KNOWLEDGE AND BELIEFS
OF HILLTRIBE WOMEN IN LAMPANG PROVINCE
ABOUT CARCINOMA OF THE CERVIX
AND CERVICAL CANCER SCREENING

DUSSANEE PAIRSUWAN

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Mrs.Dussanee Pairsuwan
Candidate

Assoc.Prof. Suwachai Intaraprasert,
M.D., Dip.Thai Board of Ob. & Gyn.
Dip.In Population Growth Studies.
Major-Advisor

Assist.Prof. Nathpong Isarangura Na Ayudhya,
M.D.,Dip.Thai Board of Ob.& Gyn.
M.Sc.(Clin.Epi)
Co-Advisor

Assoc.Prof. Vajira Singhakajen,
B.A. (Stat.),LL.B., M.A.(Demog)
Co-Advisor

Assoc.Prof.Rassmidara Hoonsawat,
Ph.D.
Dean
Faculty of Graduate Studies

Assoc.Prof. Somsak Suthutvoravut,
M.D.,Dip.Thai Board of Ob. & Gyn.
Dip. Field Epidimiology (C.D.C)
Chairman
Master of Science Programme in
HumanReproduction and Population Planning
Faculty of Medicine
Ramathibodi Hospital

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was submitted to the Faculty of Graduate Studies, Mahidol University

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on

19 May, 2004

Mrs.Dussanee Pairsuwan
Candidate

Mrs. Nitaya Sangelek,
M.Sc. (Public Health)
Major Family Health.
Director of Highland Health
Development Center.
Health Division Minister of Health.
Member

Assoc.Prof. Suwachai Intaraprasert,
M.D., Dip.Thai Board of Ob. & Gyn,
Dip.in Population Growth Studies.
Chair

Assoc.Prof. Vajira Singhakajen,
B.A. (Stat.).LL.B.,M.A.(Demog)
Member

Assist.Prof. Nathpong Israngura Na Ayudhya,
M.D., Dip.Thai Board of Ob. & Gyn,
M.Sc(Clin.Epi)
Member

Assoc.Prof.Rassmidara Hoonsawat,
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University.

Prof. Prakit Vathesatogkit,
M.D.,ABIM. FRCP.
Dean
Faculty of Medicine,
Ramathibodi Hospital,
Mahidol University.

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KNOWLEDGE AND BELIEFS OF HILLTRIBE WOMEN IN LAMPANG PROVINCE ABOUT CARCINOMA OF THE CERVIX AND CERVICAL CANCER SCREENING.

DUSSANEE PAIRSUWAN 4236618 RAHP/M
M.Sc.(HUMAN REPRODUCTION AND POPULATION PLANNING)

THESIS ADVISORS: SUWACHAI INTARAPRASERT, M.D., DIP. THAI BOARD OF OB.& GYN., DIP. IN POPULATION GROWTH STUDIES., NATHPONG ISRANGURA NA. AYUDHYA, M.D., DIP. THAI BOARD OF OB.& GYN., M.Sc. (CLIN.EPI)., VAJIRA SINGHAKAJEN, B.A., (STAT) LL.B.M.A.(DEMOG).

ABSTRACT

The purposes of this survey research were to study the rate of cervical cancer screening by Papanicolaou smear (Pap smear), the level of knowledge, health beliefs and motivating factors of cervical cancer screening among hilltribe women. The samples were 594 hilltribe women in Lampang Province. Data were collected by interviewing hilltribe women. Statistical analysis included percentage, mean, standard deviation and Chi-square test.

The rate of cervical cancer screening by Pap smear among hilltribe women was 71 percent. Over half of the women (52%) had a high level of knowledge. Hower, most of them believed that the risks were moderate (57%), that the severity of the cancer was moderate (58%), and that the benefits of screening were moderate (53%). A large majority (89%) believed that there was a moderate level of difficulty in being screened for cervical cancer. Factors associated with having screening were a belief that there was a risk of cervical cancer, the cervical cancer could be severe, and that screening was not difficult to obtain. The general characteristic factors associated with screening were age from 30-39 years old (76%), having no education (77%), having had abnormal vaginal symptoms and having practiced contraception. The motivating factors of receiving advice and knowing about the campaign for cervical cancer screening were also associated with the screening.

It is recommended that health officers should provide hilltribe women with knowledge about cervical cancer and have campaigns for cervical cancer screening by Pap smear with family planning services in location easily accessible to the hilltribe women.

KEY WORDS: CERVICAL CANCER SCREENING / PAP SMEAR /
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ความรู้และความเชื่อของสตรีชาวเขาในจังหวัดลำปาง เกี่ยวกับโรคมะเร็งปากมดลูก และการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูก (KNOWLEDGE AND BELIEFS OF HILLTRIBE WOMEN IN LAMPANG PROVINCE ABOUT CARCINOMA OF THE CERVIX AND CERVICAL CANCER SCREENING)

ดุษณีย์ แพสุวรรณ 4236618 RAHP/M
วท.ม (การเจริญพันธุ์และวางแผนประชากร)
คณะกรรมการควบคุมวิทยานิพนธ์ : สุวชัย อินทรประเสริฐ, พบ.,ว.ว.(สูตินรีเวช)., DIP. IN POPULATION GROWTH STUDIES., ณัฐพงศ์ อิศรางกูร ณ. อยุธยา, พบ.,ว.ว.(สูตินรีเวช)., M.Sc. (CLIN.EPI)., วชิระ สิงหะคเชนทร์, สค.ม.(ประชากรศาสตร์).

บทคัดย่อ

การศึกษาวิจัยเชิงสำรวจครั้งนี้ มีวัตถุประสงค์เพื่อหาอัตราการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูกโดยวิธีการทำแป๊บสเมียร์ ระดับความรู้, ความเชื่อ และปัจจัยชักนำในการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูกของสตรีชาวเขา กลุ่มตัวอย่างคือสตรีชาวเขาจำนวน 594 ราย ในจังหวัดลำปาง เก็บรวบรวมข้อมูลโดยใช้แบบสัมภาษณ์ วิเคราะห์ข้อมูลด้วยสถิติ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และไคสแควร์ ผลการศึกษาพบว่าอัตราการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูก โดยวิธีการแป๊บสเมียร์ในสตรีชาวเขา ร้อยละ71, เกินกว่าครึ่งของสตรีชาวเขามีความรู้เกี่ยวกับโรคมะเร็งปากมดลูกระดับสูง ร้อยละ52, มีความเชื่อต่อความเสี่ยงจากการเกิดโรคปานกลาง ร้อยละ 57, เชื่อถึงความรุนแรงของการเป็นโรคปานกลาง ร้อยละ 58, เชื่อถึงประโยชน์ของการตรวจคัดกรองมะเร็งปากมดลูกปานกลาง ร้อยละ 53, ส่วนมากร้อยละ 89 เชื่อถึงอุปสรรคต่อการเข้ารับการตรวจระดับปานกลาง ปัจจัยที่มีความสัมพันธ์กับการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูก คือ ความเชื่อต่อความเสี่ยงจากการเกิดโรคมะเร็งปากมดลูก, เชื่อถึงความรุนแรงเมื่อเป็นโรค และเชื่อต่อความยากในการเข้ารับการตรวจคัดกรองมะเร็งปากมดลูก ปัจจัยทางคุณลักษณะทั่วไปที่มีความสัมพันธ์กับการตรวจคัดกรองมะเร็งปากมดลูกคือ อายุ มากที่สุดร้อยละ 76 ในกลุ่มอายุ 30-39 ปี, การศึกษา มากที่สุดร้อยละ 77 ในกลุ่มที่ไม่ได้รับการศึกษา, การมีอาการผิดปกติทางระบบสืบพันธุ์และ การปฏิบัติการคุมกำเนิด สำหรับปัจจัยชักนำ คือการที่สตรีชาวเขาได้รับคำแนะนำและรับรู้ว่า มีการจัดกิจกรรมรณรงค์ในการตรวจคัดกรองมะเร็งปากมดลูก มีความสัมพันธ์กับการตรวจด้วยเช่นกัน ข้อเสนอแนะจากการศึกษาคือบุคลากรด้านสาธารณสุขควรที่จะให้ความรู้เกี่ยวกับโรคมะเร็งปากมดลูก และจัดให้มีกิจกรรมรณรงค์ตรวจคัดกรองมะเร็งปากมดลูกโดยจัดควบคู่กับการให้บริการวางแผนครอบครัว ในพื้นที่ที่สตรีชาวเขาสามารถเข้าไปรับบริการได้สะดวก
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CONTENTS

CONTENTS (CONTINUED)

LIST OF TABLES

LIST OF FIGURE

CHAPTER 1
INTRODUCTION

Background and significance

Cancer is a public health problem and it is the cause of death of population in almost every country. For Thailand, it is found that cancer is the third rank in the causes of death of population following heart diseases and accidental deaths. Its death rate has increased from 13.1 in 1972 to 26.1, 50.9, and 43.8 per 100,000 people in 1982,1993, and 1995 accordingly (1.2). It is clear that the trend of the death from cancer among Thai people has been dramatically increasing.

According to the population based cancer registry organized by the joint cooperation between the Ministry of University Affair, Ministry of Public Health and the International Agency for Research on Cancer (IARC), it was estimated that by the year 1990, the incident rate of cancer in women was 128.5 per 100,000 population which cervical cancer would be the first rank of cancer found in Thai women. The estimated rates were 23.4 per 100,000 of population. (3)

Cervical cancer is commonly reported as the second rank of female cancer globally and it is the most common found in developing countries. (4). In Thailand, the statistics from the National Cancer Institute reports that cervical cancer is the top rank cancer developed among Thai women. In 1985, the number of patients with cervical cancer were approximately 25 percent of women diagnosed with cancer in all types.(5) and increased to 34.6 percent in 1991. Of those, 70.1 percent were working women and aged between 35 to 39 years. (6) Later in 1994, the record of gynecological cancer collected by Prince Songkhlanakarin University, National Cancer Institution, and Ramathibodi Hospital reported that cervical cancer was the top rank which is about 78.0 percent of gynecological cancer (7). In addition, the death rates of gynecological cancer in Thailand in 1987 was 3.4 per 100,000 women which was 8.7 percent of all death caused by cancer. (3) In 1996, the death rate of cervical

cancer was 0.75 per 100,000 people (8.9).

Cervical cancer has several impacts on both health care system and individuals. When considering the severity of the illness and the anticipating loss will occur as a result of cervical cancer, particularly in advanced stage, the expenses of radiation cost excluding the cost of investigation is estimated about 30,000 Bahts per person for a government hospital and 100,000 Bahts for a private sector (7). However, those expenses may not be compared with the loss-related human suffering experienced by the patients and their families. For example, the feeling of loss of both patients and their family, the feeling of fear to the fatal illness and the loss of their love one. Those evidences should have not occurred if safety prevention have been taken by cervical cancer screening such as Papanicolaou smear (Pap smear). (7)

Cervical cancer screening is the secondary prevention for cervical cancer in order to decrease the number of death rates from the disease (7,10,11). It is a mean to identify an early stage of cervical cancer (pre-invasive stage of cancer) which may not be able to detect by using our bare eyes. The earlier is the cervical cancer detected and the more are opportunities to perfectly eradicate the cancer. The test is also simple to be done and inexpensive, particularly Pap smear technique.

Thailand has launched the program in relation to cancer screening by Pap smear since 1989 by Department of Medical Services, Ministry of Public Health. The project had launched several programs related to cervical cancer including campaigns on promoting screening, identifying the diseases, investigating and treatment for the disease. Range of the program was between 1989 to 1994 by setting goal of increasing Pap smear services for women aged between 20-60 years at least 15 percent every year until the project ended. This service was congruent to the family planning policy of The Sixth and Seventh National Economic and Social Development Plan (11,12,13). Unfortunately, it was found that there has been less number of women received Pap smear services. During 1991 and 1993, there were only ten percent of women received the cervical cancer screening reported in Lampang Province and 10.4 percent of those in Nan Province which was highest number found (14). According to the evaluation survey of reproductive women health of the Seventh National Economical and Social Development Master Plan in 1995, 2,451 women were interviewed. The results have shown that they were mostly in reproductive age,

and 30.8 percent of those received cervical cancer screening. It was also found that the percentages of women receiving Pap smear in Bangkok, Northern part, Central part, North-eastern part, and Southern part of Thailand were 32.9, 31.3, 33.5, 28.7 and 30.1 respectively. (15)

Hilltribe women are the population group that should be promoted in all reproductive health, not only the family planning because there are confronting with several kinds of risk. From the survey of the population structure and the hilltribe productive development in six tribes conducted by the Family Planning and Population Division, the Hilltribe Family Planning Center in 1996 (16). It is found that age of first marriage and age of first delivery is below 20 years were 71.94 and 58.39 percent, respectively. In addition, 59.1 percent have an estimated of annual income less than 20,000 baht per year, and there are other factors involving the barriers to receive the services including environment, culture, inaccurate information and transportation to the health centers. All those described are the leading risk factors of cervical cancer. For example, a lack of information about the proper age of first marriage and age of first delivery resulted in having many children, and multiple married. Few hilltribe women had Pap smear done.

Researcher, working at hilltribe area in Lampang Province, found that receiving cervical cancer screening test was limited and being a major problem. The report from public health developing activities on hilltribe areas of Lampang Public Health in 2000 (17) addressed that only 443 or 27.72% of 1,863 hilltribe married women who live with their husbands and receiving contraception service got Pap smear. Although the results were all negative for malignancies and some inflammation found, the majority of these hilltribe women in reproductive stage still kept themselves away from the test. The researchers assumed that if all the group were tested, there may be some cases of cervical cancer detected.

From the above information, we can see that few hilltribe women have Pap smear test. The researcher expect that there are many factors that may relate to those women to protect themselves from the disease. Rosenstock (18) suggested in the health belief plan that when a person ignores his/herself from the disease, it means that the person may believe that he or she has a tendency of getting the disease which may life threatening. Then a person will choose safety behavior for him or her to lessen the

risk and the seriousness of the sickness. Simultaneously, it is to understand that there are some barriers affect to behaviors expected to lessen the risk such as costs of the expenses, the painfulness, the physical discomfort, psychological aspects, and the embarrassment. These obstacles are compared to the advantages that will be received and the obstacles that might occur. When the person knows that the received benefit are more than the barriers, then he will choose to practice positive health behaviors. Becker and Maiman (19) developed the health belief plan by adding some factors related to health motivation and some modifying the factors for utilizing in describing the health behaviors of both people in a good health and those who are at risk.

From the preventive behaviors of the disease, the researcher have found that there are many factors related to knowledge, attitudes and practices of Pap smear such as age, number of children, birth control method, and income as well as motivating factors. However,little is known about those factors related to the hilltribe. women.

From the above information, the researcher is interested in investigating of some general characteristics factors, knowledge, health belief related to cervical cancer, and practice of Pap smear and which the factors relate to the receiving of cervical cancer screening among the hilltribe women in Lampang. From the study of health belief concerning the cervical cancer, the researcher assumes that if the knowledge and health beliefs of hilltribe women are in the good level, this will lead to the increase of receiving Pap smear.

Research questions

There are two major research questions. First, what are the levels of knowledge and health belief related to cervical cancer and cervical cancer screening test of hilltribe women in Lampang and secondly, what kinds of factors that related to the cervical cancer screening by Pap smear.

General objectives

To study the general characteristics factors, knowledge, and health belief in cervical cancer that related to the receiving of cervical cancer screening of

hilltribe women in Lampang Province.

Specific Objectives

The objectives were to study

1.The rates of cervical cancer screening by Pap smear.

2.The level of knowledge and health belief among hilltribe women concerning cervical cancer.

3.The association between general characteristics factors and cervical cancer screening.

4.The general characteristic factors included age, income, education, age of first marriage, number of marriage, age at first delivery, number of children, practicing contraception and abnormal vaginal symptoms.

5.The association between the motivating factors to have cervical cancer screening including receiving advice and campaign for cervical cancer screening.

Research Hypothesis

1.The general characteristic factors of hilltribe women are significantly related to cervical cancer screening.

2. Levels of knowledge and health belief of hilltribe women are significantly related to cervical cancer screening.

3.The motivating factors are significantly related to cervical cancer screening.

Scope of the study

This cross-sectional survey collected data by using structured interview. The studied population was married women in five hilltribes including Yao, Karen, Akha (Eko), Hmong (Maew), and Lahu (Musue) aged between 15-59 years that were living as husbands and wives and were living is six districts of Lampang Province. The aims were to study the general characteristic factors,

knowledge and health belief related to cervical cancer, and the relation between the motivating factors and cervical cancer screening.

Limitations of the study

According to the project of cervical cancer screening in Thailand, this research aimed to study in only hilltribe women aged between 15-59 years. According to the nature of the hilltribe women, they are shy of exposing sexual organs to others and have the behaviors of getting services from the Public Health Units. Their health seeking behaviors are only related to their physical changes such as pain, pregnancy, delivery and family planning service. The knowledge provided is then more likely to cover up only the reproductive hilltribe women. The researcher expects that if the age group over 60 years is included, then the age variable might have relation to cervical cancer screening.

Operational terms used in the research

1. Hilltribe women are married women aged 15-59 years and still living with her husband and living in five tribes of Lampang Province, which are Yao, Karen, Akha, Hmong, and Lahu.

2. Age of the hilltribe women counted on the interviewing day.

3. Income means the amount of all the household money earned by the whole family members in one year.

4. Education means the educational level of the hilltribe women divided into: no education, Pratom 4, Pratom 6, Muthayom and others.

5. Age at first marriage means the age at started to have sex with the first husband.

6. Number of marriage is the numbers of husbands that the hilltribe women has lived until the day of interview.

7. Age of first delivery is the age of hilltribe woman when delivered her first child.

8. Number of children is number of children both living and death, not including the miscarriages.

9. Practicing contraception means used and not used the birth control method of the hilltribe women.

10. Abnormal vaginal symptoms means hilltribe women that have had vaginal symptoms such as white discharge and bad odor, abnormal color, irritation, pimples, pulses, irritation while urinating.

11. Knowledge of cervical cancer means knowledge of hilltribe women related to cervical cancer consisting of the meaning of disease, causes and risk factors of cervical cancer, symptoms, diagnosis, cure, prevention, Pap smear, and benefits of getting Pap smear.

12. Health belief related to cervical cancer means belief and knowing of the hilltribe women related to the cervical cancer in many parts according to the Health Belief Model including:

12.1 Perceived risk means belief and knowing of hilltribe women towards her own health and risk factors towards the sickness by cervical cancer.

