Informatics.
- Riley, J. N., & S, Sermsri. (1974). *The variegated Thai medical system as a context for birth control services*. Thailand: Institute for Population and Social Research, Mahidol University.
- Rivera, J., Loya, A., & Ceballos, R. (2013). Use of herbal medicines and implications for conventional drug therapy medical sciences. *Alternative & Integrative Medicine*, 2(6). doi: 10.4172/2327-5162.1000130
- Robinson, L. (2009). *A summary of diffusion of innovations*. Retrieved from https://http://www.enablingchange.com.au/Summary_Diffusion_Theory.pdf
- Roekruangrit, N., Sumpaonthong, K., & Itharat A. (2010). *Factors influencing on use of herbal medicinal products in U-Thong hospital, Suphanburi province*. (Master thesis), Thammasat University, Thailand.
- Rogers, E. (1983). *Diffusion of innovation* (3 ed.). United state: The Free Press : A Division of Macmillan Publishing Co., Inc.
- Ruenkon, N., Likitkeithajorn, P., & Siththemthong, S. (2003). *The study on herbs use in Ma-Kham-Sung subdistrict of Mueang district, Phitsanulok province*. Thailand: Misnistry of Public Health of Thailand. Public Health Service.
- Saengpassa, C., & Sarnsamak, P. (2013). *Thai govt to rein in healthcare budget*. Retrieved from <http://www.asianewsnet.net/Thai-govt-to-rein-in-healthcare-budget--40873.html>
- Sahin, I. (2006). Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology*, 5(2).

- Satyapan, N., Patarakitvanit, S., Temboonkiet, S., Vudhironarit, T., & Tankanitlert, J. . (2010). Herbal medicine: affecting factors and prevalence of user among Thai population in Bangkok. *Journal of the Medical Association of Thailand*, 93(Suppl 6).
- Schreiber, L. (2005). The importance of precision in language: Communication research and (so-called) alternative medicine. *Health Communication*, 17(2), 173-190. doi: 10.1207/s15327027hc1702_4
- Sermisri, S. (1989). Utilization of traditional and modern health care services in Thailand. In S. Quah (Ed.), *The triumph of practicality: Tradition and modernity in health care utilization in selected asian countries*. Singapore: Institute of Southeast Asian Studies.
- Sermisri, S. (2002). *Changes in health care utilization in Thailand*. *OMJ*, 1(2), 167-176.
- Shetty, P. (2010). *Integrating modern and traditional medicine: Facts and figures*. Retrieved from <http://www.scidev.net/global/disease/feature/integrating-modern-and-traditional-medicine-facts-and-figures.html>
- Simatupang, A., Djojoputro, M., & Nugroho, A. W. (2012). Perception and use of herbal medicine by medical doctors. *Medical Journal of the Christian University of Indonesia*, XXVIII(3), 113-119.
- Sirisupluxana, P., Sripichyakan, K., Wonghongkul, T., Sethabouppha, H., & Pierce, F. P. (2009). The meaning of complementary therapy from the perspective of Thai women with breast cancer. *Nursing and Health Sciences*, 11(1). doi: 10.1111/j.1442-2018.2009.00432.x
- Snape, D., & Spencer, L. (2003). The foundations of qualitative research. In J. Ritchie, & Lewis, J. (Ed.), *Qualitative Research Practice: A guide for social science students and researchers* (1 ed.): SAGE Publications.
- Sompopcharoen, M., & Sresumatchai, V. (2015). *Systematic review: Marketing communication of Thai herbal products to enhance potential in becoming global products*. Paper presented at The 1st International Conference on Innovative Communication and Sustainable Development in ASEAN, Bangkok, Thailand.
- Stewart, W. D., Shamdasani, N. P., & Rook, W. D. (2007). Conducting the focus group. In *Focus groups*. United Kingdom: SAGE Research Methods. Retrieved from http://www.uk.sagepub.com/gray3e/study/chapter18/Book/chapters/Conducting_the_Group.pdf doi:10.4135/9781412991841
- Streubert, H., & Carpenter, D. (2011). *Qualitative research in nursing: advancing the humanistic imperative* (5 ed.): Lippincott Williams & Wilkins Company.
- Sukhabot, S. (2013). Market segmentation of Thai herbal products : The southern Thailand market. *SIU journal of Management*, 3(1), 61-72.
- Suleiman, A. K. (2014). Attitudes and beliefs of consumers of herbal medicines in Riyadh, Saudi Arabia. *Journal of Community Medicine & Health Education*, 4(2). doi: 10.4172/2161-0711.1000269

- Sumngern, C. (2011). *Study of factors influencing the Thai elderly on herbal medicine consumption*. (Doctoral thesis), Universidade do Porto, Portugal.
- Sumngern, C., Azeredo, Z., Subgranon, R., & Matos E, Kijjoa A. (2011). The perception of the benefits of herbal medicine consumption among the Thai elderly. *The Journal of Nutrition, Health & Aging, 15(1)*,59-63.
- Suntonvipart, P., Chantachon, S., & Koseyayothin, M. (2014). Medicinal herbs: Traditional knowledge used for constipation therapy in metropolitan Bangkok. *Indian Journal of Traditional Knowledge, 13(3)*, 466-472.
- Sutheepornviroj, S. (2010). *Chiang Mai University open herbal shop to the future AEC market*. Retrieved from <http://www.pharmacy.cmu.ac.th/web2553/n92.php>
- Suzuki, N. (2004). Complementary and Alternative Medicine: a Japanese perspective. *Evidence Based Complementary Alternative Medicine, 1(2)*. doi: 10.1093/ecam/neh029
- Swan, P., & Raphael, B. (1995). *Ways forward: National aboriginal and torres strait islander mental health policy national consultancy* (Vol. 1). Australia: The Australian Government Publishing Service.
- Takalani, M. (2015). A review and analysis of the role of integrated marketing communication message typology in the development of communication strategies. *Academic Journal, 7(8)*. doi: 10.5897/AJMM2015.0475
- Tamir, D., Weinstein, R., Dayan, I., Haviv, A., & Kalusky DN. (2001). Health knowledge, attitudes, and practice (KAP)--a basis for health promotion policy in Israel. *Public Health Reviews, 29(2-4)*, 145-151.
- Tanaka, H. T. (2009). *History of Kampo*. Retrieved from <http://www.kampo.ca/-ixzz3M8bHqJVX>
- Taubman, A. (2010). *Recognising traditional health systems*. Retrieved from <http://www.scidev.net/global/health/opinion/recognising-traditional-health-systems.html>
- The ASEAN Secretariat Community Relations Division (CRD) (2015). *ASEAN Economic Community (AEC) in 2015* [Brochure].
- The Government Public Relations Department : Office of The Prime Minister of Thailand. (2009). *Chao Phraya Abhaibhubejhr Hospital under the Royal Patronage of Princess Bejaratana*. Retrieved from <http://archive.is/VHOji> - selection-129.0-129.83
- The Government Public Relations Department : Office of The Prime Minister of Thailand. (2015). *Promoting Thai Herbal Medicine and Health Behavior Change Program*. Retrieved from http://thailand.prd.go.th/ewt_news.php?nid=2141&filename=index