12.2 Perceived severity means belief and knowing of hilltribe women relate to the seriousness and danger of cervical cancer that has effect towards a body, life styles, family bonding, ability of working, and social role.

12.3 Perceived benefits means belief and knowing of hilltribe women towards getting service of Pap smear that will enable the possibility to find pre invasive cervical cancer which can be cured and have better result for herself and family.

12.4 Perceived barriers means beliefs and knowing of hilltribe women related to factors that will effect them to come and receive Pap smear check up steadily or have never been checked for a reason such as inconvenience, fearful, shyness, time consuming. etc.

13. Receiving advice to getting cervical cancer screening of the hilltribe women that has received advice or encouragement to getting cervical cancer screening from sources such as doctors, nurses, sanitation officers, health volunteers, cousins, neighbors, television, radio, video, sound spreading tower, books, newspapers, documents, brochures. etc.

14. The campaign for cervical cancer screening means the pro-active

activities launched among the villages for encouraging hilltribe women to get Pap smear. These include giving lectures related to cervical cancer, organizing recreation, musical show, movies, weekly free service, etc.

15. Receiving Pap smear means hilltribe women who received the Pap smear test for cervical cancer screening.

Outcome benefits

1.The result of this study will be a guidance for public health staff members working for highland area in planning to provide knowledge about cervical cancer in order to change health behaviors and for further receiving Pap smear check up of hilltribe woman.

2. Bring the knowledge of factors influencing to receiving Pap smear to provide advice and organizing activities to promote and increase the rate of receiving Pap smear services for hilltribe women.

3. As a data base for future study on cervical cancer in relation to cervical cancer screening in other hilltribe area.

CHAPTER 2
LITERATURE REVIEW

From the literature review and the related research studies, scope of the review consisted of subtopics as follows:

1. Cervical carcinoma
2. Concepts framework to health behaviors
3. Concepts framework to health belief and Health Belief Model
4. Research related to cervical cancer screening
5. Information of the five hilltribe women (Yao, Karen, Akha, Hmong, and Lahu)

Cervical cancer

Cancer of cervix is a malignant tumor caused by an abnormal growth of the cervical cells. The cancer can spread to other parts of the body (20). The time that cervical cells developed to cancer cells may take about 5-10 years which is enough to be diagnosed and cured from the very early stage. (21)

Cancer of cervix can be divided into two types (22), which are

1. Pre-invasive carcinoma of the cervix: The cervical cancer before the invasive period or Cervical Intraepithelial Neoplasia (CIN) and it is divided into

CIN I – mild dysplasia

The abnormality of the cell that is only in the lower 1/3 of squamous epithelium.

CIN II – moderate dysplasia

The abnormality of the cell that is only in the lower 2/3 of Squamous epithelium.

CIN III – severe dysplasia

The whole abnormality of the thickness of squamous epithelium

but the upper cell is still normal.

In the case of thickness of the squamous epithelium, the cancer cells located only within the basement membrane and called carcinoma in situ (CIS).

2. Invasive carcinoma of the cervix is the cervical cancer in the invasive stage, which can spread through nearby organs, blood circulation, or lymph nodes.

Etiology (21,22,23,24,25)

There is enough information for concluding that Human Papilloma Virus (HPV) could be a cause of the cervical cancer, especially Types 16,18,31, and 33. The virus will locate around the superficial membrane of cervical area and cause hyperproliferation of the cells. Besides this, there are other risk factors of cervical cancer as follows:

1. Host: Women who have risk of getting cervical cancer are:

1.1 Sexual relationship factors: The age at first time of having sex is one of the important factor, women who have sex at the younger age will have high risk of getting cervical cancer than those who have it at the older age. This is because the epithelium cells in cervical area has greatly changed in adolescent. Besides, women with multisexual-partner sexual are more like to have higher risk to cervical cancer as well.

1.2 Pregnancy in teenagers and the numbers of delivery: The women who were pregnant before the age of 20 and those who have many children are more likely to have high risk to cervical cancer.

1.3 Race: It is found that cervical carcinoma is developed more in black American women than in those of Caucasian group and the Jews group. more Islamic women have a lower rate of cervical cancer than in other religious groups, because the Muslim boys undergo circumcision at the age from 6 to 12 years old. This is easy way to clean up the smegma around the penis which is the source of infection and cancer of cervix and penis.

1.4 Nutritional condition: Some studies found that the women who have good nutritional status or get beta-carotene, vitamin-C, or poly-acid in their diets and other substance that is found in vegetables will have lower incidence of the

cancer. However, other studies, do not confirmed those studies.

1.5 Immune system: The immune system of our body can prevent us from the disease or other foreign body getting into our body. When there is a lack of immunity such as receiving anti-inflammatory drug in the patient who undergoing kidney transplantation, the pregnant women, HIV patients receiving chemotherapy or anti-viral drug will have higher tendency of getting cervical cancer.

1.6 Personal hygiene: It is found that those women who keep their genital organ or hygiene clean will have lower opportunity of getting cervical cancer.

1.7 Infertility: It is occurred from the cause of pelvic inflammation or stenosis of the fallopian tube. If it is caused by virus infection, it may also lead to cervical carcinoma.

1.8 Genetics: There is a study relating chromosome which found those women with cervical carcinoma mostly have abnormalities of chromosomes Of 1, 3, 6, 11, 17 pairs which cannot certainly conclude. Therefore, researches should continue further.

1.9 Women that have checked for cervical carcinoma and found that there are abnormalities in the cervical cells and is at risk to continue to have further process of cervical carcinoma.

2. Agent: Some sexually transmitted diseases are found to be predisposing factor of cervical carcinoma. Those diseases are

2.1 Human papilloma virus (HPV)

2.2 Herpes simplex virus type 2 (HXV 2)

2.3 Condyloma

2.4 Genital warts

3. Environment

Smoking: Nicotine, cotinine, and motogen in cigarette can be found in cervical mucus of the women who smoke or living in an area of high level of smoking than in the blood. This may cause decrease in immunity and lead to the abnormality of her cervical cells. In addition, poly aromatic carbon which is a carcinogen can be found in the cervical cells of women who smoke as well.

4. Socio-economic status:

4.1 Low socio-economical status: women in developing countries with low socio-economical status will have higher incidence of cervical carcer as compared to women with higher socio-economical status in developing countries

4.2 Birth Control: From the study of estrogen hormone in contraceptive pills, it is found that the hormone indirectly increases infection of the virus. It is evidenced that condyloma acuminata virus was found more than usual. In addition, the study on condom use, women using diaphragm, and spermicides reported to have lower rate of cervical carcinoma. The knowledge supports the theory that sexual transmitted disease is a risk factor of cervical carcinoma. For the sperm-killing pills, it may be explained with the effects of chemical interactions to the virus.

4.3 Multi-parity: For the husband who his wife has cervical cancer, it is found that his new partner is more likely to have more tendency of higher risk to cervical carcinoma. A women who has sexual relationships with a man who have sex with more than 20 partners, is at higher risk of cervical carcinoma. Besides, it is also found that men who have undergone circumcision will reduce the risk to cervical carcinoma to his partner because the circumcision can reduce the aggregation of smegma, which is belief to be a carcinogen.

Signs and Symptoms (25, 26)

Carcinoma in situ

An early stage of cancer may be asymptomatic or have less symptoms. Only some signs or symptoms may be detected as follows:

1. Asymptomatic. It is mostly found because the pathology of the cancer still has no symptoms to manifest.

2. Leucorrhea. It is clear mucous discharge occurred as a result of general inflammation of the cervix.

3. Bleeding per vagina. Bleeding occurred during or after sexual intercourse as a result of cervical trauma may be an early symptom of cervical carcinoma.

Invasive carcinoma of the cervix

In this period, the stage of cancer is progressing. Signs and symptoms commonly found are:

1. Bleeding per vagina: In this stage, bleeding is commonly occurred after sexual intercourse. The discharge can be only clear watery with blood stained. In case of at higher stage, the characteristics of bleeding can be abnormal bleeding, bleeding during menstrual period, or having a longer period of menstruation. The patients may go to see the physician with anemic symptoms or bleeding.

2. Pain: The characteristics of pain include referred pain to the back or legs, and edema of lower extremities caused by lymphatic obstruction.

3.Bloody leucorrhea: The discharge may have bad odor because of the infection.

4. Systemic symptoms. When the cancer is invasive, systemic symptoms in relation to the organs involved can develop. For example, the metastasis commonly involved the bladder, colon and rectum. The patients may have dysurea, diarrhea or constipation as well as malena.

5. Weight loss, loss of appetite, drowsiness and unconscious.

Characteristics of metastatic stage of cervical carcinoma

In this stage, cervical cancer can be detected with pelvic examination. Characteristics of the tumor can be divided into four different types as follows:

1. Exophytic lesions. It is a most common type. The tumor size is large, cabbage-liked mass with fluffy coming out from cervix, called ectocervix. The size of some mass is very large and may obstruct the vaginal canal. In this case, bleeding and infection are more likely to be occurred.

2. Infiltrative lesion. This type of cervical mass may not be detected easily because the lesion is unable to be seen clearly from the outside. The cancer usually grows through the inside of the cervix or into the endocervical canal that will cause the cervix likes barrel-shaped. The mass can be characterized with firmed and

not smooth surface when palpated. In this stage, bleeding or leucorrhea are rarely found unless in the late stages.

3. Ulcerative lesion is a deeper invasion through endocervix. The rim of the lession is firm. The cancer may invade to fornix and can be seen as a cavity with no cervical mass. This stage are infective and can cause bleeding as well as bad odor leucorrhea.

4. Superficial papillary lesion (Verrucous) This is a rear type of cervical cancer. The lesion is condyloma-liked and usually superfical invaded at the cervix area.

Progression of the disease

1. From the stage that cells become abnormality to the early stage of cancer, the process is approximately progressed in 7 years

2.From the early stage of the cancer to the invasive stage, the process is approximately progressed in 10-15 years.

3.From the invasive stage to metastatic stage the process is approximately progressed within 3 years.

Stage of Cervical carcinoma (20,21,27)

International Federation of Gynecology and Obstetrics or FIGO it has been revised and categoried staging of cervical carcinoma in 1995 as follows:

Stage 0 Carcinoma in situ, intra-epithelial carcinoma. Cases of stage 0 should not be included in any therapeutic for invasive carcinoma.

Stage I The carcinoma is strictly confined to the cervix (extension to the corpus should be disregarded).

Stage IA Invasive cancer identified only microscopically; all gross lesions, even with superficial invasion, are stage IB cancers; invasion is limited to measured stromal invasion with maximum depth of 5.0 mm and no wider than 7.0 mm (the depth of invasion should not be more than 5 mm taken from the base of the epithelium, either surface or glandular,

from which it originates) Vascular space involvement, either venous or lymphatic, should not alter the staging.

Stage IAI Measured invasion of stroma no greater than 3.0 mm in depth and no wider than 7.00 mm.

Stage IA2 Measured invasion of stroma greater than 3 mm and no greater than 5 mm and no wider than 7.0 mm

Stage IB Clinical lesions confined to the cervix or pre-clinical lesions greater than IA.

Stage IB1 Clinical lesion no greater than 7.0 cm in size.

Stage IB2 Clinical lesion greater than 4 cm in size.

Stage II The carcinoma extends beyond the cervix, but has not extended on to the pelvic wall. The carcinoma involves the vagina, but not as far as the lower third.

Stage IIA No obvious parametrical involvement.

Stage IIB Obvious parametrical involvement.

Stage III The carcinoma has extended on to the pelvic wall. On rectal examination there is no cancer free space between the tumor and the pelvic wall. The tumor involves the lower third of the vagina. All cases with a hydronephrosis or non-functioning kidney should be included, unless they are known to be due to other cause.

Stage IIIA No extension onto the pelvic wall, but involvement of the lower third of the vagina.

Stage IIIB Extension on the pelvic wall or hydronephrosis or non-functioning kidney.

Stage IV The carcinoma has extended beyond the true pelvic or has clinically involved the mucosa of the bladder or rectum.

Stage IVA Spread of the growth to adjacent organs.

Stage IVB Spread to distant organs.

Diagnosis of the Disease (21)

Diagnosis in case of suspicious to invasive cervical cancer

The diagnosis of cervical carcinoma can be done by using pathological diagnosis only. The clinical diagnosis alone without cervical biopsy is unacceptable because some lesions can have gross appearances like cancerous lesion including inflammation and tuberculosis infection, etc. Cervical biopsy can be performed with three procedures:

1. Endocervical curettage is a scraping off the membrane at the area of endocervix and send the specimen for pathological examination.

2. Punch biopsy is a cutting off procedure of a mass around the cervix that is suspected to be cancer lesions and followed by pathological examination.

3. Cervical conization is a cutting off the cervix in the funnel shape to examine the whole part of abnormal mass for pathological examination.

Screening test for Pre-invasive cervical carcinoma

Pre-Invasive carcinoma can be screened with a cytological diagnosis by using Pap Smear test.

Pap smear test

Pap smear is a cytological investigation that helps in detecting cervical carcinoma as it is easily, convenient, painless, and less expensive. Dr.George N.Papanicolaou was inventor of this method and named with Father of Cytology. He had started his invention since 1917. In 1943, Papanicolaou and Traut had studied the technique together and their final results were reported in their book named, “Diagnosis of uterine cancer by vaginal smear”. The procedures of doing Pap smear and how to interpret the test result were explained in the book with the sensitivity test of 98% for the diagnosis of pre-invasive stage of cervical carcinoma. These were basic knowledge related to cervical cancer diagnosis.

Pap smear (27) means the examination of abnormal cells by scraping mucous or cells from several parts of cervix including posterior fornix, extocervix and endocervix. Then scrapes the cells from the three parts on to the glass slides and fixes with ethyl alcohol 95% for at least an hour to preserve the cells. Then, the slide is dried with room air and packed into the unbreakable container for further diagnosis.

Advantages of Pap smear

1. To help in screening cervical carcinoma in the pre-invasive stage which can be cured 100%.
2. To investigate other types of inflammation of the cervix.

Target groups of Pap smear test (28)

1. All married women without limited age should be advised to have the test at least once a year.
2. Women who are at risk for cervical carcinoma including groups of women who had sexual experiences when they were younger than 20 years, women with frequent sexual intercourses, women who have several partners, those who have had venereal disease especially the human papilloma virus, herpes simplex virus type II, women with low economical status, women with many children, women with the usage of contraceptive pills, and background of cancer in the family.
3. Women that have abnormalities of reproductive system such as bleeding per vagina, irritations, and white leucorrhoea with bad odor.
4. All women with age over 40 years should have Pap smear every year, especially in periods pre-and post-menopause, which cervical carcinoma is often found.

Report of Pap smear result

In 1954, there was a report classified in 5 classes which are

Class 1 No abnormal cells found.

Class 2 Abnormal cells found but not cancer cells.

Class 3 Cells found with uncertainty of cancer cells but not clearly.

Class 4 Cells found with almost certainty of being cancer cells.

Class 5 Cells found with certainty of being cancer cells for sure.

Later in 1969, from the Cytology meeting in New York, the reports of the test result was described in the following pattern which is presently use at Ramathibodi Hospital.

A. Normal and abnormal cells found that are not cancer cells.

B. Cancer cells found in the superficial membrane which are:

- mild dysplasia
- moderate dysplasia
- severe dysplasia
- carcinoma in situ

C. Invasive carcinoma cells.

Regularity of Pap smear

1. The World Health Organization recommends that women age between 35-45 years in developing countries should get Pap smear at least once and every ten years after that. This is because of low resources. In developed countries with enough resources, they should be check up once every year. However, in general women in all countries age between 25-60 years should have Pap smear check up every 3 years. (29)

2. American Cancer Society recommends that women age over18 years and sexually active should have Pap smear test once every year. If the result is negative for three times consecutively, the test can be done in a longer length of times according to the consideration of their physician.(30)

3. Canada Task Force for Cervical Cancer Screening recommends women should get Pap smear after the first sexual intercourse and later in the next year. If the results of both tests are normal, the follow up test should be done every 3 years until the age of 69 years. Women who have had sex since young and many partners should get Pap smear every year. (31)

4. The 8th Economical and Social Development Plan of Thailand indicates the standard guideline for preventing and controlling cervical carcinoma by setting targets of receiving Pap smear test at least 80% of women in age group of 35-49 years and having the follow up screening at least once a year. After the test results are negative for two times consecutively, then the test should be done at least every 3 years. (32).

Treatment (26)

Treatment of cervical carcinoma

In treatments the patients with cervical carcinoma in the pre-invasive stage, some factors should be considered:

1. Age
2. Need of children
3. Severity of disease
4. Physical health and psychological status of patient
5. Ability to follow up after the treatment

Treatment procedures usually used are

1. Electrocautery is how to destroy the cancerous epithelium cells by using heat. The treatment include the area of transformation zone to have a depth of 1.5 centimeters so as to deep at stroma level. This procedure is popular in European regions. The effectiveness is 90-97 persents cured in the pre-invasive stage.

2. Cryosurgery is how to treat cancer by using the cold probe at the coldness of -40 degrees celsius. From the reports globally, it is found that this technique can cure the pre-invasive stage of cancer in persents. For Ramathibodi Hospital this procedure is effective with a good result, cure rate of 83.34 persents.

3. Laser vaporization is used for patients with abnormalities before stages of cancer. This procedure is complicated and needs expertise as well as the expensive special tools. The advantage of this technique is that the wound healing is faster when compared with cryosurgery. From the international report, it is found that the effectiveness of this technique is a good level which 83-94% of cancer can be cured.

4. Surgery is effective for the first and second stage of cervical carcinoma. (The degree of surgery is varied.). It is mostly used in patients with younger age or needs to have children. By using therapeutic conization, it is possible that the cancer may recurrent again in the first 2-3 years. Therefore this kind of treatment needs close follow up. Surgery is the best and suitable in Thailand. It is effective if the patients have conditions of having enough children, in older age or at menopause period, having difficulties to follow up, or having poor differentiated cytology which needs surgery of extra mass. Radical hysterectomy is for an invasive stage I cervical cancer. The surgery may not include pelvic node dissection because it may cause excessive blood loss and other organs nearby may be injured. Some physicians prefer radiation instead.

5. Radiotherapy is used for treating cervical carcinoma in all stages ranged from the first stage until the fourth stage which the cancer has metastasis to other organs. The radiation used is Cobalt-60, Radium-220, or Cesium-137.