- The Government Public Relations Department : Office of The Prime Minister of Thailand. (2016). *Use of Thai Herbs and Traditional Medicine in Healthcare*. Retrieved from http://thailand.prd.go.th/1700/ewt/thailand/ewt_news.php?nid=3173
- The National Statistical office of Thailand. (2001). The 2001 survey on health and welfare. Thailand: The National Statistical Office of Thailand.
- The Senate Kingdom of Thailand. (2011). *Annual report of the problem of Thai herbs*. Thailand: The Senate Kingdom of Thailand.
- Thomas, K. (2016). *The price of health: the cost of developing new medicines*. Retrieved from <https://http://www.theguardian.com/healthcare-network/2016/mar/30/new-drugs-development-costs-pharma>
- Thomas, P. Y. (2010). *Towards developing a web-based blended learning environment at the University of Botswana*. (Doctoral thesis), University of South Africa.
- Thompson, C., & Troester, M. (2002). Consumer value systems in the age of postmodern fragmentation: The case of the natural health microculture. *Journal of Consumer Research*, 28(4), 550-571. doi: <https://doi.org/10.1086/338213>
- Thomson, P., Jones, J., Browne, M., & Leslie, S. (2014). Why people seek complementary and alternative medicine before conventional medical treatment: a population based study. *Complementary Therapies in Clinical Practice*, 20(4), 339-346. doi: 10.1016/j.ctcp.2014.07.008.
- Thongruang, C. (2008). A study of consumer purchasing behaviour for herbal medicine in drugstore in Bangkok. *Naresuan University Journal*, 16(3), 198.
- Thongruang, C. (2014). *The barriers to the adoption of Thai traditional medicine services in Thai community hospitals: A case study of community hospitals in Phitsanulok province*. (Doctoral thesis), University of Wollongong, Australia.
- Thungkhampien, W. (2012). *Statistic of the use of Thai traditional medicine Thailand: Abhaiphubhat organization*.
- Tien-ngarm, T., Boonkong, P, Sornjoy, S, Fugkam, S, Trimongkoltip, S, Suchaitanawanich, S, Akratamamkul, B, Virojanan, M, Tubtong, A & Intusai, P. (2010). *The study on the situation of the existing researches on Thai traditional, indigenous, alternative and herbal medicines in the past ten years in Thailand*. Thailand: Thai Health Institute in Health Systems Research Institute.
- Tilburt, C. J., & Kaptchuk, J. T. (2008). *Herbal medicine research and global health: an ethical analysis*. Retrieved from <http://www.who.int/bulletin/volumes/86/8/07-042820/en/>
- Tomar, B. S. (2016). *Integration of the traditional medicine of the individual country to modern medicine is the better way of medical health care*. Paper presented at The 5th Global Congress for consensus in Pediatric & Child Health, China.

- Torri, M. C. (2012). Intercultural health practices: towards an equal recognition between indigenous medicine and biomedicine? A case study from Chile. *Journal of Health Philosophy and Policy*, 20(1), 31-49. doi: 10.1007/s10728-011-0170-3.
- Traditional medicine. (2011). [Report]. *Earth journal network*(June).
- Tu, H. T., & Hargraves, J. L. (2004). High cost of medical care prompts consumers to seek alternatives, *The Center for Studying Health System Change (HSC)*. Retrieved from <http://www.hschange.org/CONTENT/722/>
- U.S. department of health and human services (2005). *Theory at a glance: A guide for health promotion practice* (2nd ed.). United States: National Institutes of Health.
- Udonthani Provincial Health Office. (n.d). *Data of health service in Udonthani*. Retrieved from <http://www.udo.moph.go.th/wasabi2/Home.php>. Thailand.
- Ullman, D. (2011). *Homeopathic medicine: Europe's #1 alternative for doctors*. Retrieved from http://www.huffingtonpost.com/dana-ullman/homeopathic-medicine-euro_b_402490.html
- UNESCO. (2013). *Report of the IBC on traditional medicine systems and their ethical implicaitons*. Paris, France: UNESCO.
- United States Agency for International Development (2008). *Knowledge, attitudes, and practices study livelihood and income from the environment program dead pollution clean-up in Qalyoubia*. United States.
- Usifoh, S., & Udezi, A. (2013). Social and economic factors influencing the patronage and use of complementary and alternative medicine in Enugu. *Journal of pharmacy and bioresources*, 1(1), 17-24. doi: 10.4314/jpb.v10i1.3
- Vadhnapiyyakul, A. (2011). *The status and development of traditional medicine: The influence of state and medical profession under capitalism* (Doctoral thesis), Mahidol University, Thailand.
- Vadhnapiyyakul, A., & Suttipanta, N. (2014). *The promotion of Thai traditional medicine policy in government hospital: Myth or reality*. *Isan Journal of Pharmaceutical Sciences*, 9 (Supplement).
- Vandamme, E. (2009). *Concepts and challenges in the use of knowledge-attitude-practice surveys: Literature review*. Belgium: Department of Animal Health, Institute of Tropical Medicine, Antwerp, Belgium.
- Vanson, S. (2014). *What on earth are Ontology and Epistemology?* Retrieved from <https://theperformancesolution.com/earth-ontology-epistemology/>
- Verle, L. (2008). *Interaction between artists in collaborative art and new media*. (Doctoral thesis), Goethe University Frankfurt am Main, Germany.