6. Chemotherapy is usually used when systemic metastasis occurred or the cancer is recurrent and may not be able to treat by other methods.

7. Combined treatment is commonly used in invasive stage of cervical carcinoma, particularly in the first and second stages. The treatment may combine radiotherapy with radical hysterectomy. Presently, chemotherapy is commonly combined with radiation in the patients with second and third stages of cervical carcinoma. Combined treatment is definitely at better result than just any single treatment alone.

Prognosis

Prognosis of the disease is good if the patient has received treatment from the first stage which the abnormal cells are only at the epithelium membrane. In case of poor differentiated cell changes, the treatment will be more complex. The prognosis is then worsen. Other factors related to the prognosis included age, staging, types and size of tumors, cell type, and lymph node involvement.

The public health standard of prevention of cancer (10)

The World Health Organization has indicated the standard guidelines for controlling and preventing cervical cancer in order to lessen the death rate and improve qualities of lives of those with cervical cancer. The standard guidelines are:

1. Primary prevention is a way to prevent cancer. People should have to avoid the risks to cancer and utilize some factors that help in preventing the disease.

2. Secondary prevention is a way to prevent prognosis of the disease by early detection and definitive treatment. The cervical cancer screening is secondary prevention.

3. Tertiary prevention is focused in treatment in case of

3.1 Causing the patients to completely be away from cancer

3.2 Making patients with cancer can survive longer.

3.3 Providing better quality of life to the patients.

From the standard of WHO, the prevention of all types of cancer including cervical carcinoma should begin with knowing how to avoid the risk factors that cause the disease such as avoiding having many sexual partners, taking good hygienic care of genital organs, smoking quit, and getting Pap smear once a year. If women can practice as recommended, this will help to prevent them from cervical carcinoma.

Conceptual framework relating to health behavior

The basic concepts related to health behaviors (33) are

1. All behaviors need to have reasons.

2. All behaviors need to have motivation.

3. The different reasons may lead to the same behaviors.

4. The same behavior may response to different behaviors.

From the above basic concepts, it is analyzed that behaviors happen in the present cause by certain reasons. However, some behaviors are easily to identify, but some are not and needed scientific method to help in the explanation including observation and interviewing the persons who behave, and from the perspectives of others who are related.

Health behavior

Health behavior refer to an actions or showing one's behavior that will result to his/her health by using knowledge, understanding, imagination, and self-behavior towards the health with suitable relationship.

Health behaviors can be divided into 3 types, which are

1. Preventive health behavior. It means to the behavior towards preventing disease including having safer sex with commercial sex women by using condom, getting cervical cancer screening for cervical carcinoma, and quitting smoking to prevent cancer risk.

2. Illness behavior means one's behavior towards abnormality or illness including having sufficient rest at home when illness developed or seeking health care services when abnormal symptoms are be detected.

3. Sick role behavior means one's behavior after knowing the diagnosis such as taking medication according to the treatment of the physician, exercising, and quitting alcohol.

Components of health behavior consisted of 3 parts, which are

1. Knowledge or cognitive domain behavior. It means some things shown that the person know about the health or disease. These behaviors relate to knowledge, memory, facts, ability to improve knowledge, skills and intuition for decision making. For example, explanation the reason of the beginning of the disease.

2. Attitude domain means emotional conditions of the person relating health. This behavior relates interests, feelings, acts, like or dislike, and valuing.

3. Psychomotor domain means the thing one react out in which it relates to the use of physical parts of the body. For example, taking care of personal hygiene particularly in genital organ.

Characteristics of Health Behavior

Humans will be have in two characteristics.

1. Positive behavior means the behaviors that one person react to and result for better health of the person.

2. Negative behavior means the behaviors that one has done and will result in the deterioration of the health, which will later cause diseases.

Health behaviors can also be divided into three other concept groups, which are (34)

Concept I Intra individual causal assumption. It is the basic concept from the assumption that behaviors consist of internal factors, which are knowledge, imagination, belief, value, and motivation.

Concept II: Extra individual causal assumption. Human behaviors may affect by external factors including environmental factors, and social structure of society including political system, economical system, education, religion, and consistency of population in geographical type.

Concept III: Multiple causality assumption. Human behaviors of the person occurred from in and out personnel like easiness and hardness of reaching the public health service. Efficient estimation of the public health service, the globalization of the disease, severity, and the risky factor to get the disease are all consistency of society and social networks.

Health Belief Model

Health Belief in considered a belief related to living status of Thai people since birth till death especially the belief of natural phenomenon and mysterious things relating sickness and death relating sickness and death.

The Health Belief Model is one of the most widely used approaches to understanding individual health behaviors that it is good at explaining intentions and behavior. The model is based on a cognitive approach that uses a cost-benefit perspective to understand preventive health behavior. It assumes that individual behavior change depends upon perceived severity of risk, perceived susceptibility to risk, perceived benefits of preventive action, perceived barriers to preventive action and perceived ability to take preventive action (self-efficacy).

Becker and Miman developed health belief model by adding another

factor called health motivation, and other factors derived from Reizenstock. The model covers both explanation and prediction of human behavior of the person who have good and poor health.

When a person knows and believes something, it will lead to health behavior which consists of: (19)

1. Readiness to take action. It refers to emotional readiness or consciousness for a person to react to the conditions for the health. The readiness is related to the perception of risk and the perception to severity of the disease of the individual.

2. Individual's evaluation of the advocated health action. It means that the person perceives about the barriers and benefits to change his/her health behaviors in order to protect his/herself from the disease. The person will determine the possibility to change the behavior and the outcome expected. The barriers include expenses, inconvenience, time wastage, and shyness according to the outcome predicted. Details of the Model is illustrated in Figure 1.

Elements of Health Belief Model.

Health Belief Model consists of six elements which were:

1. Perceived susceptibility. As individuals have different perceptions, they will take actions to screen for or to control their deviated health conditions if they regard themselves as susceptible to the conditions. If an individual perceives that he/she is having tendency of getting the disease or having impacts from the disease, he/she will create health behavior to prevent or avoid it. The shown-out behavior including having belief towards the diagnosis made by their physician, or realized that risk to have the recurrent disease is possible. In case of having illness, the knowledge related to the risks of that person tends to be higher.

2. Perceived severity. When an individual has knowledge about the disease, he/she will evaluate the seriousness of the disease to him/herself. The inquiries related to the perceived severity such as what does the level of the severity? Will the disease lead to death? or will the disease affect both body and mind, or whether the disease lead to permanent deformity or not? The perception to the

severity of the disease could be possible to towards oneself, towards the family, and /or towards social relationship. The perceived severity will help an individual to learn and understand the effects of the severity of the disease or impacts of the sickness.

3. Perceived benefits. When a person realizes the opportunity of having risks and know how severity of the disease is, the person will believe that a course of action available to them would be beneficial in reducing either their susceptibility to or severity of the conditions. This will encourage an individual to behave actions in leading to the decrease of the threatening conditions to the health.

4. Perceived barriers. The responses to the actions that promote healthy of an individual can be anticipated with some barriers which may lower the perceived benefit. The perceived barriers are for example; the perceived that the changed behavior is inconvenient, time wasting, wastage of money, producing some symptom such as pain or physical and psychological disturbances as well as shyness, etc. These all factors are influencing an individual to avoid performing healthy behaviors.

5. Health Motivation. It is a positive drive to motivate an individual in performing showing a particular behavior to promote his/her health.

6. Modifying factors. It refers to factual factors that can strengthen or hamper the performing of health behavior of a person which includes social status, friends, influences of population factors like age, sex, educational level, economical status, race, attitudes toward the disease, previous illness experienced and all the related factors of health behaviors. All these factors will act as an indicator or motivation to perform the behavior. The modify factors can be both from external or internal resources such as human interaction, communication effects, reminding messages, encouragement to behave.

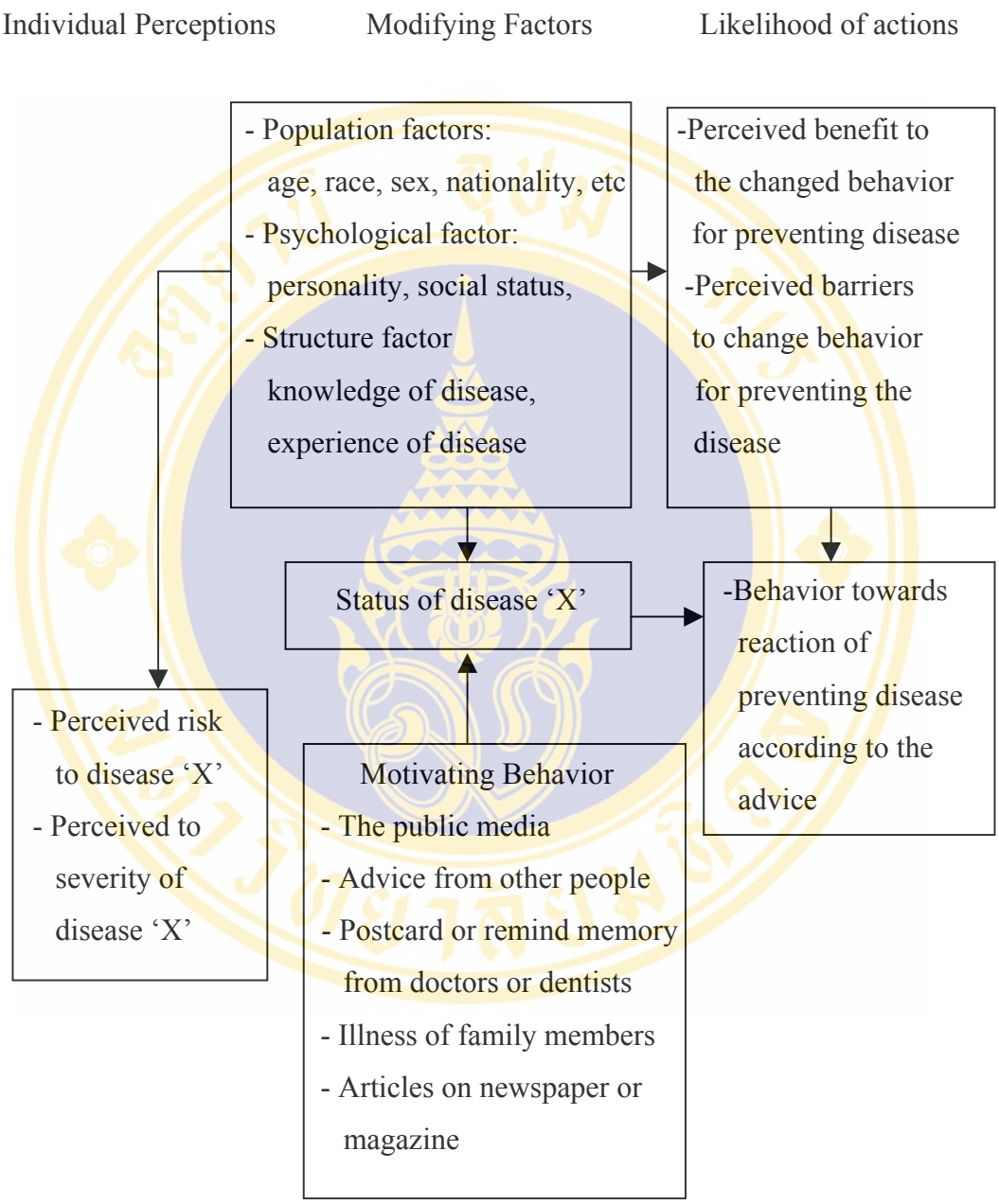

Figure 1: Illustrated Health Belief Model developed by Becker and Miman in order to predict health behavior in preventing the disease (19)

Research on cervical cancer screening and cervical cancer screening

The research studies on factors related to getting check up of Pap smear are divided the groups of 4 which are :

1. Population factors
2. Knowledge of cervical carcinoma
3. Health Belief relating cervical carcinoma
4. Influencing factors

Population factors

Vanida Senawong (35) conducted her quasi's experimental study on the effectiveness of health education program with spousal support to encouraging cervical cancer screening of 113 married female house workers in Nonthaburi Province during December 1991 to February 1992. Results had shown that age and education levels had no relationship with the practice of getting cervical cancer screening.

Phornee Surin (36) applied the processes of social marketing in her quasi's study with the aim to promote cervical cancer screening service in 165 married women aged between 25–60 years in rural areas of Surin Province. The study found that age and family income have no relationship with receiving cervical cancer screening service. However the experimental group with age of 25-44 years received cervical cancer screening more frequently than those of 45-60 years. For the income, it was found that the experimental group with higher and lower income perceived that cervical cancer screening test fee was inexpensive. Therefore, family income may not relate to cervical cancer screening test.

Aaphakorn Supanya (37) conducted a descriptive study focusing on the relationships of imaginative knowledge to cervical cancer screening of 416 women receiving family planning services in Udonthanee Province. Data collection was done between 3-13 January 1994 and reported in the same year. The results have shown that

age, income, education, number of children, and contraception had no significant relationship with cervical cancer screening. It was also found there was no difference of level of knowledge between women receiving cervical cancer screening and who had no experience. In addition, women who have low income (less than 2000 per month) received less frequency to receive cervical cancer screening test. Women with higher education seemed to receive cervical cancer screening services more frequent than those with low education. It was found that women completed their education in elementary level and secondary education level had cervical cancer screening about 48.1 and 51.3 percents, respectively. Also, 54.2 percents of women who had more than three children received cervical cancer screening more frequent than those who have less children.

Sarrita Theeawathanasakul, Waraphorn Sirisawang, and Somsri Pathamaphan (38) studied on factors influencing decision making to get cervical cancer screening of 210 married women ages between 20-60 years in Doi Saket District, Chiangmai. Data was collected by using interviewing during October-November 1994.It was found that income had significant relationship to decision making to get cervical cancer screening (P-value <0.05). The groups that had sufficient income made a decision to be examined more frequently than those who had less income. There was no significant relationship between age, educational level, number of lived children, using contraceptive pills, using contraceptive injection and getting. The percentage of those who decided to get cervical cancer screening were 50 percents of both women aged equal or under 35 years, 89.3 percents of women with educational level of elementary or lower, 87.5 percents of women who had two children or lesser decided to get the check ups, 82.1 percents of women received pills and non-received pills, and 71.4 of those received injection.

Chetna Srisai (39) studied factors relating cervical cancer screening in 193 women receiving service for family planning at Nan Hospital, Nan Province during 1-31 July 1997. It was found that age, age at marriage, birth control method had significant relationship with getting cancer screening (P-value <0.01). Groups of age 35 years or lesser had cervical cancer screening about 68.2 percents which was

higher than the groups older than 35 years. The groups that at first marriage was 20 years or lesser had cervical cancer screening about 78.9 percents which higher than groups who first marriage was 20 years. Groups who used pills had cervical cancer screening about 74.7 percents which was more than groups that used injection, condom, and tubule sterilization. However, there was no significant relationship between getting cervical cancer screening and education, income or numbers of children.

Pradap Thongsai (40) studied protecting behavior to wards cervical carcinoma of 400 female industrial workers in suburb area in Bangkok during 27 November- 27 December 1997. Data was collected by using structure interview. It was found that age had significant relationship with the protecting behavior from at primary level (P-value <0.05). However, education had no significant relationship with the protecting behavior from the cancer.

Pacharee Chanpheng (41) studied in relation to preventive behaviors of cervical carcinoma of 400 housewives in agricultural area in upper southern part of Thailand. Data was collected by using interview form. It was found that age had no relationship with preventive behaviors towards cervical carcinoma (P-value >0.05). However, the groups aged less than 35 years had preventive behaviors to wards the disease more than those aged over 35 years.

Amphai Suphapha (42) studied the same factors by focusing on factors in relation to preventing behaviors towards cervical carcinoma of 400 housewives in western agricultural part of Thailand. The interviews were done during 13 October-17 November 1997 and found that age had no relationship with the preventive behavior towards the primary level of cervical carcinoma at (P-value >0.05). Most women aged between 35 years and over (54 %) had no preventive behavior.

Conclusions. General characteristic factors were found that

Age: Age of women had no significant relationship with getting

cervical cancer screenings, but there was evidences that women aged lesser than 35 years were more likely to have cervical cancer screening more frequently than those of age 35 years.

Income: The income had both relationship and no relationships to cervical cancer screening. For those with relationship, it was found that the women with high income were more likely to had cervical cancer screening more frequently than those with less income even but both groups perceived the test was inexpensive.

Education: It was found that education had no relationship with cervical cancer screening test for those who completed their education in both elementary and high school levels.

Age at first marriage: It was found that women who got married at when they were younger than 20 years, they had cervical cancer screening more frequently than those who got married when they were older than 20 years. In addition, the age at first marriage had significant relationship with getting cervical cancer screening as well.

Knowledge related to cervical carcinoma

Aaphakorn Supanya (37) focused on knowledge, attitude, and the practice towards getting cervical cancer screening for cervical carcinoma of 416 women receiving family planning services in Udonthanee Province. The data was collected during 3-31 January 1998 and found that knowledge related to cervical carcinoma had no significant relationship with having cervical cancer screening. (P-value =0.7229).

Renu Kavira (43) studied the relationship between knowledge and health belief on cervical carcinoma and receiving cervical cancer screening services in 400 married women aged between 25-60 years in Sanpatong District, Chiangmai Province and found that knowledge had significant relationship with getting cervical cancer screening. (P-value<0.001)

SaritaTheerawathanasagul, Varaphorn Sirisawang,Somsri Pathamaphan

(38) studied factors relating the decision making of getting cervical cancer screening of 210 married women aged between 20-60 years in Doi Saket District, Chiangmai Province. Data was collected during October to November 1991 and found that at least 16.6 – 28.2 percents of samples had good knowledge. It also found that knowledge had significant relationship with decision making in getting cervical cancer screening which were about 65.5-68.5 percents of the women in the study (P-value <0.05).

Suphaphorn Rangsisuwan (44) studied factors relating knowledge, health belief, motivation factor, and cultural factor to the cervical cancer screening check up of 240 women who lived in the rural, NaSo Sub-District, Kudshum District, Yasothorn Province. The researcher classified the women in the study into two groups with those who had and had no cervical cancer screening test. It was found that cervical carcinoma had significant positive relationship with the cervical cancer screening checkup having important statistics of (P-value<0.05).