- Wachtel-Galor, S., & Benzie, F. I. (2011). Herbal medicine. In *Herbal medicine: Biomolecular and clinical aspects* (2 ed.). United States: National Center for Biotechnology Information, U.S. National Library of Medicine.
- Waldram, B. J. (2000). The efficacy of traditional medicine: Current theoretical and methodological issues. *Medical Anthropology Quarterly* 4, 603-625.
- Wan, T. H. (2014). A transdisciplinary approach to health policy research and evaluation. *International Journal of Public Policy.*, 10(4-5), 161-177. doi: 10.1504/IJPP.2014.063094
- Wan, T. H., Terry, A., McKee, B., & Kattan, W. (2017). KMAP-O framework for care management research of patients with type 2 diabetes. *World journal of diabetes*, 8(4), 165-171. doi: 10.4239/wjd.v8.i4.165
- Wang, J. (2004). Culture and campaign communication: Toward a normative theory. *Intercultural Communication Studies XIII: 3 2004*.
- Wassie, S. M., Aragie, L. L.,Taye, B. W. & Mekonnen, L. B. (2015). Knowledge, Attitude, and Utilization of traditional medicine among the communities of Merawi town, Northwest Ethiopia: A cross-sectional study. *Evidence-Based Complementary and Alternative Medicine*, 2015(Article ID 138073), 7. doi: <http://dx.doi.org/10.1155/2015/138073>
- Watanabe, K., Matsuura, K., Gao, P., Hottenbacher, L., Tokunaga, H., Nishimura, K.,...Witt, M., C. (2011). Traditional Japanese kampo medicine: Clinical research between modernity and traditional medicine—the state of research and methodological suggestions for the future. *Evidence Based Complementary and Alternative Medicine*. doi: 10.1093/ecam/nej067
- Wongyai, S. (2004). *Traditional Thai medicine to the fore*. Retrieved from [http://www.thaihealingalliance.com/membersonly/Helpful_Information/Rangsit University Medicine Program.pdf](http://www.thaihealingalliance.com/membersonly/Helpful_Information/Rangsit_University_Medicine_Program.pdf)
- World Health Organization (2000). Traditional and modern medicine, harmonizing the two approaches. Manila, Philippines: World Health Organization, Regional Office for the Western Pacific.
- World Health Organization (2001). *Traditional medicine in Asia* (Vol. 39). Regional Office for South-East Asia. New Delhi.
- World Health Organization (2002). WHO traditional medicine strategy 2002–2005. Geneva, Switzerland.
- World Health Organization (2004a). Review of traditional medicine in the South- East Asia region. Report of the regional working group meeting, New Delhi, India, 16-17 August 2004.
- World Health Organization (2004b). WHO guidelines on developing consumer information on proper use of traditional, complementary and alternative medicine. Italy.

- World Health Organization (2004c). WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems (pp. 18). Geneva, Switzerland.
- World Health Organization (2005a). Development of Traditional Medicine in the South-East Asia Region. *Report of a Regional Consultative Meeting Pyongyang, DPR Korea, 22-24 June 2005*. Korea.
- World Health Organization (2005b). National policy on traditional medicine and regulation of herbal medicines: Report of a WHO global survey. Geneva.
- World Health Organization (2009). Traditional medicine in Kingdom of Thailand: The integration of Thai traditional medicine in the national health care system of Thailand (pp. 97-120). Thailand.
- World Health Organization (2010). Barriers to innovation in the field of medical devices: World Health Organization.
- World Health Organization (2012). Health education: theoretical concepts, effective strategies and core competencies: WHO Regional Office for the Eastern Mediterranean, Cairo.
- World Health Organization (2013). WHO traditional medicine strategy 2014-2023. Hong Kong, China.
- Yothavijit, S., Chinvanitcharoen, S., Meksuwan, W., & Ginwong, A. (2013). Development of Thai traditional Services to meet the needs of the patients in public health service at Udonthani province. *Department of Health Service Support Journal*, 9(1).
- Zavestoski, S. (2002). Guest editorial: Anticonsumption attitudes. *Psychology and Marketing*, 19(2), 121-126. doi: <https://doi.org/10.1002/mar.10005>
- Zhang, A. L., Xue, C. C., & Fong, H. S. (2011). Integration of herbal medicine into evidence-based clinical In 2 (Ed.), *Herbal Medicine: Biomolecular and Clinical Aspects*. United States: CRC Press.
- Zion Market Research. (2017). *Global dietary supplements market is expected to reach around USD 220.3 Billion in 2022*. U. S. Retrieved from <https://http://www.zionmarketresearch.com/news/dietary-supplements-market>
- Zollman, C., Vickers, A., & Richardson, J. (2008). *ABC of complementary medicine* (2nd ed.). United Kingdom: Wiley- Blackwell.

Appendix 1: Developing a Communication Framework for Promoting TTM Use in Thailand

Communication for health promotion is a planned process and its effectiveness comes when the audience has achieved, acted on, or has responded to a message (Corcoran, 2007). Accordingly, the MoPH has widely promoted “*the finished form of TTM*”; however, the consumer participants had failed to notice this new form. The study findings and literature indicate that there is the anti-consumption of TTM in Thailand.

According to Lee, Fernandez and Hyman (2009), many social marketing campaigns are based on encouraging anti-consumption of undesirable products or activities. Consequently, social marketing approaches can contribute meaningfully to anti-consumption.

Morgan and Voola (2000) noted that Integrated Marketing Communications (IMC) has an important role to play in social marketing. Nowak et al. (1998) further stated that IMC’s approach has great potential in health communication efforts. Takalani, (2015, p. 1) concluded that IMC “provides an opportunity for organizations to enhance the relationship of their brands with customers and other stakeholders”.

According to the anti-consumption of TTM in Thailand, I found that the involvement of cultural participants is minimal. For the best ways to contribute predetermined communication and messages for the promotion of TTM in Thailand, I revealed that for both medicines (TTM and conventional), we should not say which one is better but we have to bring our own traditional treatment and TTM back to the current Thai way of life. By doing so we should complement each medical practice to the other.

It is found that different knowledge influences the creation of different power, and the power of TTM has been constructed from the acceptance and need for it (Aphisamacharayothin, 2014). Therefore, social marketing and IMC may help to create change in social behaviour with respect to TTM for the people of Thailand. Ultimately, these actions may lead to the creation of TTM’s place and power in Thailand.

In order to encourage usage of the finished form of TTM by the government, there are two areas of interest from a strategic communications approach that can lead to its adoption by

consumers. The first involves “sharing knowledge to raise TTM awareness”. The goal here is to develop a public health campaign for raising awareness so that Thai citizens adopt TTM into practices of self-treatment, by empowering them to use TTM before going to see their medical doctors. The findings suggested that the MoPH should aim as follows: 1) to create awareness of the new finished form of TTM among Thai citizens, and 2) to further raise awareness of TTM’s new finished form by changing the people’s attitudes toward using TTM and by empowering them to adopt TTM as a part of their practices.