Cheta Srisai (39) focused on factor effecting getting cervical cancer screening check ups in 193 women recruited from family planning clinic, Nan Hospital during 1-31 July 1997. It was found that the women in her study had knowledge related cancer at a medium level and the knowledge had no significant relationship with the cervical cancer screening. (P-value=0.66).

Pradap Thongsai (40) studied protecting behavior towards cervical carcinoma of 400 female industrial workers in suburb area in Bangkok during 27 November-27 December 1997. Data was collected by using structured interview. It was found that knowledge related cervical carcinoma had significant relationship with preventive behavior of receiving cervical cancer screening (P-value<0.01).

Pacharee Chanpheng (41) studied on the preventive behavior for cervical carcinoma of 400 farming housewives in the upper southern part and found that knowledge relating to cervical carcinoma had no significant relationship with the behavior of getting cervical cancer screening (P-value >0.05) by interviewing.

Amphai Suphapha (42) reported about her study on factors influencing the preventive behavior of 400 farming housewives in the western area by interviewing during 13 October-17 November 1997. It was found that the knowledge of preventing cervical carcinoma had significant relationship with the cancer preventing of getting cervical cancer screening (P-value<0.05).

Conclusions: The knowledge of cervical carcinoma. It was found that those women in the studies who had knowledge related to cervical carcinoma in medium to high level were more likely to had cervical cancer screening more frequently than those with knowledge in lower level.

Health Belief in relation to cervical carcinoma

Aaphaknorn Supanya (37) studied the relationship between knowledge, attitude and the practice towards the cervical cancer screening of 416 women recruited from family planning unit in Udonthanee Province by interviewing during 3-31 January 1994 and found that women with good health beliefs tended to have better responses with the cervical cancer screening. However, there was no significant relationship between attitude and cervical cancer screening.(P-value =0.37252).

Renu Kavira (43) studied about the relationship of health belief of cervix carcinoma and Cervical cancer screening in 400 married women aged between 25-60 years in Sanpatong district, Chiangmai Province and found the health beliefs had significant relationship with getting check ups at statistic value of (P-value<0.01)

When the beliefs were classified, it was found that the knowledge related to cervical cancer screening and perceived barriers to get cervical cancer screening had significant relationship with coming to get it (P-value<0.001). In addition, the perceived risk or susceptibility to cervical cancer and perceived severity of the cancer had no significant relationship with getting the test.

Suphaphorn Rangsisuwan (44) focused on the study of relationship between knowledge, health belief, motivation factor, and cultural factors with the getting cervical cancer screening test of 240 women who lived in rural area of Naso Sub-District, Kudshum District r, Yasothorn Province.Data was collected by using questionnaire and separating groups of those who had check up and those who have not had. It was found that health belief had a positive significant relationship with the cervical cancer screening.(P-Value<0.05)

When determined health belief in each elements, it was found that the perceived risk of getting the cervical carcinoma, perceived benefit to get check ups and perceived barriers to cervical cancer screening had significant relationships with getting cervical cancer screening (P-value<0.05). However, there was no statistical relationship between perceived severity of the cervical carcinoma with the cervical cancer screening.(P-value>0.05).

Conclusions: The health belief as a whole is perceived risk of cancer, perceived benefits to get cervical cancer screening, perceived severity and barrier of cervical cancer screening have relationship with getting cervical cancer screening test.

Motivating factor

Usumphorn Purinthraphibaan (45) used quasi-experimental study to investigate the effectiveness of the health education program towards getting the cervical cancer screening check up in 110 mothers in Nakornsrethamarat Province. After ending the health education program, the results had shown that the numbers of women who came to get cervical cancer screening in experiment groups were significantly higher than the control group (P-value<0.001). Getting cervical cancer screening also had significant relationship with the perceived barriers in relating to having some advice from the health care workers (P-value<0.05), but had no relationship of perceived risk and severity to cervical carcinoma.

Vanida Senawong(35)used quasi's study to investigate the effectiveness of health education program with husband support in 113 working women to get

cervical cancer screening in Nonthaburi Province during December-February1991. The researcher found that after participating in the health education program, the experimental group had changes in their behaviors in a better way when compared with the behaviors before participating in the program and with the control group. In addition, the proportion of women in the experiment group who came to receive cervical cancer screening was significant higher than that of the control group. The check up had significant positive relationship with the knowledge related to cervical carcinoma and spousal support, having children, and not having children. It also found that health behavior to prevent from cervical carcinoma had significant positive relationship with perceived benefit and barriers to cervical cancer screening. The intention to request for cervical cancer screening had significant positive relationship with getting the test.

Phornee Surin (36) reported her quasi's experimental design about the effectiveness of applying social marketing to 165 rural women in Surin Province. The samples were 165 married women with age between 25-60 years. The research found that after launching activities in targeting the women checked for cervical cancer screening, the experimental group had improved in their perceived risk and severity to cancer, perceived barriers and benefits to get cervical cancer screening. In addition, the intentions to getting check up were significantly higher than before participating in the program (P-value<0.05). The proportions of the service received in the experimental group were significantly higher than those in the control group (P-value <0.05).

In addition, the perceived risk and perceived severity to cancer, perceived benefits and barriers to getting cervical cancer screening services and the intention of getting cervical cancer screening had significant relationships with getting cervical cancer screening (P-value<0.05). However, age, family income, experiences of getting cervical cancer screening, relationships between husband and wives, and getting information did not significantly related to getting cervical cancer screening test.

Aaphakorn Supanya (37) studied about the relationship between knowledge, opinion and the reactions towards getting check up of 416 women recruited from family planning from Udonthanee Province by using questionnaire during 3-31 January. It was found that getting information was significantly related to getting cervical cancer screening (P-value<0.01).

Orathai Chomasuk (46) investigated the effectiveness of the health education program combined with social support and motivating letters on cervical cancer screening testing Hmong 162 volunteered housewives in Nong wuasaw District, Udonthanee Province by using a quasi's study. Those married women were aged between 25 to 60 years. After completing the experiment, it was found that knowledge, perceived benefit to cervical cancer screening of the experimental group and the group that received letter of reminding were significantly higher than before participating in the program. In addition, knowledge related to cervical carcinoma of the groups being supported by volunteered housewives was significantly higher than the groups that got reminding letters. The proportion of accessing services for cervical cancer screening of both groups had no significant differences as well as had no significant relationship with the reactions towards the prevention of cervical carcinoma and follow up check. However, perceived social support had significant relationship with the practice on cervical carcinoma and getting cervical cancer screening.

Suphaphorn Rangsisuwan (44) studied on the relationship between knowledge, health belief, motivating factors, and cultural factor with cervical cancer screening of women living in rural of Naso Sub-District, Kudshum District,Yasothorn Province. The samples were divided into two groups of women who have had cervical cancer screening and those who have not had. By using structured interview, it was found that supports by using motivating factors from husbands and neighbors had significant positive relationship with cervical cancer screening. (P-value<0.05).

Nuchnaad Chukiat (47) used quasi's study to investigate the effectiveness of motivating factors on improving health beliefs to cervical cancer and screening in 1996. The samples were 283 women living in rural areas of

Daankhudthod, Nakornrajasrima Province. The researcher found that the motivating program had effects on knowledge, perceived risk, perceived severity, and getting cervical screening of the experimental group. In addition, the number of people receiving cervical cancer had significantly increased when compared with those before launching in the program. It was also found that knowledge, perceiving knowledge, perceiving risks and practicing according to the advice of the experimental group had significant relationship with getting cervical cancer screening. There was no significant relationship between perceived severity of the disease with getting cervical cancer screening.

Chetana Srisai (39) studied factors influencing cervical cancer screening of 237 women recruited from family planning clinic, medical science, Nan Hospital. Data was collected by using questionnaires during1-31 July 1997. Results have shown that receiving information of cervical carcinoma had significant relationship with getting cervical cancer screening (P-value <0.01). However, there were no significant relationships between sources of the information and cervical cancer screening (P-value = 0.06). The receiving advice after knowing the results of the test had significant relationship with getting cervical cancer screening (P-value <0.01). There was no relationship between sources of advice and getting cervical cancer screening (P-value = 0.26).

Pradap Thongsai (40) studied protecting behavior towards cervical carcinoma of 400 female industrial workers in suburb area in Bangkok during 27 November-27 December 1997. Data was collected by using structured interview. It was found that the behaviors supported by getting information about cervical carcinoma had relationship with health behavior to prevent cancer by getting cervical cancer screening (P-value > 0.05)

Pacharee Chanpheng (41) reported in 1998 in relation to preventive behavior of cervical carcinoma of 400 housewives in upper agricultural area in southern part of Thailand. It was found that support by receiving information about cervical carcinoma had no significant relationship with getting cervical cancer

screening (P-value >0.05). In addition, staff members of public health care units received the most information and village public health volunteers received the least information.

Amphai Suphapha (42) studied the same focus of factors in relating preventive behaviors towards cervical carcinoma of 400 housewives in western agricultural part of Thailand. The interviews were done during 13 October-17 November 1997. It was found that the support such as receiving information about cervical carcinoma had significant relationship with getting cervical cancer screening (P-value <0.05). The Public Health staff received the most information and the least was the village public health volunteers.

In conclusions, motivating factors utilized in quasi's studies to promote cervical cancer screening and in the descriptive studies had no significant relationship with getting the check up. Resources of motivations were mostly from husbands and neighbors.

Some information relating hilltribe women

The hilltribe people in Thailand live in both a nuclear family and extended family which is the same as Karen and Lahu. Those in Karen, the nuclear family did not give importance to the gender of their children as much. Either son or daughter can be possible. In contrast, the extended family of Hmong, Yao, Akha, and Lahu set their sons dominantly because the belief of connecting the new generation for their families. Any family who has no son, the husband will be allowed to seek for another wife.

Nevertheless, both in nuclear and extended family, everyone in the families participate in social activities and financial activities of the families. The life-styles related to their culture and traditions of each hilltribe are independently for their both economical and social wise. Children learned how to take their leader roles from their parents so as to take care of them while they are alive and after they are dead. (48)

Yao tribe

The Yao tribes called themselves as Ewe Mian and have history of ancients located in the Middle part of China 2000 years ago. The Yao migrated to Thailand 145 years ago. (49)

Choosing mates

Yao tribes have ancient rules of dating women since they are older than 17 years, but presently it starts at age of 13-14 years (50). They also have traditions of building up their relationship called "Kiewparasee" where it can take place at both in the farm and in the house. Yao youngsters are at ease to choose their own mates. The boys may reach the girls in the bedroom for only one or many nights depending on the agreement of his partners who prefer having sex before marriage. Thus, they can have 1-2 children before marriage as well. The children born will be called Look Phee Fa (ghost child). If the girl is sick, the boy can refuse to get married with his partner, but he has to pay a fine. At present, some villages have increased the amount of fine (49,51). The freedom of the Yao tribes in choosing mates is limited with two conditions. The first is to marry with a person who has different surname and the second is the luck of both should meets. Generally, the elder will get married first but if the younger wants to get married first, the younger couple has to pay to the elder (51).

Having children

Yao tribes perceive delivery or labor as valuable things which is important. It is usually in trend to have many children or adopt other children in their family in order to increase the numbers of family members. How to adopt is to accept their relatives' children who are poorer and cannot take care of their own children. Yao also adopt other hilltribe children but they will not allow their children to go to other tribes what so ever. (51)

From the basic information and the survey results on population structure and reproduction in six main fertile tribes, by the Hilltribe Family Planning Center around the country (16) in 6 tribes of 20 Provinces**,** it was found that almost

80.99 percents of reproductive female Yao of 121 Tribes were aged between 15-19 years old when at first marriage. Of 3.31 percents were younger than 15 years and of 70.25 percents had first child in the ages between 15 to19 years, and 7.44 percents were younger than 15 years. 80.99% had more than two living children. The average numbers of children in a family was approximately 3.64 children. They were mostly married more than one time. Only 65.29 percents had birth control. Sterilization was most frequently used to control birth which is about 77.22 percents, followed by using contraceptive pills (18.99%).

Karen tribe

The history of Karen was told by old people in Mae Hong Sorn that they were originally in Myanmar and had started immigrating to Thailand through Salawin Lake around the end of Ayuthaya Era until the Ratanakosin Era. The Northern dialect calls Karen "Yang" (51). The Karens are peaceful, kind, love deserted lives and are contended. They have strong beliefs in monogamy family such as having one husband and one wife until death. Adultery is social rejected. From their beliefs, it makes Karens live peacefully in a good and loving society. (52)

Choosing mates

Karen youngsters have opportunities to meet their mates even though their parents do not agree with their sexual behavior. The Karen girls are taught to be peacefully and should not show interests outwardly. The activities of Karen girls are mostly as group activities such as cloth stitching and grinding rice at night (51) according to their culture. The youngsters of Karen have freedom to choose their mates by themselves. The parents have no influence to this. The funeral ceremony in a village which mostly takes place for 3 days and 3 nights is a place where the youngsters can pay their attraction to each other. The way to perform attraction is just only staring without any emotional relationship. Have sex before marriage is unacceptable. If done, punishment is made with simple and isolated marry cerebration (52).

After marriage, the boy will move out from his house and settle in his wife's family for at least 2 years. They can move out to live in their own place as a nuclear family later. This is considered matrilineal. The Karen do not accept for divorcing as they believe in lifetime bondage. If either side separates, then he or she will have to pay to other side. However, the house and the children will belong to the ex-wife. The assets will be divided half-half. In case of adultery, it is strongly unacceptable. If it is happened, they will have to kill the big animal to apologize the ghost and their ancestors, distribute salt to all the villages, and the adultery couple will be forced to leave the village.

Having children

Generally, they will have children after the marriage and continue having children until they become naturally infertile. Some women were pregnant about 16 times, but she has only three alive Therefore, having many children of the Karen is the choice of letting the babies grow up the most because they have high incident of infant mortality rates.The Karen also thinks that the family will be perfect after marriages and with children. If a woman cannot have any child, she is considered abnormal or imperfect (Thupho). It is also believed to be sinful of cursed by the sacred things. Children are expected to take care for their parent when they get older, and help them not to be lonely as well as can do hard working.

From the research of the population structure and the reproduction of 6 tribes by the Hilltribe Family Planning Center (16), it was found that the 217 Karen hilltribe women aged between 15-19 years when they were age of first marriage which was about 59.45 percents and 5.07 percents were aged less than 15 years. 41.49 percents were aged 15-19 years at first delivery and 5.99 percents were aged less than 15 years. 52.54 percents have more than two living children. It was found that only one Karen fertile women had 2.6 children. Number of marriage were only once. 5.99 percents were married more than 2 times onward. 63.60 percents has contraception. Pills are mostly used with 44.20 percents. 26.09 percents used injection.

Akha tribe

Akha can be named "Eko" which their origin was located in Yunan

region, China. They immigrated to Thailand more than 100 years. The first group was settling at Ban Eko Sam Yak, Mae Jun Tambon, Maejun Amphur, and Chiangrai Province.(53)

Choosing mates (48, 49, 51)

Akha youngsters are freedom for their mate choosing. When they were 12 to 13 years, they started to identify their mates. Have pre-marriage sexual relationship is acceptable. Body touch is perceived as normal social things. Then they have a place for the lover to meet and date called “Lan Sao Kod”. This is a starting point for their marriage life. After marrying, the couple will live in husband’s family. This is to continue the patrilineal.

Having children

Akha takes their son dominantly according to the belief in patrilineal. If any family has no son, wife has to allow her husband to have a new wife until they can have her own son. Their marriage life is still remained (48).

The information from the survey of population structure and reproductive of six main hillltribe by the Hillltribe Family Planning Center (16), it was found that 78 reproductive Akha women, 52.70 percents and 4.05 percents had first marriage when they were aged between 15-19 years and less than 15 years respectively. 28.38 percents and 8.8 percents had their first child when they were 15-19 years and less than 15 years. 93.24 percents still have their children alive. The average number of lived children per mother was 2.7 persons. Most of them married for one time.2.7 percents married more than 2 times. 58.0 percents had practicing contraception, with sterilizations (40.0%) and pills (29.4%)

Hmong tribe (54)

Hmong (Maew)” is originally in China. The word “Maew” is a Chinese, but they prefer calling themselves “Hmong”. They immigrated to Thailand around 1889 via Lao at Chiang Khong Amphur, Chiangrai Province and Tungchang Amphur, Nan Province.

Choosing mates (54, 55)

Hmong starts their adolescent when they are about 13-14 years. They can choose their mate independently. The girl can invite her boyfriend to chat in her house as well as the boy can bring his girlfriend to stay overnight if she agrees. After that, he has to bring his parents or seniors of his family to meet his girlfriend' family for their marriage. If it happens later than three days, it was perceived as against their tradition and their belief in ghost. Fines are requested. After marrying, the couple will stay with the husband's family as for his patrilineal. Their family is then extended-like.

Having children (48)

Hmong beliefs that the stabilities and security of their family are from having children in their family. Therefore, they take the son as important. If any family has no son, the husband then can have new family. Even though the wife disagrees, she may not be able to stop her husband.

The information from the survey of population structure and reproductive of six main hill hilltribe by the Hillltribe Family Planning Center (16), it was found that Hmong 254 reproductive Hmong women, 72.84 percents and 7.09 percents had first marriage when they were aged between 15-19 years and less than 15 years respectively. 70.27 percents and 7.44 percents had their first child when they were 15-19 years and less than 15 years.69.68 percents still have their children alive. The average number of lived children per mother was 3.64 persons. Most of them married for one time. 4.13 percents married more than 2 times. 38.98 percents had practicing contraception, with injection (42.42 %) and pills (19.2%)

Lahu tribe(56)

Lahu (Musues) calls themselves Lahu. They are originally from Tibet and immigrated to the southern part of Unan region to Burma. They immigrated to the northern part of Thailand since 1885.

Choosing mates (48).

Lahu beliefs that men and women are couple which is like the sky belong to the earth. They compare a couple like a new sprout with two little leaves appeared in a pair. Therefore, Lahu has a single family. A man cannot have more than one wife in a same time. He has to divorce first. If this tradition is refused, it is belief that his life will not be rich and has barriers. After getting married, a couple will stay with the wife's family so as to her matrilineal. They both live longer until they die.

Having children

Luha has not much attitudes towards gender of the baby. They also take care of their children equally as they believe that children are a family bonding.

The information from the survey of population structure and reproductive of six main hilltribe by the Hilltribe Family Planning center (16), it was found that 156 reproductive Lahu women, 70.51 percents and 8.97 percents had first marriage when they were aged between15-19years and less than 15 years respectively. 49.36 percents and 11.4 percents had their first child when they were15-19 years and less than 15 years.46.15 percents still have their children alive. The average number of children alive per mother was 2.38 persons. Most of them married for one time. 8.33 percents married more than 2 times. 59.62 percents had birth control, with injection (68.89 %) and female sterilization (13.97%)

According to the literature review and research related, it can be seen that some population factors, knowledge about cervical cancer and health belief have an important roles in preventing the cancer. If an individual received a right knowledge, it will lead to accurate health beliefs as well as compliance to preventing the cancer. However, sometimes, good knowledge and beliefs may not lead to appropriate health behavior if there is a lack of effective motivation or support. The researcher is interested in some general characteristics including age, income, education, age of first marriage, numbers of marriage, age of first delivery, number of children, practicing contraception, abnormal vaginal symptoms, knowledge, health belief and motivating factors of hilltribe related to cervical carcinoma. Therefore, the researcher used those variables and Health Belief Model of Becker and Miman as a framework of this study. (Figure 2)

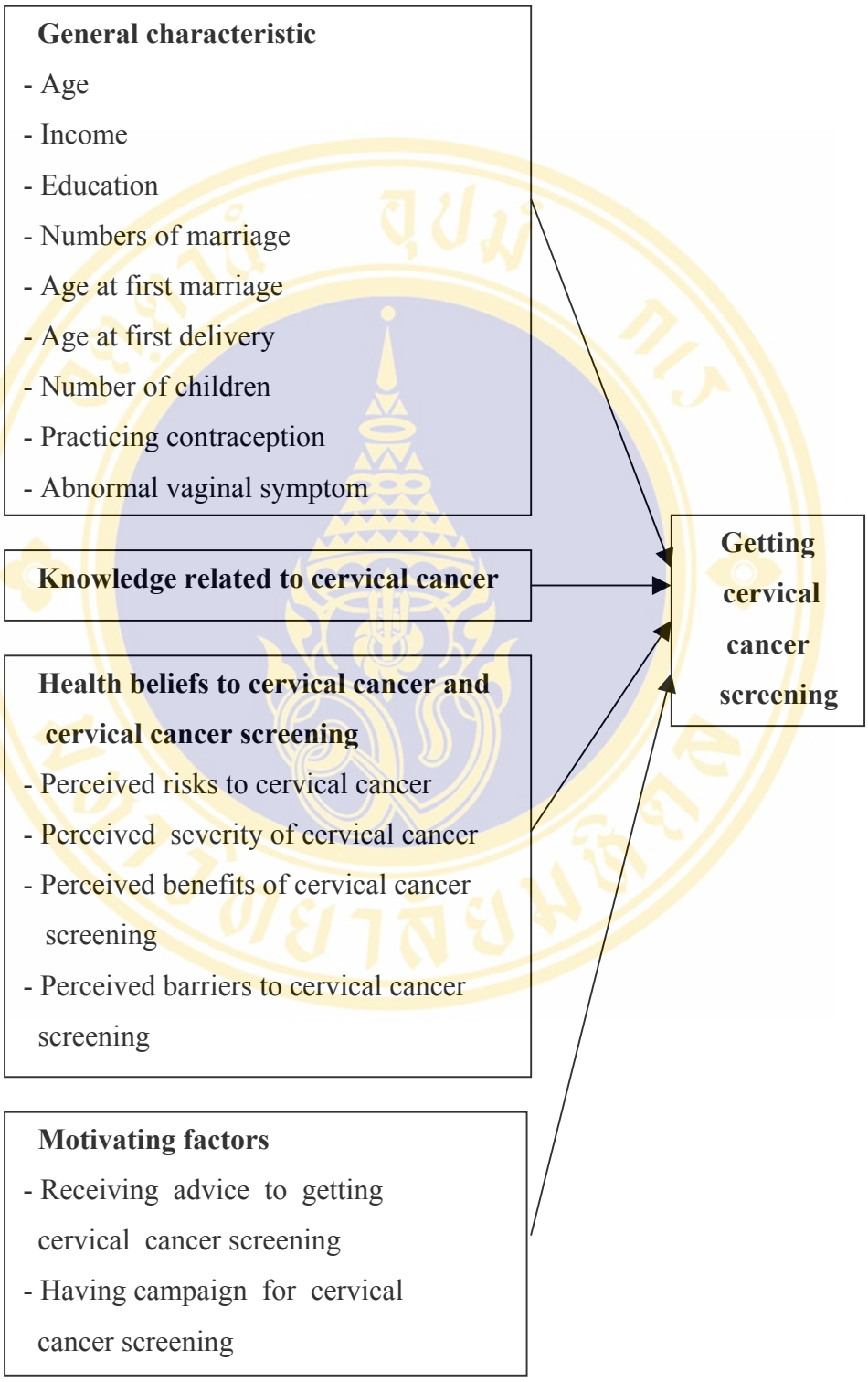

Figure 2 Conceptual framework for this research

CHAPTER 3
MATERIALS AND METHODS

This is a descriptive cross-sectional study among married female hill tribes in Lampang Province. The study designed to collect data by using structured interviewing. Tools were developed by the researcher in order to investigate general characteristic factors, knowledge, health beliefs to cervical cancer and cervical cancer screening and the relationships between those factors and receiving cervical cancer screening of the hilltribe women in Lampang.

Samples

Participants in this study were

1. Women from five hilltribes including Yao, Karen, Akha, Hmong and Lahu.
2. Aged between 15-59 years.
3. Married and living with their husband during the study being conducted.
4. Located in 6 districts in Lampang Province. (In Lampang Province, there are thirteen districts, seven districts reported no hilltribes living in.)

Sampling

The sampling techniques were subsequently done by using simple random sampling and followed by Multi-stage random sampling.

Step 1. Stratified random sampling the hilltribe women group. (Yao, Karen, Akha, Hmon and Lahu) Then picking up a blind code number of Districts in each hilltribes.

Step 2. Random sampling the hilltribe women by picking up a blind code number of Sub districts from Districts which picking up.

Step 3. Random sampling the hilltribe women by picking up a blind code number of village from Sub districts which picking up.

Step 4. Accidental sampling for the hilltribe women in each village when we meet them during the interview and they accepted to be interviewed.

Estimation of sample size

In order to make the samples covered the women aged between 15 to 59 years, researcher was replaced the proportion (π=0.5) in the formula to calculate the sample size of this study.

Sample size $$n = \frac{Z^2_{\infty/2}\ \pi(1-\pi)}{d^2} \quad (57)$$

n = sample size

$Z_{\infty/2}$ = Standard value under normal curve at alpha level 0.05. The value is 1.96

π = Proportion of hilltribe women who received cervical cancer screening is 0.5

d = Accepted error for estimating proportion of population in this study. The value is set for 5% error

$$n = \frac{(1.96)^2\ (0.5)\ (0.5)}{(0.05)^2}$$

= 384 cases

In this collected data, researcher was determined to increase one village which near village picking up to cover the sample size because this area was difficulty in traveling. Thus the sample size was 594 cases.

Developing Instruments

The processes of developing instruments for this study were:

1. Setting the scopes of research questions and hypothesis and

identifying the required data. This process helped gathering the information to answer the research questions and the hypothesis.

2. Reviewing literature from several kinds of resources including books and research reports in order to use as a frame for developing the interviewing form.

3. Determining the interviewing form developed. This process was mainly focused on the length and characteristics of the interviewing form in order to maximize the effectiveness of the questionnaires, convenience of the interviewers and applicability of data collection and analysis.

4. Draft of the questions to be interviewed by locating them within the frame of the study, and check also for the completions of the content as well as the directness to the objectives and hypothesis of the study.

5. Testing the content validity and reliability of tool before using

(See page 49-51 for more details about validity and reliability of tool).

Instrument

The instrument of this study was the interview forms developed by the researcher using literature review from research studies and books. Contents were mainly focused to fulfill the objectives and hypothesis of the study. The information form consisted of four sections described below:

Section I General characteristic data form. This 14-items questionnaire asking about general characteristic data of hilltribe women and their medical history related to cervical cancer screening. Details included age, income, educational level, times of marriage, age of first married, age of first delivery, number of children, practicing contraception and abnormal vaginal symptoms.

Section II Questionnaire about health beliefs in cervical cancer and cervical cancer screening test. The details included 19-items for four kinds of health beliefs, which were:

- Beliefs and perception of the risk of cervical cancer 5 items
- Beliefs and perception of severity of cervical cancer 5 items

- Beliefs and perception of the benefit for cervical cancer screening 5 items
- Beliefs and perception of barriers to receive cervical cancer screening 4 items

In each item, there were 3 choices for answering including

Strongly agree means that the women had the highest level of beliefs or perceptions to the statements.

Partially agree means that the women were not sure that they had beliefs or perceptions to the statements.

Disagree means that the women did not beliefs the statements.

Scoring of the questionnaire consisted of both positive and negative statements, scoring was depended on the characteristics of the statements as follows:

For positive statement, keys to mark the score were:

Strongly agree	3 marks
Partially agree	2 marks
Disagree	1 marks

For negative statement, keys to mark the score were:

Strongly agree	1 marks
Partially agree	2 marks
Disagree	3 marks

The lowest score of health beliefs was 1 mark and the highest score was 3 marks. The researcher then recorded the score by using three-level rating scales as follows:

The value of the mean score equal to over 1.33 or 80 percents means having beliefs in a high level.

The value of the mean score ranged from .67-1.32 or 60-79 percents means having beliefs in a moderate level.

The value of the mean score ranged from 1- .66 or 0-59 percents means having beliefs in a low level.

Section III Questionnaire about knowledge of cervical cancer and pelvic examination. Scopes of the questions were about definitions, etiology, and risk

factors of cervical cancer, signs and symptoms, diagnosis, treatment, prevention of the cancer and the usefulness of the screening.

This section consisted of 14 multiple-choice questions. The total score was 14. Three choices were addressed for being chosen in each question.

Ranged from yes, no and do not know

Yes No Do not know

Criteria for scoring

Correct answer	1 score
Incorrect answer	0 score
Do not know	0 score

The assessment of knowledge of cervical cancer was calculated by using the total score of the measurement, which the data ranged from 0 to 14. The total score was then grouped into three levels by using the following criteria.

Score ranged from 11-14 or 70-100 percents means high level.

Score ranged from 8-10 or 50- 69 percents means moderate level.

Score ranged from 0- 7 or 0- 49 percents means low level.

Section IV: Questionnaire about motivating factors toward cervical cancer screening. The questions mostly focused on

1. Receiving advice for cervical cancer screening. The answers were dichotomous with “receiving” and “not receiving ” If the answer was receiving advice for cervical cancer screening, then more details of multiple-choice questions were asked about resource of advice.

2. Campaign for promoting cervical cancer screening. The answers were dichotomous with the same pattern of the above aspects including “having” and “not having” campaign to promote the cervical cancer screening test.

Reliability and validity of the instruments

1.Content validity of the instruments was determined by focusing on the congruence, completeness of the language used, sequencing of the question. the validity of the content and structure was examined by three expertise, the instruments

were then subsequent revised until the criteria were fulfilled.

2. Reliability of the questionnaires were tested to 30 women who had the same characteristics as the participants in this study.

2.1 The statistic used to calculate internal reliability of the questionnaire about knowledge related to cervical cancer and cervical cancer screening test was Kuder Richardson 20 (KR 20) (58) . The formula was

$$KR20 : r_{xx} = \frac{k}{k-1}\left(1 - \frac{\Sigma pq}{Sx^2}\right)$$

When r_{xx} = Reliability coefficient

k = Number of questionnaires

p = Proportion of persons who marked the correct answer

q = Proportion of persons who marked incorrect answer in each item ($q = 1 - p$)

pq = Variances of score in each item (calculated by multiplying the proportion of persons who answer the question correctly and incorrectly)

Σ = Sum. in this case, Σpq is a total sum of all pq in each item.

S_x^2 = Variances of total score

KU20 = 0.77

2.2 The statistic used to calculate internal reliability of the questionnaire about health beliefs to cervical cancer and cervical cancer screening was calculated by using Cronbach's alpha coefficient which is suitable for rating scale questionnaire (58). The formula is as follows:

$$\infty = \frac{k}{k-1}\left(1 - \frac{\Sigma S_1^2}{S_X^2}\right)$$

When k = number of items

S_1^2 = Variance of each item

S_x^2 = Variance of total test or equal to Square root of standard deviation of the total score

∞ = 0.69

Data collection

The researcher collected data from the samples according to the following processes:

1.Submitting an official letter to the Provincial Public Health Administrator for approval of data collection plan in the randomized villages.

2.Official co-ordination with the six District Public Health Administrators for organizing data collection in the villages.

3. Selection and training research assistants for interviewing techniques and data recording. The aims of this study were clearly discussed. This would help to understand the purpose of each question before the interviews started.

4.The researcher and the research assistants collected data by introduced them selves to the hilltribe women, provided information about the objectives of the study and asked for their consent.

5.Checking for the completeness of the questionnaires after interviewing and then analyzed the data.

Data analysis

1.Preparing the data and coding

The researcher rechecked the correctness and completion of all questionnaires. The data were coded and recorded into the diskette and analyzed, using SPSS program version 7.5 (Statistical Package for the Social Sciences).

2.Statistics used for data analysis were (58):

2.1 Descriptive statistics for summarizing information gathering from the study. The details were described by using number, percentage, mean and standard deviation. All information was subsequently utilized.

2.2 Analytical statistics were used to identify the relation between factors and receiving cervical cancer screening by using Chi – Square test.

Variables in the study

Independent variables were

1. Age
2. Income
3. Education
4. Number of marriage
5. Age of first marriage
6. Age of first delivery
7. Number of children
8. Practicing contraception
9. Abnormal vaginal symptoms
10. Level of knowledge related to cervical cancer screening
11. Perceived risk to cervical cancer related to cervical cancer screening
12. Perceived severity to cervical cancer related to cervical cancer screening
13. Perceived benefit to cervical cancer related to cervical cancer screening
14. Perceived barriers to cervical cancer related to cervical cancer screening
15. Receiving advice related to cervical cancer screening
16. Having campaign for cervical cancer screening

Dependent variable was receiving cervical cancer screening

CHAPTER 4
RESULTS

This research had the objectives to study the rate of cervical cancer screening by Pap smear and related factors for screening among hilltribe women in Lampang Province. The results of the research were presented in 2 parts.

Part 1: The general data of hilltribe women such as, general characteristics, the rates of cervical cancer screening by Pap smear, the level of knowledge and health beliefs of cervical cancer screening and the motivating factors to have cervical cancer screening.

Part 2: The association between general characteristics, knowledge, health beliefs, and the motivating factors of hilltribe women and cervical cancer screening.

Part 1 The general data of the hilltribe women

1. General characteristics (Table 1)

Age: Fifty five percents of the hilltribe women aged between 20 – 39 years old and 37.5 percents of aged between 40–59 years old. The mean age was 35.5 years old, the youngest was 15 years old, and the oldest was 59 years old.

Income: Almost half (48.0 %) of the hilltribe women had income less than 10,000 Bahts/ year. The mean income was 19,996 ± 2,183.33 Bahts/ year. The lowest income was 500 Bahts/ year, and the highest income was 140,000 Bahts/ year.

Education: Education levels of most the hilltribe women (66.3 %) were uneducated and only 5.6 percents had Muthayom level.

Number of marriage: Most of the hilltribe women had one time marriage (87.7 %). The mean number of marriage was 1.14.

Age at first marriage: Most of the hilltribe women had age at first marriage less than 19 years old (66.3 %). The mean age at first marriage was 18.31 years old. The youngest was 16 years old and the oldest was 40 years old.

Age at first delivery: Most of the hilltribe women delivered their first child at the age less than 19 years old (60.8 %). Only 36.2 percents gave birth when their age ranged between 20-29 years. The mean age at first birth was 18.0 ± 3.1 years. The youngest was 17 years old and the oldest was 40 years old.

Number of children: Most of the hilltribe women had more than three children (60.6 %). The mean number of children was 3.7 ± 2.4. The lowest and the highest number of children was one and fourteen, respectively.

Practicing contraception: Only 56.4 percents of the hilltribe women were currently use contraceptive methods. Most of them used injectable or implant (43.0%) and pills (36.4%). According to low contraceptive prevalence rate effect to more children. In this study have found that the hilltribe women have children more than three. (60.6 %).

Abnormal vaginal symptoms: Seventy nine percents of the hilltribe women had abnormal vaginal symptoms such as: leukorrhea, foul smell discharge, bleeding, and genital itching.

Table 1 Number and percentages of the hilltribe women classified by general characteristics.

general characteristics	Number n = 594	Percentages 100.0
Age (yrs)		
≤ 19	45	7.6
20 – 29	172	28.9
30 – 39	157	26.0
40 – 49	133	22.4
50 – 59	87	15.1
Mean ± SD = 35.5 ± 11.23 Min =15, Max =59		
Income (baht / year)		
0 – 9999	285	48.0
10,000 – 19,999	172	28.9
≥ 20,000	137	23.1
Mean ± SD = 19,996 ± 2,183.33 Min = 500, Max = 140,000		
Education		
No education	394	66.3
Pratom 4	50	8.4
Pratom 6	101	17.0
Muthayom	33	5.6
Other	16	2.7
Number of marriage		
1	521	87.7
2	64	10.8
3	9	1.5
Mean ± SD = 1.14 ± 0.39 Min =1, Max = 3		
Age at first marriage (yrs)		
≤ 19	387	66.3
20 – 29	188	31.6
≥ 30	19	3.1
Mean ± SD = 18.31 ± 3.78 Min = 16, Max = 40		

Table 1 Number and percentages of the hilltribe women classified by general characteristics.(continued)

general characteristics	Number n = 594	Percentages 100.0
Age at first delivery (yrs)		
≤ 19	361	60.8
20 – 29	215	36.2
≥ 30	18	3.0
Mean ± SD = 18.0 ± 3.11 Min = 17, Max = 40		
Number of children		
1	19	3.2
2	215	36.2
> 3	360	60.6
Mean ± SD = 3.68 ± 2.43 Min = 1, Max = 14		
Practicing contraception		
No	259	43.6
Yes	335	56.4
Pills	122	36.4
Injectable & implant	144	43.0
IUD	8	2.4
Vasectomy	27	8.1
Condom & others	34	10.1
Abnormal vaginal symptoms		
Yes	126	21.2
No	468	78.8

2. The rate of cervical cancer screening of the hilltribe women

The rate of cervical cancer screening among hilltribe women was 70.9 percent. The reason of screening was leucorrhea or bleeding per vagina and gynecological examination (43.7%), annual screening (33.9%). The hilltribe women

refused to have cervical cancer screening because of they did not have abnormal symptoms (46.2%) and did not have knowledge about cervical cancer (41.1 %). (Table 2)

Table 2 Number and percentages of cervical cancer screening of the hilltribe women and the reasons for receiving and refusing cervical cancer screening.