The second level target is the key role of health and medical professionals in the adoption of TTM due to them playing the vital role in encouraging or blocking TTM’s adoption in Thai society.

The data also indicated to specifically target the finished form of TTM for promotion by the MoPH. I found that the signature TTM products that are significantly well-known by consumers are: 1) Turmeric, which is used to cure stomachaches and flatulence, and 2) Creyat, which is used to cure fevers and sore throats. Since they are both used in the traditional forms, many people already know about these two and have confidence in using them. In addition, the health professionals (including the conventional doctor informants) claimed that there is more academic research to support the properties and efficacy for these two types of TTM. Furthermore, an analysis from both the consumer and health professional participants found that they had accepted that the efficacy of these two TTM were equal and/or better than conventional medicines.

Thus, it is suggested that the MoPH should promote significant TTM, such as Turmeric and Creyat, to create an awareness of TTM’s finished form, given that both of these are well-known to Thai users and medical doctors. It may be easier to engage consumers with these two than with the other finished TTM products. Once the Thai people have become engaged in using Turmeric & Creyat for their primary illnesses, the MoPH can later provide further promotion of the other finished forms of TTM. Thus, the MoPH should accordingly promote these two signature “Leader Products”.

The findings also indicate the need to shift the knowledge, understanding and beliefs towards TTM from the objective of individual behaviour change to communicative empowerment. The proper knowledge of TTM means sharing and developing information through IMC messages that are consistent over time between the MoPH and the Thai people, and are

configured within Thai culture, structure and the Thai environment, so that consumer awareness may be improved in order to cultivate an understanding of and attitudes towards TTM, through a process of psychosocial interaction (Jehso 2015).

The KAP model is thought of as a “learning hierarchy” (Haloi, Ingle & Kaur 2014, p.100), and researchers assume that its three key pillars (knowledge, attitude and practices) are related (Rav-Marathe, Wan & Marathe, 2016, p.4). The hierarchy of communication effects by Lavidge and Steiner (1961) is a communication model that assumes that the effective communication is followed by each step: 1) Awareness, 2) Knowledge, 3) Liking, 4) Preference, 5) Conviction, and 6) Purchase.

Social marketers use a wide range of health communication strategies based on mass media, interpersonal, and other modes of communication, including marketing methods such as message placement (for example, in clinics), promotion, dissemination and community level outreach (Douglas, 2006, p.1).

Therefore, I argue the communication for the promotion of TTM integrate both the KAP framework and the hierarchy of communication effects into three steps, and the MoPH should implement the communication program by using various activities as following.

1. Knowledge stage: Increasing awareness and knowledge of TTM

Based on my findings, firstly, actions should be taken to raise awareness about the existence of the new finished form. The MoPH should catalogue TTM knowledge and share this with the correct medical information of the finished form of TTM (Turmeric and Creyat) in order to increase their ability to minimize the risks, and to maximize the benefits (World Health Organization, 2004b).

1.1 Increasing awareness by creating campaigns for planting herbs

Yothavijit et al. (2013) noted that to integrate TTM into the public health system there should be a “community development strategy”. An analysis of findings from both types of participants, as a result, suggested that the government should implement a campaign to encourage local people/villagers to plant herbs throughout the country, because Thailand lacks the raw materials to produce to TTM products and many herbs must be imported from other countries (Kongrerk, 2013; Sukhabot, 2013). By reducing the cost of raw materials, costs of TTM products could, thereby, be reduced for the Thai people and for public hospitals.

This could ensure that the cost could be handled in both the public healthcare system and in the marketplace, and the consumer's wants and needs could be fulfilled and the costs could satisfy their needs in terms of the principles of IMC (Krishnan, 2012). This suggestion is similar to Coninck (2016) in Uganda, where aspects of environmental sustainability also need to be incorporated into the promotion of commercial herbal medicines. Furthermore, there is a need for providing encouragement to citizens to establish herbal gardens, especially gardens growing rare medicinal plant species.

Based on the findings from my study, by coordinating with the Sub-district Administrative Organization, the MoPH should implement a project involving the planting of Turmeric & Creyat, to sell to hospitals because the organization has easy access to villagers. In this way, the local people could receive greater benefits because they could earn extra income. Meanwhile, the government should provide correct and clear information about Turmeric & Creyat to help the people better understand how to correctly plant and use them, which will lead to a greater awareness of herbs and TTM. It is suggested that this project be implemented in tandem with publicizing the finished forms of TTM, as previously mentioned. Consequently, the villagers will try to learn more about Turmeric & Creyat because it can be beneficial for their incomes and for their health. Ultimately, this may lead to an increase in their use.

Furthermore, the campaign for planting Turmeric & Creyat could create new jobs for local people and good logistics for Thailand, because as the economic importance of traditional knowledge, medicinal plant-based products and their services grows, it will provide employment opportunities to people from various sectors (Kongrer, 2013). The best example of such a hospital is Chao-Phraya Abhaibhubejhr Regional Hospital in Prachinburi. In accordance with specifications set by the hospital, the raw materials for production are grown and processed there by people in nearby communities via contract farming. Hence, the production of herbal medicines not only generates income for the hospitals, but in terms of healthcare for the community, it also helps to create jobs, generate incomes, and fosters self-reliance. This process is at the forefront of community participation and can assist in creating social mobilization regarding the use of TTM and herbal products for health promotion. Consequently, it helps to accelerate the integration of TTM into the healthcare system (Chokevivat & Chuthaputti, 2005).

1.2 Providing Training by Using Two Steps Flow Communication

The WHO's Traditional Medicine Strategy 2014–2023 noted that the member states should establish formal channels of communication to facilitate education, including continuing education and accreditation (World Health Organization, 2013). Chokevivat and Chuthaputti (2005) noted that training for the public will help to build confidence in and a demand for TTM among the public. Yothavijit et al. (2013) further indicated that the strategic development for TTM services is “*Community Participation for Health Promotion and Health Protection Services Strategy*”, with help to adopt TTM practices for Thai people in the community; thus, providing “*Awareness knowledge*” about the new finished form of TTM available in the public health system as well as in the marketplace. It should encourage “*the knowhow knowledge*” to an individual in order to seek more knowledge of TTM that “How?” and “Why?” TTM work, that can encourage the individual to learn more and eventually adopt TTM (Sahin, 2006).

Based on an analysis of findings from both methods, providing training should help people trust in and see the benefits of Turmeric & Creyat, as a primary treatment to be used when they are sick. Knowledge is needed in the following areas: 1) who will benefit from the Turmeric and Creyat treatment; 2) which diseases Turmeric & Creyat is intended to treat, and 3) how the treatment by Turmeric & Creyat is to be administered. In addition, it would be helpful to get an idea as to whether the patients have improved under the treatment (Watanabe et al, 2011). Therefore, the government should disseminate the knowledge of Turmeric & Creyat to determine the proper ways to use them when citizens have minor illnesses.

Based on the investigative findings from both methods, it was revealed that the government should establish a project, such as “*Training the Trainers*” to train Thai citizens. The interpersonal network links a system's members, determining who interacts with whom and under what circumstances (Rogers, 1983). Thus, interpersonal channels are more powerful in creating or changing strong attitudes held by an individual (Sahin, 2006). The results showed that training should be done at two levels: 1) adults at community level, and 2) students at the High School & University levels.

“*For training at the community level*”, it is suggested that the MoPH should coordinate with the Public Health Volunteers (PHV) to provide training in TTM at the family level within each community. Given that the PHV in Thailand have the responsibility to care for ten

families within their areas, these efforts would provide each family with the knowledge to care for themselves and their family members by using Turmeric and Creyat. Thus, the training of the villager users is well within the scope of the PHV's duties and could also include follow-up sessions in which feedback could be received. Because the PHV's are familiar with the villagers, they can visit them in their homes, whereas the medical doctors cannot. It was suggested that before initiating training sessions with the families under their responsibility, the PHV's must first be trained in the knowledge of Turmeric & Creyat by the MoPH officers. In addition, it was noted that when the PHV's pay visits to each family, they should carry documentation to make them more trustworthy.

Based on the participants' viewpoints on approaching the topics during training and visiting sessions, the following information should be given: 1) the new form of the two herbs; 2) information about the properties of Turmeric & Creyat, and how they can act as a replacement for modern medicines, and 3) their advantages.

"With respect to educational training", the results noted that the MoPH and the Ministry of Education should bring herbs and herbal information to educational institutions. In addition, teachers should be trained to give TTM training sessions to students in educational institutions so that they can be taught about herbs/TTM in high schools and universities. In particular, if the MoPH and Ministry of Education were able to add "Herbs" as a subject and place it into the 12-year curriculum, young students could be easily informed about herbs and TTM.

Specific to *"Training Teenage Students in High Schools & Universities"*, based on the results, it is suggested that the teachers should train the teenage students regarding the usefulness of Turmeric & Creyat, and how to plant them. Afterwards, the teachers should assign the students to write reports about Turmeric & Creyat. It is significant to note that the teenage students always search for information on the Internet to do their reports on TTM. Thus, the teachers could advise the students to search for information on the MoPH website, where the content is already provided. Doing this could introduce them to Turmeric & Creyat and the fact that they can serve as replacements for conventional medicines. The findings revealed that after doing their own reports, the teenager students admitted that they had become interested in herbs and had applied their TTM knowledge in their daily lives. Furthermore, they will be able to share their knowledge with their family members.

2. Attitude stage: Increasing liking and preference of TTM

The sequence for the finished form of TTM is A-P-K. Thus, the MoPH should provide the knowledge and information that can motivate their positive attitude towards TTM in order to encourage the practice of the consumers. Based on my findings, it can be noted that the motivations that could be utilized to encourage “*the use of the finished form of TTM*” are: 1) convenience of use, 2) quality and efficacy, and 3) fewer side-effects. In particular, emphasis should be placed upon the convenience of use, which is approximately the same as conventional medicines, as well as emphasizing its convenience as compared to the traditional form. By doing so, consumer motivation could be increased within the Thai population so that citizens can develop positive attitudes towards the finished form.

2.1 Gaining experience about TTM usage to create word-of-mouth communication

The communication process to promote TTM products of Chao-Phraya Abhaibhubejhr Regional Hospital that significant to make their products had been well-known to the public, is the human medium, which is considered to be the best channel (Bhokanandh, 2001; Maneerat, 2009), by using the strategy of “word-of-mouth” that became the most effective communication tool to reach most samples (Bhokanandh, 2001).

Similarly, based on the findings from both types of participants, it is significantly noted that the best way to promote TTM usage is to create “*word-of-mouth*” by sharing personal experiences, because people receiving services from traditional remedies have different background knowledge, which results in different attitudes and behaviours. Nevertheless, they are all under the same process of acceptance, which pays particular attention to the efficiency of the treatment (Watanabe et al, 2011). Therefore, in order to create the acceptance of and need for TTM, if Turmeric & Creyat were to be promoted by the MoPH through mass media and hospitals were coordinated with in order to prescribe both of these TTM, then users, who have had good results, would naturally want to recommend them to their families and friends. This cycle creates word-of-mouth communication through people who receive the treatment and realize its effectiveness (Watanabe et al, 2011), because they want to share the significance of their experience with TTM with their associates (Rattanapikul & Fusiri, 2012). Meanwhile, TTM will have a more personal channel of recommendation than just medical doctors, because the participants would be able to change their roles from “*users*” to “*advisors*”. If the consumers had positive experiences, it would help them to develop “*new*

attitudes and new behaviours” and the experiences that arise could be applied and shared. As a result, permanent behaviours could be created that would empower consumers to continue using TTM and to later on become “permanent users”. Finally, TTM usage would be significantly increased.

2.2 Increasing the attitude of TTM products by developing product quality, packaging and design

Based on the discussions with both sets of participants, the findings revealed that “Developing the quality of TTM products” is important to further promote the use of TTM and to gain the trust of the Thai people, in particular the well-educated people. A majority of the health professional interviewees claimed that the manufacturers of the finished forms must be forced to have standards and that the government must raise the level of trust that the people have regarding the product safety of TTM.

The WHO noted that the development of quality and cost-effective TM is required to support the its use in each country (World Health Organization, 2013). Yothavijit et al. (2013) noted that one of the strategies for the development of TTM services in the public health system in Udonthani Province (the same province in which the consumer focus groups were conducted) was a “quality control strategy”. However, I noted that the quality control strategy should not only be implemented in the public health system, but should also be implemented in the marketplace.

Aside from improving the quality of the TTM products, the findings have indicated the significance of “*changing the packaging to suit each target group*”. For “*modern people*”, it should have good packaging to attract them, to gain their acceptance, and to increase the frequency of TTM usage for each target group. Often, production costs of TTM are increased due to the investments made in designing the new packaging, but the packaging should not affect those groups who cannot afford to pay higher prices.