Cervical cancer screening	Number n = 594	Percentages 100.0
Yes (answer more than one)	421	70.9
- Annual screening	143	33.9
- Post partum or post abortion follow up	104	24.7
- Leucorrhea or bleeding per vaginal and gynecological examination	184	43.7
-Fear of cervical cancer	100	23.8
No (answer more than one)	173	29.1
-No knowledge about cervical cancer	71	41.1
-No abnormal symptoms	80	46.2
-No risk of cervical cancer	56	32.4
-Worry and fear of pain	55	31.8
-Feel shy	30	17.3
-No knowledge about the place for check up	34	19.6
-Financial problem	32	18.5

3. The level of knowledge and health beliefs about cervical cancer screening of the hilltribe women.

3.1 The level of knowledge (Table 3)

Fifty two percent of the hilltribe women had high level and 22.7 percents had low level of knowledge about cervical cancer. When considering each items of knowledge, it was found that they did not have knowledge about signs and symptoms, diagnosis, and treatment of cervical cancer, such as: an early stage of cervical cancer (pre-invasive) may not have any abnormal symptoms and signs

(47.9%), women who have bloody vaginal discharge after sexual intercourse is more likely to have cervical cancer (44.0%), diagnosis can be made by cervical biopsy (47.1%) and radiotherapy treatment is used when the cancer is spread (34.1%).

Table 3 Percents, mean and standard deviation of correct answer of knowledge about cervical cancer.

Statement	correct answer		
	%	Mean	SD
Knowledge about cervical cancer			
- Cervical cancer is dangerous tumor caused by abnormal growth of cells at cervix and can distribute to other parts of human body.	52.8	0.58	0.79
- Having several children can cause cervical cancer.	56.8	0.61	0.72
- Cervical cancer is mostly found in married women who still living with their husbands.	68.7	0.73	0.69
- An early stage of cervical cancer (pre-invasive) may not have any abnormal symptom and signs.	47.9	0.52	0.73
- One symptom of invasive cervical cancer is having bad smell, yellowish or cloudy discharge from vagina (leucorrhea).	53.9	0.62	0.94
- Women who have bloody vaginal discharge after sexual intercourse is more likely to have cervical cancer.	44.0	0.49	0.79
- Cervical biopsy (cutting a very small part of cervical tissue) is one of method to detect cervical cancer.	47.1	0.51	0.73
- Early stage of cervical cancer can be cured by surgery.	49.6	0.54	0.73
- Radiotherapy treatment is used when the cancer is spread.	34.1	0.42	0.94
- Having experience of sexual intercourse at younger age less than 20 years is the risk of cervical cancer.	49.4	0.55	0.79

Table 3 Percents, mean and standard deviation of correct answer to test of knowledge about cervical cancer.(continued)

Statements	correct answer		
	%	Mean	SD
Knowledge about cervical cancer			
- Having fewer children can reduce the risk of cervical cancer.	52.3	0.58	0.79
- Pelvic examination is a method to detect cervical cancer.	77.6	0.82	0.66
- Women age over 40 years should have Pap smear test.	49.1	0.55	0.79
- Screening test for cervical cancer is time consumed and complicated.	38.0	0.47	0.95
Level of knowledge (n = 594)			
High (≥ 70 %)	52.2		
Moderate (50- 69 %)	25.1		
Low (≤ 49 %)	22.7		

3.2 Health beliefs (Table 4)

For health beliefs, most of hilltribe women perceived of risk and severity of cervical cancer at a moderate level. (56.6% and 58.2% respectively). When considering each the items of beliefs, this study found that: married women had higher risk to cervical cancer than unmarried women (48.3%), having abnormal or foul smell vaginal discharge can be a risk of cervical cancer (48.7%), if cervical cancer develops, people will lose their weight (51.3%),women who gives birth since they were very young have the risk to develop cervical cancer (54.7%).

The perceived benefits of cervical cancer sceening among hilltribe women was moderate (53.0%). Most of hilltribe women perceived of barrier of cervical cancer screening in moderate level (89.4%). When considering about the item of perceiving benefits and barrier of cervical cancer screening it was found that they did not belief that Pap smear will help them to detect cervical cancer (41.1%), if cervical cancer can be early detected, early treatment can be done (42.3%), if cervical

cancer is detected in an early stage, the opportunity to be cured is more than being detected in a late stage (42.3%), and embarrassment cannot prevent you from getting pelvic examination when its benefit is determined.(43.7%)

Table 4 Percents, mean and standard deviation of health beliefs about cervical cancer.

Statements	%	Mean	SD
Perceiving risk of cervical cancer			
- Married women have higher risk of cervical cancer than unmarried women.	48.3	1.45	0.94
- Having child birth at young age have a risk to develop cervical cancer.	53.3	1.60	1.05
- Married women can have a risk to cervical cancer from poor hygiene penises of the husbands.	49.0	1.47	1.01
- Having experienced of sexual transmitted diseases several times do not related to cervical cancer risk for women.	66.7	2.0	0.90
- Having abnormal or foul smell discharge from vagina can be a risk of cervical cancer.	48.7	1.46	1.03
Level of perceived risk of cervical cancer (n=594)			
High (≥ 80 %)	9.4		
Moderate (60 - 79 %)	56.6		
Low (≤ 59 %)	34.0		
Perceiving severity of cervical cancer			
- If cervical cancer develops, people will loose their weight.	51.3	1.54	1.09
- If the cancer spread , people will have bloody urine or feces	54.7	1.64	1.01
- Women with cervical cancer in any stage of disease can work for their income as they had ever done before	72.0	2.16	0.83

Table 4 Percent, mean and standard deviation of health beliefs about cervical cancer.(continued)

Statements	%	Mean	SD
Perceiving severity of cervical cancer			
- Husband, daughter/son and their relatives will waste their times in caring for women with cervical cancer in their families.	57.7	1.73	1.10
- Women with cervical cancer can experience rejections from their neighbors.	73.0	2.19	0.90
Level of perceived severity of cervical cancer (n=594)			
High (≥ 80 %)	10.3		
Moderate (60 - 79 %)	58.2		
Low (≤ 59 %)	31.5		
Perceiving benefits of cervical cancer screening			
- Pap smear helps us to detect cervical cancer.	41.1	1.25	0.90
- Although the cervical cancer is early detected in an early stage, it doesn't mean that the cancer can be cured.	68.0	2.04	0.91
- Pap smear cannot help to prevent metastasis of cervical cancer.	72.7	2.18	1.14
- If cervical cancer can be early detected, early treatment can be done.	42.3	1.27	0.85
- If cervical cancer is detected in an early stage, the opportunity to be cured is more than being detected in a late stage.	42.3	1.27	0.85
Level of perceived benefits (n = 594)			
High (≥ 80 %)	4.7		
Moderate (60 - 79 %)	53.0		
Low (≤ 59 %)	42.3		

Table 4 Percent, mean and standard deviation of health beliefs about cervical cancer.(continued)

Statements	%	Mean	SD
Perceiving barrier of cervical cancer screening			
- Embarrassment cannot prevent you from getting pelvic examination when its benefit is determined.	43.7	1.31	0.89
- The fear of discovering cervical cancer prevents you from getting pelvic examination.	73.0	2.19	0.89
- Pelvic examination is not painful.	57.0	1.71	1.06
- Pelvic examination is costly. This prevents you from getting pelvic examination.	76.0	2.28	0.87
Perceiving barrier of cervical cancer screening (n=594)			
High (≥ 80 %)	9.1		
Moderate (60 - 79 %)	89.4		
Low (≤ 59 %)	1.5		

4. The motivating factors for having cervical cancer screening (Table 5).

4.1 Most of hilltribe women (66.7 %) received the advice about cervical cancer screening from the health care providers such as: domestic health care workers and primary health care volunteers of the village (87.4%). Only twenty-nine percent received advice from the doctors and only thirty- three by nurses.

4.2 Seventy seven point six percent of hilltribe women knowing about the campaign for cervical cancer screening in their community.

Table 5 Number and percentages of hilltribe women who received advice for cervical cancer screening and knowing about the campaign.

Motivation	Number n = 594	Percentages 100.0
Received advice to have cervical cancer screening		
Yes	396	66.7
Doctors	115	29.0
Nurses	131	33.1
Other health care providers	346	87.4
Friends and relatives	181	45.7
Mass media	177	44.7
No	198	33.3
Knowing about the campaign for cervical cancer screening		
Yes	461	77.6
No	133	22.4

Part 2: The association between general characteristics, knowledge, health beliefs, and the motivating factors of hilltribe women with cervical cancer screening.

2.1 The association between general characteristics of the hilltribe women and cervical cancer screening.

As seen from Table 6, age, education, practicing contraception and abnormal vaginal symptoms had statistically significant association with practice of cervical cancer screening by Pap smear. Most of them received cervical cancer screening especially in the group of age 30-39 years old(76.4%), no education (76.4%) practicing contraception (78.2%) and having abnormal vaginal symptoms (79.4%).

Table 6 The association between of general characteristics of the hilltribe women and cervical cancer screening.

General characteristics	Cervical cancer screening		χ^2	df	P-value
	Ever (%)	Never (%)			
Age (yrs)			22.539	4	0.004*
≤ 19	21 (46.7)	24 (53.3)			
20 – 29	126 (73.2)	46 (26.7)			
30 – 39	120 (76.4)	37 (23.6)			
40 – 49	100 (75.9)	33 (24.8)			
50 – 59	54 (62.1)	33 (37.9)			
Income (baht / year)			3.129	2	0.209
0 – 9,999	202 (70.9)	83 (29.1)			
10,000 – 19,999	118 (68.6)	54 (31.4)			
≥ 20,000	101 (73.7)	36 (26.3)			
Education			28.276	4	0.002*
No education	301 (76.4)	93 (23.6)			
Pratom 4	28 (56.0)	22 (44.0)			
Pratom 6	70 (69.3)	31 (30.7)			
Muthayom	12 (36.4)	21 (63.6)			
Other	10 (62.5)	6 (37.5)			
Number of marriage			0.494	2	0.947
1	370 (71.0)	151 (29.0)			
2	44 (68.7)	20 (31.3)			
3	7 (77.8)	2 (22.2)			
Age at first marriage (yrs)			2.403	2	0.662
≤ 19	276 (71.3)	111 (28.7)			
20 – 29	128 (68.1)	60 (31.9)			
≥ 30	17 (89.5)	2 (10.5)			

* = Significant

Table 6 The association between of general characteristics of the hilltribe women and cervical cancer screening. (continued)

General characteristics	Cervical cancer screening Ever (%)	Never (%)	χ^2	df	P-value
Age at first delivery (yrs)			2.443	2	0.655
≤ 19	253 (70.1)	108 (29.9)			
20 – 29	154 (71.6)	61 (28.4)			
≥ 30	14 (77.8)	4 (22.2)			
Number of children			6.649	2	0.156
1	11 (57.9)	8 (42.1)			
2	197 (91.6)	18 (8.4)			
≥ 3	213 (59.2)	147 (40.8)			
Practicing contraception			24.019	1	< 0.001*
No	159 (61.4)	100 (38.6)			
Yes	262 (78.2)	73 (21.8)			
Pill	93 (76.2)	29 (23.8)			
Injectable & Implant	121 (84.0)	23 (16.0)			
IUD	6 (75.0)	2 (25.0)			
Vasectomy	18 (66.7)	9 (33.3)			
Condom & other	24 (70.6)	10 (29.4)			
Abnormal vaginal symptoms			12.36	1	0.015*
Yes	100 (79.4)	26 (20.6)			
No	321 (68.6)	147 (31.4)			

* = Significant.

2.2 The association between level of knowledge and health beliefs and practice of cervical cancer screening by Pap smear.

From Table 7, knowledge about cervical cancer of the hilltribe women had not statistically significant associated with cervical cancer screening. Most of them who had moderate level were received cervical cancer screening.

Health beliefs of perceiving of risk of cervical cancer, severity of cervical cancer and barrier of cervical cancer screening had statistically significant relationship. Most of them who had level of health belief more than 70 percents received cervical cancer screening.

Table 7 The association between level of knowledge, health beliefs and cervical cancer screening.

Level	Cervical cancer screening		χ^2	df	P-value
	Ever (%)	Never (%)			
Level of knowledge:			2.29	2	0.317
High	212(68.4)	98 (31.6)			
Moderate	115(77.2)	34 (22.8)			
Low	94 (69.6)	41 (30.4)			
Level of health beliefs:					
Perceiving risk of cervical cancer			194.62	2	< 0.001*
High	33 (58.9)	23 (41.1)			
Moderate	241 (71.7)	95 (28.3)			
Low	147 (72.8)	55 (27.2)			
Perceiving severity of cervical cancer			45.56	2	< 0.001*
High	41 (67.2)	20 (32.8)			
Moderate	242 (69.9)	104 (30.1)			
Low	138 (73.8)	49 (26.2)			
Perceiving benefits of cervical cancer screening			5.48	2	0.480
High	18 (64.3)	10 (35.7)			
Moderate	232 (73.7)	83 (26.3)			
Low	171 (68.1)	80 (31.9)			
Perceiving barrier of cervical cancer screening			587.28	2	< 0.001*
High	42 (77.8)	12 (22.2)			
Moderate	375 (70.6)	156 (29.4)			
Low	4 (44.4)	5 (55.6)			

* = Significant

2.3 The association between the motivating factors and practice of cervical cancer screening by Pap smear.

Hilltribe women who received advice and knowing about the campaign for cervical cancer screening were statistically significant associated with practice cervical cancer screening by Pap smear (Table 8).

Table 8 The association of motivating factors and cervical cancer screening of hilltribe women.

Motivating factors	Cervical cancer screening		χ^2	df	P-value
	Ever (%)	Never (%)			
Receiving advice of cervical cancer screening			87.40	1	< 0.001*
Yes	312 (78.8)	84 (21.2)			
No	109 (55.1)	89 (44.9)			
Knowing about the campaign for cervical cancer screening			75.83	1	< 0.001*
Yes	355 (77.0)	106 (23.0)			
No	66 (49.6)	67 (50.4)			

* = Significant

CHAPTER 5
DISCUSSION

The objectives of this survey research were to study the rate of cervical cancer screening by Pap smear, the level of knowledge, health beliefs and associated factors of practice screening among the hilltribe women in Lampang Province. The discussion is divided into 2 sections as follow:

1. The discussion of research methodology
2. The discussion of research results

Research methodology

1. Research design

This study was a cross-sectional survey research, which collected data by interview hilltribe women. The sampling groups were hilltribe women in Lampang Province. The research design is appropriate according to the objectives of the study.

2. The study sample and sample size

The study sample were hilltribe women including Yoa, Karen, Akha, Hmong and Lahu in Lampang Province in 2002. The number of hilltrible women in this study was 594 cases, which was adequate according to the calculated sample size by Danial's formula.

3. Research Instrument

The instrument of this study was the interviewing form developed by

researcher using literature review. The content covered all the objectives. The content validity of the questionnaires was examined for its accuracy by three experts. Reliability test of the questionnaires was determined by the pilot study of 30 hilltribe women in Lampang Province. (KR 20 = 0.77, Cronbach's alpha = 0.69)

4. Data Collection

Data collection was interviewing by researcher and research assistants who was trained for interviewing techniques and data recording. Because most of the hilltribe women were not able to read the questionnaires, the study had three interviewing team for data collection.

5. Data Analysis

Descriptive statistics including number, percentage, mean and standard deviation were used. Analytical statistics were used to identify the relationship between factors and cervical cancer screening by using Chi-square test.

Research results

According to the study on knowledge and health beliefs related to cervical cancer and receiving cervical cancer screening of hilltribe women in Lampang Province, the discussions would follow the hypothesis.

Hypothesis 1. General characteristic variables which were age, income, education, age at first marriage, numbers of marriage, age at first delivery, number of children, practicing contraception and abnormal vaginal symptoms had statistically significant relation with getting cervical cancer screening.

By Chi-square test, the results had shown that the variables that had relation with cervical cancer screening test were age, education,

practicing contraception and abnormal vaginal symptoms.

Age had a statistical significant relation with cervical cancer screening test (P<0.05). Hilltribe women age between 30-39 years and 40-49 years had cervical cancer screening more frequently than other age groups, which were 76.4 and 75.9 percents respectively. The results of this study were congruent with the study of Srisai (39) that most women who received family planning were aged 35 or less.

This study also found that the level of education had a statistical significal relation with cervical cancer screening test (P<0.05). Hilltribe women in non-educated group (76.4%) had cervical cancer screening more frequently than other groups with higher level of education. The results of this study were different from many researchers such as; Senawong (35), Supanya (37), Therawatthanasakul, Sirisawang and Pathamapgan (38), and Thongsai (40) that, whose participants were higher education to receive cervical cancer screening more than those were low education. This may be due to most of the hilltribe women in this study are non-educated which was different from those studies whose participants were mostly high educated and living in the main land.

Practicing contraception also had a statistical significant relation with cervical cancer screening (P<0.001). This research found that 78.2 percent of women who received family planning services had cervical cancer screening which was similar to the study of Srisai (39) in the women who received family planning service at Nan Hospital. The types of contraception also had relation with cervical cancer screening. The women who received contraceptive pills and implantation had the most frequent cervical cancer screening.

The results also found that abnormal vaginal symptoms had a statistical significant relation with cervical cancer screening (P<0.05). Both of the groups, had and not had abnormal vagina symptoms, had cervical cancer screening which were 79.4 and 68.6 percent respectively. Thus most of them received advice (66.7%) and knowing about the campaign (77.6%) for cervical cancer screening test.

We can see that only general characteristic variables had statistically significant relation with cervical cancer screening but age at first marriage, number of marriage, age at first delivery and numbers of children had no statistically significant

relation with the screening test. This may because sexually transmitted viruses are proved as a genotype of carcinogen, which are the major causes of gene mutation of causes of gene mutation of cervical cell and lead to the cervical cancer. (21, 22, 23, 24, 25)

Hypothesis 2. Level of knowledge and health beliefs of hilltribe women had statistically significant relation with getting cervical cancer screening.