In order to adopt the new finished form of TTM in Thailand’s public health system and marketplace, the new form of TTM should show “*relative advantage*” for the Thai consumers in order to perceive them as better than those it supersedes (Rogers, 2003) and including the cost of implementing them (Mulvey, et al., 2002). As a result, the MoPH must force Turmeric

& Creyat to have quality standards, such as GMP. Additionally, this should include helping vendors to improve product design to gain the trust and confidence of modern people regarding both herbs. If the government and the MoPH could help the vendors, the cost of improving the product design may not considerably increase the overall cost, which could mean that some low income groups would still be able to afford to buy both of them.

3. Practice stage: Convincing the medical doctors in order to adopt TTM

Medical doctors are the most powerful people in term of medicines, given that people trust conventional doctors the most. It is found that usage of “*the finished form of TTM*” really depends on the medical doctors. Despite the fact that some medical doctors had a lack of knowledge and bias towards TTM, the findings from health professionals (including the conventional doctor informants) claimed that Turmeric & Creyat need more academic research to support the properties and efficacy for these two types of TTM, so the medical doctors have confidence in using them. The medical doctors should ask if the patients would like to use Turmeric to cure stomachaches and/or flatulence and Creyat to cure fevers and sore throats when they have these symptoms, because analysis from both the consumer and health professional participants found that both had accepted that the efficacy of these two finished forms of TTM were equal and/or better than conventional medicines.

Based on a review of literature, it was found that the consumers agreed that doctors should ask the patients about their opinions and needs before writing prescriptions (Prasansuk, 1996; Roekruangrit, Sumpaonthong, & Itharat, 2010). It may be easier to engage the consumers with these two types of TTM than with the other finished TTM products because they are significantly well-known by the consumer participants, since they are both used in the traditional form and the medical doctors are confident in using them too.

In summary, the solutions suggested active involvement by the government in the creation of health choices that would provide access to some basic finished TTM products. Strategies of community organizing and mobilization and public agenda need to be developed further and applied to address community-based issues (Dutta & Basu, 2007), such as knowledge inequities and a lack of accessibility to TTM, to create new spaces for TTM in Thailand. Providing appropriate information about TTM in order to re-construct the cultural and

national identity of TTM, as one of our Thai wisdom of treatment that represents Thai way of life, is significantly urgently required by both sectors.

Appendix 2: The Focus group participants' demographic Data

This section presents the participants' demographic information. In all, fifty-seven participants from eight sub-groups participated in this study. They have been summarized based on the participants' demographic details as noted in the list of participants in Chapter 4. Tables 2.1 to 2.4 show the demographic information for the participants including gender, age, educational level, and occupation.

Table 2.1: The Participants' Data based on Gender

Gender	Total (57)	Percentage (100%)
Male	17	29.82
Female	40	70.18

Of the fifty-seven participants, 17 were males (29.82%) and the remaining 40 were females (70.18%).

Table 2.2: The Participants' Data based on Age

Age	Total (57)	Mean (Years)
1. A User group: Age range of 18-26 years old	7	21.86
2. A Non-user group: Age range of 18-26 years old	8	20
3. A User group: Age range of 27-38 years old	6	30.17
4. A Non-user group: Age range of 27-38 years old	6	33.67
5. A User group: Age range of 39-50 years old	8	44.63
6. A Non-user group: Age range of 39-50 years old	8	45
7. A User group: Age range of 51-59 years old	8	54.13
8. A Non-user group: Age range of 51-59 years old	6	54.83

For the User group, seven participants were in the age range of 18-26 years with a mean of 21.86 years old, six were in the age range of 27-38 years with a mean of 30.17 years old, eight were in the age range of 39-50 years with a mean of 44.63 years old, and eight were in the age range of 51-59 years with a mean of 54.13 years old, respectively.

In the Non-user group, eight participants were in the age range of 18-26 years with a mean of 20 years old, six were in the age range of 27-38 years with a mean of 33.67 years old, eight were in the age range of 39-50 years with a mean of 45 years old, and six participants were in the age range of 51-59 years with a mean of 54.83 years old, respectively.

Table 2.3: *The Participants’ Data based on Highest Level of Education Completed*

Highest Level of Education Completed	Total (57)	Percentage (100)
Primary School	13	22.81
High School	16	28.07
Senior High School	9	15.79
Vocational College	13	22.80
Bachelor’s Degree	6	10.53

Of the participants, thirteen had completed Primary School (22.81%), sixteen had completed High School (28.07%), nine had finished Senior High School (15.79%), thirteen had completed Vocational College (22.80%), and six had received a Bachelor’s Degree (10.53%).

Table 2.4: *The Participants’ Data based on Occupation*

Occupations	Total (57)	Percentage (100%)
Farmer	19	33.33
General Contractor	15	26.32
Housewife	10	17.54
Employee in the Private Sector	5	8.78

Merchant	4	7.02
Student	3	5.26
Government Officer	1	1.75

The participants were engaged in seven different occupations. The occupations are presented in order from the greatest number of the participants having the same occupation to the fewest number of the participants having the same occupations. The data from each Nineteen were farmers (33.33) and fifteen were General Contractors (26.32), while ten were Housewives (17.54%). Five held jobs as employees in the Private Sector (8.78) and another four were Merchants ((7.02%). Of the remaining participants, three were students (5.26%) and one was a Government Officer (1.75%).

In summary, based on the participants' demographic data, twenty-nine participants were members of the Users group, and twenty-eight participants were in the Non-users group. Based on gender, the participants consisted of forty Female participants and seventeen male participants. The highest level of education attained was a Bachelor's Degree and lowest level was Primary School. According to their occupations, the top three occupations were farmers (33.33%), followed by General Contractors (26.32%), and Housewives (17.54%), respectively.

Appendix 3: The In-depth interview participants' demographic data

This section presents the informants' data consisting of their positions and roles in their organizations including the location of their organizations and the code representing each of the informants as shown in Table 3.1 below.

Table 3.1: The Participant s' Data

No.	Organization & Position	Areas of Expertise	Roles	Working Location	Code
1	A High-Level Management at the DTAM Department, The MoPH	A Medical Doctor	A Promoter	The MoPH in Bangkok	<i>A High-level official at the MoPH-1</i>
2	A High-Level Management at the DTAM Department, The MoPH	A Nurse	A Promoter	The MoPH in Bangkok	<i>A High-level official at the MoPH-2</i>
3	A Mid-Level Management at a Public Hospital in Udonthani, The MoPH	A Pharmacist	A Promoter	Udonthani in North-eastern Thailand	<i>A Mid-level official at the MoPH-3</i>
4	A Mid-Level Management at Udonthani Provincial Health Office in Udonthani, The MoPH	A Pharmacist	A Promoter	Udonthani in North-eastern Thailand	<i>A Mid-level official at the MoPH-4</i>
5	A Medical Doctor at the Public Hospital in Udonthani, The MoPH	A Medical Doctor	A Healer	Udonthani in North-eastern Thailand	<i>A Government Medical Doctor</i>

6	A TTM Doctor at the Public Hospital in Chiang Mai, The MoPH	A Thai Traditional Doctor	A Healer	Chiang Mai in Northern Thailand	<i>A TTM Doctor for the government</i>
7	A FDA staff at The Food & Drug Administration (FDA), The MoPH	A Pharmacist	A Controller	The MoPH in Bangkok	<i>A Staff member of The MoPH-FDA</i>
8	A Vendor at the Public Hospital in Prachinburi, The MoPH	A Pharmacist	A Vendor	Prachinburi in Eastern Thailand	<i>A Staff member of The MoPH-Vendor</i>
9	A Khon Kaen University Lecturer in the Faculty of Medicine	A Medical Doctor	A Researcher	Khon Kaen, in Northeastern Thailand	<i>An Academician for the government -1</i>
10	A Chiang Mai University Lecturer in the Faculty of Pharmaceutical Sciences	A Pharmacist	A Researcher	Chiang Mai, in Northern Thailand	<i>An Academician for the government -2</i>
11	A Chiang Mai University Lecturer in the Faculty of Pharmaceutical Sciences	A Pharmacist	A Researcher	Chiang Mai, in Northern Thailand	<i>An Academician for the government -3</i>
12	An Owner of a TTM Drugstore in the Private Sector	A Pharmacist	A Vendor	Sakonnanakorn, in Northeastern Thailand	<i>A Vendor in the Private Sector-1</i>
13	An Owner of a TTM Manufacturing Operation in the Private Sector	-	A Vendor	Bangkok	<i>A Vendor in the Private Sector-2</i>

14	A TTM Doctor in the Private Sector	Thai Traditional Doctor	A Healer	Udonthani, in Northeastern Thailand	<i>A TTM Doctor in the Private Sector</i>

In summary, the governmental informants consist of 11 informants in the roles of promoter, controller, healer, vendor, and researcher while the private informants consist of 3 informants in the roles of vendor and healer. The interviews took place at the interviewees' workplaces in 3 different parts of Thailand: Northeastern Thailand, Northern Thailand, and Eastern Thailand, including Bangkok.

Appendix 4: Participant information form



PARTICIPANT INFORMATION FORM

Project title

The role of Traditional This Medicine (TTM) in Thailand

Researcher

Miss Prarawan Senachai

PhD candidate, Faculty of Arts and Design, University of Canberra, Australia

Email:

Supervisor

Associate Professor Glen Fuller

Faculty of Arts and Design, University of Canberra, Australia

Tel.

Project aims

- 1) Explain the roles and meanings of Traditional Thai Medicine (TTM) for Thai people in their everyday lives.
- 2) Develop communication strategies to promote greater TTM usage in Thailand.

Benefit of the project

Findings from this research will assist practitioners and policy-makers in determining factors that influence the understanding of TTM within Thailand.

General outline

The 10th National Health Development Plan (2007-2011) of Thailand's Ministry of Public Health set a target 5% TTM in public hospitals by 2011. This target has yet to be reached; therefore, this research seeks to understand under-use of TTM, and to develop communication strategies to improve uptake.

Participant involvement

People who agree to participate in this study will be asked to take part in

- 1) A focus group, or
- 2) An in-depth interview

Focus groups will last 90 minutes and will be recorded (video and audio) with the permission of participants. Notes will be taken throughout.

Interviews will last 120 minutes and will be recorded (audio) with the permission of participants. Notes will be taken throughout. Interviews will be conducted at the participant's place of work.

Participation in focus group and interviews is completely voluntary and participants may, without any penalty, decline to take part or withdraw at any time without providing an explanation, or refuse to answer a question.

The only potential risks to participation relate to privacy and confidentiality. Please be assured that all the data collected from clients will be stored securely and only accessed by the researcher. Great care will be taken to ensure that any reports of the data do not identify any individual or their circumstances.

Confidentiality

Only the researcher and supervisory panel will have access to the individual information provided by clients. Privacy and confidentiality will be assured at all times. The research outcomes will be provided in a thesis submitted to the University of Canberra and may also be presented at conferences and written up for publication. However, in all these reports, the privacy and confidentiality of individuals will be protected.

Anonymity

It is not possible for focus group or interview participants to be anonymous. However, please be assured that all reports based on this research will contain no information that can identify any individual and all information will be kept in the strictest confidence.

Data storage

Hard copies of interview and focus group transcripts, video and audio recordings will be stored at the University of Canberra and accessible only by the researcher and supervisors. Names and other identifying information will be removed from these data and replaced with codes. Computer files will be password-protected and stored on a secure server at the University of Canberra for the required five-year period after which it will be destroyed according to university protocols.

Ethics Committee clearance

The project has been approved by the Human Research Ethics Committee of the University of Canberra.

Queries and concerns

Queries or concerns regarding the research can be directed to the researcher and/or supervisor. Their contact details are at the top of this form. You can also contact the University of Canberra's Human Research Ethics Officer via phone +61 2 6201 5220 or email humanethicscommittee@canberra.edu.au

Further guidance is provided in the online Participants' Guide located at <http://www.canberra.edu.au/ucresearch/attachments/pdf/a-m/Agreeing-to-participate-in-research.pdf>

Appendix 5: Invitation to participate in research focus group



INVITATION TO PARTICIPATE IN RESEARCH FOCUS GROUP

PhD project title

The role of Traditional Thai Medicine (TTM) in Thailand

Researcher

Miss Prarawan Senachai, PhD candidate, Faculty of Arts and Design,
University of Canberra, Australia

[Date]

[Participant Name] [Address]

Dear [Participant Name],

I invite you to participate in a focus group panel as part of this research project. I would like to ask you about your experiences and insights into the roles and meanings of TTM for Thai people in their everyday lives. This interview is part of my current PhD study at the University of Canberra. During a focus group, a panel of between six and eight people will discuss some broad questions about TTM which I shall ask. There are no right or wrong answers to these questions, instead I am trying to find our /your thoughts about TTM.