The groups of hilltribe women who had moderate level of knowledge related to cervical cancer were the majority group who received cervical cancer screening (77.27%) but the Chi-square test showed that knowledge related to cervical cancer had no statistically significant relation with getting cervical cancer screening test. The results were similar to the study of Supunya (37) and Srisai (39) that perception to cervical cancer had no significant relationship to cervical cancer screening test. There are several studies revealed the different results; Gavira (43), Theerawathanasakul, Sirisawang and Pathamaphan (38), Rangsisuwan (44), Thongsai (40), Chanpheng (41) and Suphapha (42) that, the level of knowledge about cervical cancer of whose participants had statistically significant relation with getting cervical cancer screening and them had moderate to high level of knowledge.

When considering each item of knowledge it was found that hilltribe women did not have the knowledge about symptoms and sign, diagnosis, treatment of cervical cancer, such as; an early stage of cervical cancer (per-invasion) may not have any abnormal symptoms (47.9%), women who have bloody vaginal discharge after having sexual intercourse is more likely to have cervical cancer (44.0%), diagnosis can be made by cervical biopsy (47.1%) and treatment in used by radiotherapy when the cancer is widely spread (34.1%). This may because most of them received advice and knowing about the campaign for cervical cancer screening in their village more than knowledge.

In case of health beliefs, it was found that in details of each elements of health beliefs of hilltribe women had statistically significant relation to the receiving of cervical cancer screening ($p<0.001$) except perceiving benefit. When determined in details of each elements of health beliefs, it was found that hilltribe women who had

low level of perceiving risk and severity of cervical cancer (72.8% and 73.8%, respectively.) moderate level of perceiving benefit (73.7%) and high level of perceiving barrier (77.8%) were the major group who had cervical cancer screening. The result of this study was similar to those of Supanya (37) Kabila (43) and Rangsisuwan (44) that health beliefs were both associated and not associated with cervical cancer screening. In this point of view, we can see that the study results were not congruent with Health Belief Model which is western concept and could not apply in special area such as hilltribe.

Hypothesis 3. The motivating variables which were receiving advice and knowing about the campaign for cervical cancer screening had statistically significant associated to the receiving of cervical cancer screening.

If was found that the hilltribe women who received advice (78.8%) and knowing about the campaign for cervical cancer screening (77.0%) had statistically significant associated to the receiving of cervical cancer screening ($P<0.001$). The results of this study were similar to the study of Supanya (37) Srisai (39) and Rangsisuwan (44) that motivating program and providing information about cervical cancer had significant relation with cervical cancer screening. Interestingly, the hilltribe women in this study reported receiving most information from other health care providers such as domestic health care workers, primary health care volunteers of village (87.4%) friends or relatives (45.7%) and mass media (44.5%). Only 29 percents received advices from doctors and 33 percents by nurses.

The explanation of the relation between having campaign promoting for cervical cancer screening in their residential areas and getting cervical cancer screening may be focused on the perceiving barriers to the test. Living in highland may be a major cause of access to the services and care. Transportation is inconvenience and costly for the low-income. In this case, having campaign may help the hilltribe women to receive cervical cancer screening locally in the village or nearby which is more convenience for the hilltribe as well as receiving information and be friendly with the health care providers. This had helped them to make decision easily for cervical cancer screening by Pap smear service.

CHAPTER 6
CONCLUSIONS

Conclusions

This cross-sectional descriptive study was aimed to study the rate of cervical cancer screening by Papanicolaou smear (Pap smear), the level of knowledge, health beliefs and associated factors for screening among hilltribe women in Lampang Province. The sample were 594 hilltribe women age 15-59 years from 5 hilltribes mainly, Yao, Karen, Akha, Hmong and Lahu.

Data collection were by using structured interview with questionnaires developed by the researcher which covered to the aims and hypothesis of the study. The content validity of the instruments were examined by three experts and tested for reliability in 30 selected hilltribe women from 1-15 March, 2002.

Data was analyzed by using SPSS version 7.5 (Statistical Package for the Social Sciences) and described by numbers, percentage, mean and standard deviation of the data. Chi-square statistical test was used to analyze the relationships between the factors.

The results revealed that rate of cervical cancer screening by Pap smear were 70.9 percent. Most of the hilltribe women are 20-29 years old (28.9%) and 30-39 years old (26.0%). The mean age was 35.5 years old. The household incomes per year were mostly between 0-9,999 Bahts (48.0%) and 10,000-19,999 baths (28.9%). The mean annual income was about 19,996 ± 2,183 Bahts / year. The lowest annual income was 500 Bahts and the highest income was 140,000 Bahts per year. Most of the hilltribe women were uneducated (66.3%). Age at first married was younger than 19 years (66.3%). Numbers of marriage who were married one time were 87.7 percents. 60.8 percents of the hilltribe women delivered their first chide at the age less than 19 years old. Only 36.2 percents gave birth when their age ranged between 20-29 years. The mean age at first birth was 18 ± 3.1years. Most of the hilltribe women had

more than three children (60.6 %). The mean number of children was 3.7 ± 2.4. Practicing contraception of hilltribe women were 56.4 percents. Most of them used injectable or implant (43.0%) and pills (36.4%) and most of the hilltribe women had no abnormal vaginal symptoms (79.0 %).

The level of the knowledge about cervical cancer of the hilltribe women was high (52.2 %). When considering each item of knowledge, it found that they did not have knowledge about symptoms and signs, diagnosis and treatment of cervical cancer. The correct answer were less than fifty percent.

The level of health beliefs of perceived risk and severity of the cervical cancer were moderate (56.6% and 58.2%, respectively). Perceived benefits and barriers of receiving cervical cancer screening were moderate (53.0% and 89.4.2%, respectively). When considering each item of perceived benefits and barrier of cervical cancer screening, it found that they did not perceive about: Pap smear helps them to detect cervical cancer (41.1%), if cervical cancer can be early detected, early treatment can be done (42.3%), if cervical cancer is detected in an early stage, the opportunity to be cured is more than being detected at late stage (42.3%), embarrassment cannot prevent their from getting pelvic examination when its benefit is determined (43.7%).

About motivating factors to have cervical cancer screening, it was found that most of the hilltribe women received advice of cervical cancer screening (66.7%), mostly from other health care providers such as, domestic health care workers, primary health care volunteers of the village (87.4%) and knowing of campaign for cervical cancer screening which were 77.6 percent.

The factors that statistically significant associated with cervical cancer screening were age, educational level, abnormal vaginal symptoms (P-value< 0.005) and practicing contraception (P-value< 0.001), health beliefs of perceived risk of cervical cancer, perceiving severity of cervical cancer and barrier of cervical cancer screening.(P-value< 0.001). For motivating factors, receiving advice and knowing about the campaign for cervical cancer screening were significantly related with the cervical cancer screening (P-value< 0.001).

Recommendations for future research

1. To study in qualitative research of hilltribe women who decided to received cervical cancer screening.

2. To compare the knowledge and health beliefs about cervical cancer screening among women of different hilltribe.

Recommendation to the services

1. The service providers should provide the knowledge about cervical cancer and having campaign for cervical cancer screening to the hilltribe women along with family planning service at location of hilltribe.

2. Organizing refresher course for health officers who worked at hilltribe village.

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APPENDIX

Interviewing form (English version).

Interviewing form (Thai version).

Table of number and percentages each variable of five hilltribe women.

Interviewing form (English version)

Knowledge, Health beliefs of cervical cancer and receiving cervical cancer screening of the hilltribe women in Lampang Province.

Date of interview……Time for interview…….

Interviewer……

Place……

Name of village……Mu…….

Tambon…… Amphur… ……..…….

Province Lampang

Tribe……

Information of questionnaire

This form is used to interview the hilltribe women who are living with their husbands, aged between 15-59 years.

The questionnaire consists of four sections:

Section I General characteristic data

Section II Questionnaire about health belief related to cervical cancer

Section III Questionnaire about knowledge of cervical cancer

Section IV Questionnaire about motivating factors toward to cervical cancer screening

Section I. General characteristic data ID □□□

1.1 Tribe (Please indicate)…….How old are you now?……..years (Full year)

1.2 What is your educational level?

( ) No education

( ) Pratom 4

( ) Pratom 6

( ) Muthayom

( ) Others (please indicate)…….

1.3 What is your average annually households income? …….Baths/year

1.4 What is the age of your first marriage? ……years

1.5 How many times did you marry?……. .times.

1.6 How many children do you have?…….. . children.(Including all children births and except abortion)

1.7 What is the age of your first delivery?…… .years.

1.8 Have you practicing contraception ?

( ) No

( ) Yes (please indicate the types of contraception……...)

1.9 Did you ever have abnormal vaginal symptoms? (For examples, having leukorrhea or abnormal discharge or pus from vagina with foul smell, or puritic pustules or blisters)

( ) No

( ) Yes (please indicate symptoms…….)

1.10 Did you ever have pelvic examination for cervical cancer screening?

( ) No (Skip to item 1.12)

( ) Yes

1.11 What were the reasons that make you had Pap smear? (Answer can be chosen more than one item.)

( ) Annual check up

( ) Post partum follow up

( ) Post abortion follow up

( ) Luekorrhea or blood per vagina

( ) Perceiving risk to cervical cancer

( ) Medical follow up as appointment

( ) Pap smear campaign

( ) Invited by friends

( ) Others…….

1.12 What are the reasons that make you decide not to go for Pap smear testing? (Answer can be chosen more than one item.)

( ) Have no knowledge about cervical cancer

( ) No abnormality symptom

( ) Perceiving that have no risk for cervical cancer

( ) Worry to be detected with cervical cancer

( ) Worry about instrument used for testing

( ) Fear of pain

( ) Shy to physician, nurse, and other health care providers

( ) Do not know where to go

( ) Inconvenience for transportation

( ) Worry that the testing cost might be expensive

( ) Financial problem

( ) Others…….

Section II Questionnaire about health beliefs to cervical cancer

Direction: Please indicate how much you agree or disagree determined by your own beliefs or perceptions to cervical cancer explained with the following statements by marking √ at the appropriate box. The degrees of determination are strongly agree, partially agree or disagree. The beliefs are categorized into four parts.

2.1 Perceiving risks to cervical cancer

Item	Statements	Strongly agree	Partially agree	Disagree
1 □	Married women have higher risk of cervical cancer than unmarried women.			
2 □	Women who gave child birth since they were very young have a risk of developing cervical cancer.			
3 □	Married women can have a risk of cervical cancer from poor hygiene penises of the husbands.			
4 □	Having experienced sexual transmitted diseases several times do not related to increase risk of cervical cancer.			
5 □	Having abnormal or foul smell discharge from vagina can be a risk of cervical cancer			

2.2 Perceiving severity of cervical cancer if the cancer developed

Item	Statements	Strongly agree	Partially agree	Disagree
1	If cervical cancer develops, people will lose their weight.			
2	If the cancer spreads , people will have bloody urine or feces			
3	Women with cervical cancer in any stage of disease can work for their income as they had ever done before.			
4	Husband, daughter/son and their relatives will waste their times in caring of women with cervical cancer in their families.			
5	Women with cervical cancer can experience rejection from their neighbors.			

2.3 Perceiving benefits of cervical screening

Item	Statements	Strongly agree	Partially agree	Disagree
1	Pap smear helps us to detect cervical cancer.			
2	Although the cervical cancer is early detected in an early stage, it doesn't mean that the cancer can be cured.			
3	Pap smear cannot help prevention of metastasis of cervical cancer.			
4	If cervical cancer can be early detected, early treatment can be done.			
5	If cervical cancer is detected in an early stage, the opportunity to be cured is more than being detected at the late stage.			

2.4 Perceiving to Barriers to receive Pap smear service.

Item	Statements	Strongly agree	Partially agree	Disagree
1	Embarrassment cannot prevent you from getting pelvic examination when its benefit is determined.			
2	The fear of discovering cervical cancer prevents you from getting pelvic examination.			
3	Pelvic examination is not painful.			
4	Pelvic examination is costly. This prevents you from getting pelvic examination.			

Section III Questionnaire about knowledge of cervical cancer

Direction: Please uses your own knowledge and understanding about cervical cancer by marking √ into the blank space provided at the end of the statement. The block space "yes" is determined when you agree with the statement, "no" for the disagree with the statment. If you do not know about the statement, mark on the space of "unsure."

Item	Statements	Yes	No	Unsure
1	Cervical cancer refers to dangerous tumor caused by abnormal growth of cells at cervix and can distribute to other parts of human body.			
2	Having several children can cause cervical cancer.			
3	Cervical cancer is mostly found in married women and still live with their husbands.			
4	An early stage of cervical cancer (Pre-invasion) may not have any abnormal signs.			
5	One symptom of invasive cervical cancer is having bad smell and yellowish or cloudy discharge from vagina (leukorrhea).			
6	Women who have bloody discharge from vagina after having sexual intercourse is more likely to have cervical cancer.			
7	Cervical biopsy (cutting a very small part of cervical tissue) is the method to detect cervical cancer.			
8	Cervical cancer in early stage can be cured by surgery.			
9	If using radiotherapy for treatment of cervical cancer, it means that the cancer is widely spread.			
10	Having experiences of sexual intercourse at younger than 20 years of age can be the risk of cervical cancer.			

Item	Statements	Yes	No	Unsure
11 □	Having fewer children can reduce the risk of cervical cancer.			
12 □	Pelvic examination is a way to detect cervical cancer.			
13 □	Women age over 40 years should have Pap smear test.			
14 □	Screening test for cervical cancer is time consumed and complicated.			

Section IV Questionnaire about motivating factors toward to cervical cancer screening

Direction: Please mark √ into ( ) or fill some statements related to your previous experiences or participation in any activity associated with the following statements.

4.1 Have you ever been adviced for getting Pap smear? □

( ) Yes (Skip to item 4.3)

( ) No

4.2 If the answer is "yes", where did you get the advice from ? (Answers can be chosen more than one item.) □□

( )1. Physicians

( ) 2. Nurses

( ) 3. Domestic health care workers

( ) 4. Primary health care volunteers of the village

( ) 5. Relatives

( ) 6. Neighbors

( ) 7. Television program

( ) 8. Radio broadcasting

( ) 9. Video

( ) 10. News from domestic announcement

( ) 11. Books

( ) 12. Newspaper

( ) 13. Brochure

( ) 14. Others, please indicate……

4.3 Is there any campaign in relation to promote Pap smear in your village?

( ) No

( ) Yes

……

แบบสัมภาษณ์

เรื่อง ความรู้ ความเชื่อด้านสุขภาพเกี่ยวกับโรคมะเร็งปากมดลูก

และการเข้ารับการตรวจภายในหามะเร็งปากมดลูก

ของสตรีชาวเขาในจังหวัดลำปาง

วันที่สัมภาษณ์……เวลา……..

ผู้สัมภาษณ์……..

สถานที่……

บ้าน……หมู่ที่……..ตำบล……อำเภอ…….

.จังหวัด ลำปาง

เผ่า……..

คำแนะนำในการสัมภาษณ์

1. ใช้สัมภาษณ์สตรีชาวเขาอายุระหว่าง 15 – 59 ปี ที่อยู่กินกับสามี
2. แบบสัมภาษณ์นี้แบ่งออกเป็น 4 ส่วนคือ

   ส่วนที่ 1 คุณลักษณะทั่วไป

   ส่วนที่ 2 แบบทดสอบความเชื่อด้านสุขภาพเกี่ยวกับ โรคมะเร็งปากมดลูก

   ส่วนที่ 3 แบบทดสอบความรู้เกี่ยวกับโรคมะเร็งปากมดลูก

   ส่วนที่ 4 แบบสอบถามเกี่ยวกับปัจจัยชักนำ ที่มีผลต่อการเข้ารับการตรวจภายในเพื่อหามะเร็งปากมดลูก

ส่วนที่ 1 คุณลักษณะทั่วไป

ID□□□

เผ่า ระบุ…….. □

1.1 ปัจจุบันท่านมีอายุ…….ปี (อายุปีเต็ม) □□

1.2 ท่านเรียนหนังสือจบชั้นอะไร □

( ) ไม่ได้เรียน

( ) จบชั้นประถมปีที่ 4

( ) จบชั้นประถมปีที่ 6

( ) จบชั้นมัธยมศึกษาตอนต้น

( ) กศน.

( ) อื่นๆ ระบุ……

1.3 เงินรายได้รวมของครอบครัวท่านภายใน 1 ปี จำนวน……..บาท / ปี □

1.4 ท่านแต่งงานครั้งแรกเมื่ออายุ……..ปี □

1.5 ท่านแต่งงานรวมทั้งหมด……..ครั้ง □

1.6 ท่านมีบุตรจำนวนทั้งหมด…….คน (นับบุตรที่มีชีวิตและเสียชีวิต ไม่รวมแท้ง) □□

1.7 ท่านคลอดบุตรคนแรกเมื่อท่านอายุได้……..ปี □□

1.8 ปัจจุบันท่านคุมกำเนิดอยู่หรือไม่ □

( ) ไม่ได้คุม

( ) คุมกำเนิด ระบุชนิด…….

1.9 ท่านเคยมีความผิดปกติทางอวัยวะสืบพันธ์ หรือไม่ □

(ยกตัวอย่างอาการเช่น ตกขาวมีกลิ่นเหม็น ตกขาวมีสีผิดปกติ มีหนองไหล มีตุ่ม คัน ปัสสาวะแสบขัด)

( ) ไม่เคย

( ) เคย

1.10 ท่านเคยเข้ารับการตรวจภายในหามะเร็งปากมดลูกหรือไม่ □

( ) ไม่เคย (ถ้าไม่เคยตรวจข้ามไปตอบข้อ 1.12)

( ) เคย

1.11 เหตุผลที่ท่านเข้ารับการตรวจภายในหามะเร็งปากมดลูกเพราะ □

(เลือกตอบได้มากกว่า 1 ข้อ)

( ) ตรวจสุขภาพประจำปี

( ) ตรวจหลังคลอด

( ) ตรวจหลังแท้ง

( ) มีตกขาวผิดปกติ หรือมีเลือดออกทางช่องคลอด

( ) คิดว่าตัวเองมีโอกาสเสี่ยงต่อการเป็นมะเร็งปากมดลูก

( ) ไปตามแพทย์นัด

( ) มีการรณรงค์ตรวจมะเร็งปากมดลูกในพื้นที่

( ) ไปตามเพื่อน

( ) อื่นๆ ระบุ.....