The focus group will last 90 minutes and will be audio recorded with your permission. Notes will be taken throughout. The focus groups will be conducted at Huay Koeng Hospital in Udonthani, Thailand on 22-23 June 2015 and 29-30 June 2015 between 10:00-12:00 and 13:00-15:00.

I sincerely hope that you will consider participating in this important effort to gain the insight of into the role of TTM for Thai people in Thailand. I shall contact you in the near future to confirm your interest in being interviewed.

Please feel free to contact me as specified below with any questions. An information sheet on the project is attached for your reference.

Sincerely,

Prarawan Senachai

Email:
Mobile:

Approach script for focus group recruitment.

Hello, my name is Prarawan Senachai. I am a lecturer at Khon Kaen University and I am conducting PhD research at the University of Canberra, Australia. For my PhD I am studying how people do or don't use Traditional Thai Medicine (TTM). By TTM, I mean traditional medicine with Food and Drug Administration approval that is prescribed by a licensed medical practitioner. May I ask if you do or don't use this kind of TTM?

I would like to invite you to participate in a focus group about TTM. During a focus group, a panel of between 6-8 people will discuss some broad questions about TTM which I shall ask. There are no right or wrong answers to these questions, instead I am trying to find out your thought about TTM.

The focus group will take place between 10:00-12:00 and 13:00-15:00 at Huay Koeng Hospital in Udonthani. If you'd like to take part in a focus group, please could you let me have your contact details and I shall confirm a time with you. More background to the research project including my contact details are provided on this information sheet, which you can keep. I'm happy to answer any further questions you may have at any time before or after the focus group.

Appendix 6: Invitation to participate in in-depth interview



INVITATION TO PARTICIPATE IN RESEARCH INTERVIEW

PhD project title

The role of Traditional Thai Medicine (TTM) in Thailand

Researcher

Miss Prarawan Senachai

PhD candidate, Faculty of Arts and Design, University of Canberra, Australia

Email:

[Date]

[Interviewee Name] [Address]

Dear [Interviewee Name],

I invite you to participate in a research interview as part of this research project. I would like to ask you about your experiences and insights into the roles and meanings of TTM for Thai people in their everyday lives. This interview is part of my current PhD study at the University of Canberra.

Interviews will last 120 minutes and will be audio-recorded with your permission. Notes will be taken throughout. The majority of interviews will be conducted at your place of employment at your convenient time.

All interviewees retain the right to: review and edit their interview transcript prior to transcript finalisation; place restrictions on the availability of the interview; or specify conditions under which it may be accessed by researcher. Interviewees can be provided with a copy of the final transcript, if desired.

I sincerely hope that you will consider participating in this important effort to gain the insight of the role of TTM for Thai people in Thailand. I shall contact you in the near future to confirm your interest in being interviewed.

Please feel free to contact me as specified below with any questions. An information sheet on the project is attached for your reference.

Sincerely,

Prarawan Senachai

Email:
Mobile:

Approach script for in-depth interview recruitment (follow up)

Hello, my name is Prarawan Senachai. I am a lecturer at Khon Kaen University and I am conducting PhD research at the University of Canberra, Australia. For my PhD I am studying how people do or don't use Traditional Thai Medicine (TTM). By TTM, I mean traditional medicine with TTM Food and Drug Administration approval that is prescribed by a licensed medical practitioner.

I would like to invite you to participate in a research interview to share your ideas and experience about TTM. The interview would take place at your workplace and at a mutually convenient time and would last no more than 2 hours.

If you'd like to take part in the interview, please could you let me have your contact details by e-mail or fax and I shall confirm a time with you. More background to the research project including my contact details are provided on the information sheet that I shall send you. I'm happy to answer any further questions you may have at any time before or after the interview.

Appendix 7: Participant consent form



PARTICIPANT CONSENT FORM

Project title

The role of Traditional Thai Medicine (TTM) in Thailand

Consent Statement

I have read and understood the information about the research. I am not aware of any issue that would prevent my participation, and I agree to participate in this project. I have had the opportunity to ask questions about my participation in the research. All questions I have asked have been answered to my satisfaction.

Please indicate whether you agree to participate in either of the following parts of the research by checking the relevant box:

- Focus group with other members of the public.
- Interview with the researcher.

Name _____

Signature _____

Date _____

A summary of the research report can be forwarded to you when published. If you would like to receive a copy, please include your email address below.

Email _____

Appendix 8: The questions for the research interview

The Questions for the research

“The role of Traditional Thai Medicine (TTM) in Thailand”

Focus group, the research will be conducted based upon the following:

- A focus on everyday life experiences of Thai people regarding TTM.
- An evaluation of participants' understandings of TTM.
- Enquiry as an interactive process between researcher and participants.
- Primary descriptions and reliance upon people's words

The researcher will ask about TTM from their point of views to understand the consumer need and the questions base on the guidelines as follows:

- Participant knowledge/information about TTM.
- What would make them use it/not use it?
- The role of TTM for participants in their everyday lives which is concerned with their experience of TTM using and how it has affected their physical well-being.
- How to improve the use of TTM from their points of view.

Sample questions for focus group

- **Initial open-ended questions**
 1. Please tell me about TTM from your views.
 2. What, if anything, do you know about TTM?
- **Intermediate question**
 1. What do you think about modern medicine? Or What do you understand by the term “modern medicine”?
 2. What do you see or what do you do if you are ill?
 3. What relational factors influence and make you attracted to TTM? or What factors make you reject TTM?
 4. Which communication activities by the government have been most influential in TTM? (such as posters, exhibitions, etc.)
- **Ending questions**
 1. After having these experiences, what advice would you give to someone who has just discovered TTM? or Who does not know about TTM? or Who is unsure about using it?
 2. Is there anything that you might not have thought about before that occurred to you during this interview?
 3. Is there anything you would like to say?

In-depth interview, the interview is to understand the role of promoter's needs, problems, vision and mission, and in addition, in order to better grasp the problems of TTM from the points of view of government and private staff to connect all aspect areas of TTM from their point of views.

Sample questions for in-depth interview questions (Thai traditional healers, Pharmaceutical, Public health department, FDA, Academic people)

1. Do you believe that TTM is accepted by the community?
2. What are the main reasons for the acceptance or lack of the acceptance of TTM by the community?
3. What are the important areas of training TTM if we want to improve TTM uptake from your viewpoint?
4. Do you agree with government support to TTM? Why/Why not?
5. Do you want to know what these people think about TTM and how, if at all, they use it?
6. What is the messages and media that would be best to raise awareness of TTM?