1.12 เหตุผลที่ท่านไม่เคยเข้ารับการตรวจหามะเร็งปากมดลูกเพราะ □□

(เลือกตอบได้มากกว่า 1 ข้อ)

( ) ไม่มีความรู้เกี่ยวกับโรคมะเร็งปากมดลูก

( ) ไม่มีอาการผิดปกติใดๆ

( ) ไม่คิดว่าตนเองจะเป็นมะเร็งปากมดลูก

( ) กลัวจะตรวจพบว่าเป็นมะเร็งปากมดลูก

( ) กลัวเครื่องมือตรวจ

( ) กลัวเจ็บ

( ) อายแพทย์ พยาบาล เจ้าหน้าที่ผู้ตรวจ

( ) ไม่ทราบว่ามีสถานที่ตรวจ

( ) การเดินทางไม่สะดวก เช่น ไม่มีรถ ระยะทางไกล ทางลำบาก

( ) กลัวค่าตรวจแพง

( ) มีปัญหาการเงิน

( ) อื่นๆ ระบุ.....

ส่วนที่ 2 แบบทดสอบความเชื่อด้านสุขภาพเกี่ยวกับโรคมะเร็งปากมดลูก

คำชี้แจง: ให้ใส่เครื่องหมาย √ ท้ายข้อความ ตามความเชื่อและความรู้สึกของท่าน ว่าข้อความนั้นท่านเห็นด้วยมาก เห็นด้วยน้อย หรือไม่เห็นด้วย โดยแบ่งความเชื่อด้านสุขภาพออกเป็น 4 ด้าน

2.1 การรับรู้โอกาสเสี่ยงต่อการเกิดโรคมะเร็งปากมดลูก

ข้อ	ข้อความ	เห็นด้วยมาก	เห็นด้วยน้อย	ไม่เห็นด้วย
1 ☐	ผู้หญิงที่อยู่กินกับสามีมีโอกาสเป็นมะเร็งปากมดลูกได้มากกว่าผู้หญิงโสด			
2 ☐	ผู้หญิงที่มีลูกตั้งแต่อายุยังน้อย มีโอกาสเสี่ยงต่อการเป็นโรคมะเร็งปากมดลูก			
3 ☐	สามีที่ไม่ทำความสะอาดอวัยวะเพศ จะทำให้ภรรยามีโอกาสเสี่ยงต่อการเป็นโรคมะเร็งปากมดลูก			
4 ☐	ผู้หญิงที่เป็นโรคติดต่อทางเพศสัมพันธ์บ่อยๆ ไม่ได้เป็นเหตุให้เกิดโรคมะเร็งปากมดลูก			
5 ☐	การมีตกขาวมากผิดปกติ และมีกลิ่นเหม็นมีโอกาสเป็นโรคมะเร็งปากมดลูกได้			

2.2 การรับรู้ถึงความรุนแรงของโรค เมื่อเป็นมะเร็งปากมดลูก

ข้อ	ข้อความ	เห็นด้วยมาก	เห็นด้วยน้อย	ไม่เห็นด้วย
1 ☐	ถ้าเป็นมะเร็งปากมดลูกจะทำให้ร่างกายซูบ-ผอม น้ำหนักลด			
2 ☐	ถ้าเป็นมะเร็งปากมดลูกระยะลุกลาม จะทำให้เกิดการถ่ายปัสสาวะและอุจจาระเป็นเลือดได้			
3 ☐	ผู้หญิงที่เป็นมะเร็งปากมดลูก ไม่ว่าระยะใดก็ตามยังมีแรงที่จะทำงานหารายได้เข้าครอบครัวได้เหมือนตอนที่ยังไม่เป็นมะเร็งปากมดลูก			
4 ☐	ผู้หญิงที่ป่วยเป็นมะเร็งปากมดลูก ญาติพี่น้องจะต้องเสียเวลาทำงานเพื่อมาดูแล			
5 ☐	มะเร็งปากมดลูกเป็นโรคที่น่ารังเกียจต่อชุมชน น่าอับอายต่อชาวบ้าน เพื่อนบ้านจะรังเกียจ			

2.3 การรับรู้ถึงประโยชน์ของการตรวจภายในหามะเร็งปากมดลูก

ข้อ	ข้อความ	เห็นด้วยมาก	เห็นด้วยน้อย	ไม่เห็นด้วย
1 ☐	การตรวจภายในหามะเร็งปากมดลูกช่วยทำให้ทราบว่า จะเป็นมะเร็งปากมดลูกหรือไม่			
2 ☐	ถ้าตรวจมะเร็งปากมดลูกแล้วพบว่า กำลังเริ่มเป็น ก็ไม่สามารถรักษาให้หายจากโรคได้			
3 ☐	การตรวจภายในหามะเร็งปากมดลูกไม่ใช่การป้องกันการลุกลามของมะเร็งปากมดลูก			
4 ☐	ถ้าไปตรวจภายใน และพบว่าเป็นมะเร็งปากมดลูก จะทำให้รักษาโรคได้เร็วขึ้น			
5 ☐	ถ้าไปตรวจ และพบว่ามะเร็งปากมดลูกระยะแรก โอกาสที่จะรักษาหายจะมีมากกว่า ที่เป็นในระยะลุกลาม			

2.4 การรับรู้ถึงอุปสรรคในการเข้ารับการตรวจภายในหามะเร็งปากมดลูก

ข้อ	ข้อความ	เห็นด้วยมาก	เห็นด้วยน้อย	ไม่เห็นด้วย
1 ☐	การตรวจภายในหามะเร็งปากมดลูกไม่ใช่เรื่องน่าอาย เมื่อเปรียบเทียบกับประโยชน์ที่ได้รับ			
2 ☐	การรู้ว่าเป็นมะเร็งปากมดลูก เป็นโรคที่น่ากลัว จึงไม่อยากมารับการตรวจ			
3 ☐	การตรวจภายในหามะเร็งปากมดลูกไม่ทำให้เจ็บปวด			
4 ☐	การตรวจแต่ละครั้ง ต้องเสียค่าใช้จ่ายสูงจึงทำให้ท่านไม่มาตรวจ			

ส่วนที่ 3 แบบทดสอบความรู้เกี่ยวกับโรคมะเร็งปากมดลูก

คำชี้แจง: ให้ใส่เครื่องหมาย √ ท้ายข้อความตามความรู้ ความเข้าใจของท่านว่าข้อนั้นใช่หรือไม่ใช่ ในช่องใช่ หรือไม่ใช่ และถ้าข้อความใดที่ท่านไม่แน่ใจ หรือไม่ทราบ ให้ใส่ในช่องไม่ทราบ

ข้อที่	ข้อความ	ใช่	ไม่ใช่	ไม่ทราบ
1 ☐	มะเร็งปากมดลูก หมายถึง เนื้องอกชนิดร้ายที่เกิดขึ้นจากการเจริญเติบโต อย่างไม่หยุดยั้งของเซลล์บริเวณปากมดลูก และกระจายลุกลามไปยังอวัยวะอื่นของร่างกายได้			
2 ☐	ผู้หญิงที่มีลูกหลายคน ทำให้เป็นมะเร็งปากมดลูกได้			
3 ☐	พบมะเร็งปากมดลูกมากที่สุดในผู้หญิงที่แต่งงานและอยู่กินกับสามี			
4 ☐	อาการของมะเร็งปากมดลูกในระยะเริ่มแรก (ก่อนระยะลุกลาม) คือ ยังไม่มีอาการแสดงอะไรผิดปกติ			
5 ☐	อาการของมะเร็งปากมดลูกในระยะลุกลาม คือ ที่เป็นมากตกขาวจะมีกลิ่นเหม็น			
6 ☐	ผู้หญิงที่มีเลือดออกหลังการร่วมเพศ (นอนกับแฟน) มีโอกาสเป็นมะเร็งปากมดลูกได้			
7 ☐	วิธีการตัดเอาชิ้นเนื้อ บริเวณปากมดลูกไปตรวจ เป็นการตรวจที่ทำให้รู้ว่าเป็นมะเร็งปากมดลูกอีกวิธีหนึ่ง			
8 ☐	การรักษามะเร็งปากมดลูกในระยะเริ่มแรก ด้วยการผ่าตัดเป็นวิธีรักษาที่ทำให้หายขาดจากโรคได้			
9 ☐	การรักษามะเร็งปากมดลูกด้วยการฉายรังสี แสดงว่าอาการมะเร็งแพร่กระจายไปแล้ว			
10 ☐	การร่วมเพศ (นอนกันแฟน) ในขณะที่อายุยังไม่ถึง 20 ปี ทำให้มีโอกาสเป็นโรคมะเร็งปากมดลูกได้			
11 ☐	การมีบุตรจำนวนน้อย จะทำให้ลดการเสี่ยงต่อการเกิดโรคมะเร็งปากมดลูกได้			
12 ☐	การตรวจภายในหามะเร็งปากมดลูก เป็นวิธีค้นหามะเร็งปากมดลูก			
13	การตรวจหามะเร็งปากมดลูก ควรเริ่มตรวจเมื่ออายุ 40 ปีขึ้นไป			

ข้อที่	ข้อความ	ใช่	ไม่ใช่	ไม่ทราบ
14 □	การตรวจภายในหามะเร็งปากมดลูก ใช้เวลาในการตรวจนานและยุ่งยาก			

ส่วนที่ 4 แบบสอบถามเกี่ยวกับปัจจัยชักนำ ที่มีผลต่อการเข้ารับการตรวจค้นหามะเร็งปากมดลูก

คำชี้แจง: ให้ใส่เครื่องหมาย √ ลงใน ( ) หรือเติมคำลงในข้อความตามประสบการณ์ที่ท่านเคยได้รับ

4.1 ท่านเคยได้รับคำแนะนำให้ไปตรวจภายใน หามะเร็งปากมดลูกหรือไม่ □

( ) ไม่เคยได้รับคำแนะนำ (ข้ามไปตอบข้อ 4.3)

( ) เคยได้รับคำแนะนำ

4.2 ถ้าท่านเคยได้รับคำแนะนำ ท่านได้รับคำแนะนำจากแหล่งใด □□

(เลือกตอบได้มากกว่า 1 ข้อ)

( ) แพทย์

( ) พยาบาล

( ) เจ้าหน้าที่สถานีอนามัย

( ) อสม. (อาสาสมัครสาธารณสุขหมู่บ้าน)

( ) ญาติ

( ) เพื่อนบ้าน

( ) โทรทัศน์

( ) วิทยุ

( )วิดีโอ

( ) เสียงจากหอกระจายข่าว

( ) หนังสือ

( ) หนังสือพิมพ์

( ) เอกสาร แผ่นพับ

( ) พนักงานเยี่ยมบ้าน

( ) อื่นๆ ระบุ.....

4.3 ในหมู่บ้านของท่าน เคยมีการรณรงค์ให้ไปตรวจภายในหามะเร็งปากมดลูกหรือไม่

( ) ไม่เคยมี

( ) เคยมี

……..

Table 9 Number and percentages each variables of five hilltribe women.

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Age (Y)						
≤19	11 (5.5)	3 (6.2)	5 (8.4)	13 (11.8)	3 (6.8)	45 (8.6)
20 – 29	43 (23.3)	56 (26.7)	20 (33.3)	36 (32.7)	17 (38.6)	172 (29.9)
30 – 39	49 (27.8)	58 (27.6)	20 (33.3)	20 (18.2)	10 (22.7)	157 (27.5)
40 – 49	43 (23.3)	46 (21.9)	14 (23.3)	22 (20.1)	8 (18.3)	133 (23.4)
≥ 50	24 (20.1)	37 (17.6)	1 (1.7)	19 (17.2)	6 (13.6)	87 (10.6)
Income (Bath / Year)						
0 – 9,999	52 (30.6)	144 (68.6)	22 (36.7)	50 (45.5)	17 (38.6)	284 (48.0)
10,000 – 19,999	58 (34.1)	63 (30.0)	11 (18.3)	31 (28.2)	9 (20.5)	172 (28.9)
≥ 20,000	60 (35.3)	5 (2.4)	27 (45.0)	29 (26.3)	18 (40.9)	138 (23.1)

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Education						
No education	115 (67.6)	132 (62.9)	53 (88.3)	65 (59.0)	29 (65.9)	394 (66.3)
Pratom 4	18 (10.6)	20 (9.5)	2 (3.3)	6 (5.5)	4 (9.1)	50 (8.4)
Pratom 6	21 (12.4)	40 (19.0)	2 (3.3)	28 (25.5)	10 (22.7)	101 (17.0)
Muthayom	12 (7.1)	12 (5.7)	0 (0.0)	8 (8.7)	1 (2.3)	33 (5.6)
Other	4 (2.3)	6 (2.9)	3 (5.1)	3 (2.7)	0 (0.0)	16 (2.7)
Number of marriage						
1	161 (94.7)	172 (81.9)	53 (88.3)	98 (89.1)	37 (84.1)	521 (87.7)
2	8 (4.7)	32 (15.2)	6 (10.0)	11 (10.0)	7 (15.9)	64 (10.8)
3	1 (0.6)	6 (2.9)	1 (1.7)	1 (0.8)	0 (0.0)	9 (1.5)
Age at first marriage (Y)						
≤ 19	124 (72.9)	82 (39.0)	51 (85.0)	95 (86.4)	35 (79.5)	387 (66.3)
20 – 29	43 (25.3)	112 (53.3)	9 (39.0)	15 (13.6)	9 (20.5)	188 (31.6)
≥30	3 (1.8)	15 (7.2)	0 (0.0)	0 (0.0)	0 (0.0)	19 (3.1)

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Age at first delivery (Y)						
≤19	120 (70.6)	82 (39.0)	44 (73.3)	85 (77.3)	30 (68.2)	361 (60.8)
20 – 29	49 (28.8)	112 (53.4)	24 (21.8)	24 (21.8)	14 (31.8)	215 (36.2)
≥30	1 (0.6)	16 (7.6)	0 (0.0)	1 (0.9)	0 (0.0)	18 (3.0)
Number of children						
1	1 (0.6)	16 (7.6)	0 (0.0)	2 (1.8)	0 (0.0)	19 (3.1)
2	49 (28.8)	112 (53.4)	24 (21.8)	24 (21.8)	14 (31.8)	215 (36.2)
> 3	120 (70.6)	82 (39.0)	44 (73.3)	85 (77.3)	30 (68.2)	360 (60.7)
Practicing contraception						
Yes	44 (25.9)	142 (67.6)	41 (68.3)	74 (67.3)	33 (75.0)	335 (56.4)
No	126 (74.1)	68 (32.4)	19 (32.7)	36 (32.7)	11 (25.0)	259 (43.6)

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Abnormal vaginal symptoms						
Yes	63 (37.1)	23 (10.9)	5 (8.3)	25 (22.7)	10 (22.7)	126 (21.2)
No	107 (62.9)	187 (89.1)	55 (91.7)	85 (77.3)	34 (77.3)	468 (78.8)
Level of knowledge						
High	42 (24.7)	189 (90.0)	26 (43.3)	40 (36.4)	13 (29.5)	310 (52.2)
Moderate	62 (36.5)	20 (9.5)	19 (31.7)	38 (34.5)	10 (22.7)	149 (25.1)
Low	66 (38.8)	1 (0.5)	15 (25.0)	32 (29.1)	21 (47.7)	135 (22.7)
Perceiving risks						
High	7 (4.1)	32 (15.2)	2 (3.3)	10 (9.1)	5 (11.4)	56 (9.4)
Moderate	91 (53.5)	147 (70.0)	22 (36.7)	58 (52.7)	17 (38.6)	336 (56.6)
Low	72 (42.2)	31 (14.8)	36 (60.0)	42 (38.2)	22 (50.0)	202 (34.0)
Perceiving severity						
High	5 (2.9)	39 (18.6)	1 (1.7)	10 (9.1)	6 (13.6)	61 (10.3)
Moderate	91 (53.6)	151 (71.9)	27 (45.0)	59 (53.6)	18 (40.9)	346 (58.2)
Low	74 (43.5)	20 (9.5)	32 (53.3)	41 (37.9)	20 (45.5)	187 (31.5)

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Perceiving benefits						
High	4 (2.4)	10 (4.8)	2 (3.3)	7 (6.4)	3 (6.8)	28 (4.7)
Moderate	94 (55.3)	114 (50.3)	24 (40.0)	62 (56.4)	39 (88.6)	315 (53.0)
Low	72 (42.4)	86 (40.3)	34 (56.7)	41 (37.2)	2 (1.8)	251 (42.3)
Perceiving barrier						
High	10 (5.9)	26 (12.4)	7 (11.7)	7 (6.4)	3 (6.8)	54 (9.1)
Moderate	159 (93.3)	183 (87.1)	50 (83.3)	62 (56.4)	39 (88.6)	531 (89.4)
Low	1 (0.6)	1 (0.5)	3 (5.0)	41 (37.2)	2 (1.8)	9 (1.5)
Cervical cancer screening						
Yes	117 (19.7)	147 (24.7)	47 (7.9)	90 (15.1)	20 (3.4)	421 (70.9)

Factors	Yao	Karen	Akha	Hmong	Lahu	Total
Receiving advice to getting cervical cancer screening						
Yes	98 (57.6)	148 (70.5)	25 (41.7)	101 (91.8)	24 (54.5)	396 (66.7)
No	72 (42.4)	62 (29.5)	35 (58.3)	9 (8.2)	20 (45.5)	198 (33.3)
Knowing of campaign for cervical cancer screening						
Yes	133 (78.2)	159 (75.7)	47 (78.2)	90 (81.8)	32 (72.7)	461 (77.6)
No	37 (21.8)	51 (24.7)	13 (21.7)	20 (18.2)	12 (27.3)	133 (22.4)

BIOGRAPHY

NAME	Mrs.Dussanee Pairsuwan
DATE OF BIRTH	10 March 1961
PLACE OF BIRTH	Nakhornsawan, Thailand
INSTITUTIONS ATTENDED	College of Nursing Sawan Pracharuk Nakhornsawan Diploma in Nursing and Midwifery Mahidol University, 2002 Master of Science (Human Reproduction and Population Planning) Ramathibodi Hospital.
POSITION&OFFICE	122 Mu.8 Hangchat District Lampang Province, Thailand Position: Public Health Technical Office Tel.0-5433-941 E-mail: Dussanee_04@yahoo.com
HOME ADDRESS	171/17 Mu. 6 Super Highway Rd. Hangchat District, Lampang Province, Thailand. Tel. 0-5426-9254