HIV/AIDS PREVENTIVE BEHAVIOR AMONG THE HOUSEWIVES OF MAE TAENG DISTRICT IN CHIANG MAI, THAILAND

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ABSTRACT

A cross sectional descriptive study was conducted with a quantitative design in village settings. An interviewer-administered questionnaire was used to collect data from 200 subjects in 10 villages of three Tambols of Mae Taeng District in Chiang-Mai, Thailand during the period 10-25 February 2005 to determine the socio-demographic and economic characteristics, level of knowledge, perception and preventive behavior, regarding HIV/AIDS among house-wives. The study considered adaptive behavior such as faithfulness and condom use, and investigated the relationship between various independent and dependent variables on one another. Chi-square test was used for analysis of the factors associated with knowledge, perception, and HIV/AIDS preventive behavior.

The results of this study revealed that nearly half of the housewives were within the cohort group 35-45 years of age. There was a significant statistical association (p value-<.004) between the respondents' age and their knowledge of HIV/AIDS. The majority of housewives attended primary school (74.5 %); while the average monthly family income (for 61.5%)was equal to or less than 5000 baht. Most of them (72.2%) had a Fair knowledge concerning HIV/AIDS, while only a small number (15.5%) had a low perception of the severity and risks associated with HIV/AIDS. Most housewives (71.0%) indicated that their husbands never or very rarely used a condom while engaging sexual intercourse with them. Since the respondents' HIV/AIDS preventive behavior was only measured by determining condom use, the HIV/AIDS preventive behavior of this cohort of housewives was considered "poor" (84.5%), or that they were potentially at risk to an HIV/AIDS infection from their husbands. In terms of choosing the most important source of HIV/AIDS information, 84.0% of the housewives selected health personnel, illustrating a significant association with the respondents' level of perception (p value-<.035). The respondents' level of knowledge also had a highest significant statistical relationship with perception about HIV/AIDS (p value-<.001), and there was also a significant association between the level of perception and the respondents' preventive behavior against HIV/AIDS (p value-.042).

It is recommended that in order to improve the HIV/AIDS preventive behavior among housewives in rural northern Thailand, condoms should be promoted as part of a dual contraceptive service delivery strategy [with other FP methods currently used by rural women], as well as an important barrier method to prevent HIV/AIDS and STDs.

KEY WORDS: HIV/AIDS/PREVENTIVE BEHAVIOR/HOUSEWIVES

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CONTENTS

CONTENTS (Continued)

Page

LIST OF TABLES

Tables **Page**

LIST OF TABLES (Continued)

Tables **Page**

LIST OF FIGURES

Figures **Page**

CHAPTER 1
INTRODUCTION

1.1 Problem statement

HIV/AIDS is not solely a medical issue but also has profound implication for social and family relationships. Traditionally, when a person is ill the family is seen to provide emotional, practical and social support. Experience has shown, however, that HIV/AIDS disrupts this pattern of support. On the one hand HIV/AIDS, like any other serious illness, affects family members both from day to day and in the long term. What distinguished HIV/AIDS from so many other illnesses, however, are the associated social stigma and the fact that HIV may be transmissible, or may already have been transmitted, within a relationship [1].

One important factor was the common that AIDS is a disease of homosexual men and drug addicts and women especially house-wives were not a risk of being infected by the HIV. This assumption turned false soon after the 1990 with HIV infection in large number of women particularly as a result of patronize of commercial sex by husbands. Women have different absolute and relative risk than male for many diseases and disabilities and AIDS is no exception. Heterosexual women are four times more likely to contact AIDS through heterosexual transmission than heterosexual man [2]. Sexually transmitted diseases in female go unnoticed which facilitate AIDS transmission. Regarding the chances of HIV infection, a woman than man is more likely to encounter an infected partner since there are more man infected with AIDS.

There is a growing awareness that HIV/AIDS have qualitatively different and greater implications for women than men, particularly in developing countries. De Bruyn cites four major reasons for this: ‘stereotypes related to HIV/AIDS have meant that women are either blamed for their spread or not recognized as potential patients

with the disease; various factors, related indirectly and directly to gender, place women at increased risk of exposure to HIV infection; the psychological unsocial burdens are greater for women than for men; women's social position makes it difficult for them to undertake prevention measures [3].

Most psychological and social research has concentrated on the impact of HIV disease on individuals. Only recently has attention turned to the effect of HIV disease on the family. Researchers now recognized that while HIV infects individuals, it also affects their relationships. Women roles in the family not only as house-wife also as caregiver, pregnant mother teacher of adolescent and community volunteers. So house wives may act as a central role of HIV infection transmission from husband to herself then children or herself to husband and children. This is one of the research that required to address the HIV/AIDS preventive behavior among the house-wives in the family (1). In this research house-wife refers to the married women of reproductive age (MRWA of 15-50 years old), living with the husband, not separated or divorced and are not infected with HIV/AIDS.

1.2 Background Information:

Since the mysterious disease AIDS was first detected in 1981 in USA, later on it was known. Related to this no one medical event has got success to get rid of it. Within 15-20 years of AIDS first eruption almost all over the world affected by HIV/AIDS.

Now world is going to enter into third decade of epidemic of HIV/AIDS and millions of people have affected round the world. Globally, women are increasingly affected by HIV, and now calculated almost half of the 37.2 million adults living with HIV/AIDS. The UNAIDS/WHO AIDS epidemic update in December 2004 states that the number of women living with HIV increased in every region of the world over the past two years. The sharpest increase of 56% occurred in East Asia, followed by a 46% increase in Eastern Europe and Central Asia. In sub-Saharan Africa, the worst-affected region, close to 60% of adults living with HIV are women. Women in this

region are up to 1.3 times more likely to be infected with HIV than men. This risk is greatest for young women aged 15–24 years, who are three to four times more likely to be infected with HIV than young men of the same age [4].

Women are physically more susceptible to HIV infection than men, and gender-based violence makes them even more vulnerable. Compelling evidence demonstrates an urgent need for prevention strategies that reach girls and women. Globally there are now 17 million women and 18.7 million men between the ages of 15 and 49 living with HIV/AIDS. Since 1985, the percentage of women among adults living with HIV/AIDS has risen from 35 per cent to 48 per cent. Of particular concern are the dramatic increases in HIV infection among young women, who now make up over 60 per cent of 15- to 24-year-olds living with HIV/AIDS [5].

The HIV/AIDS cases in South and South-East Asia is very alarming and according to UNAIDS/WHO; AIDS epidemic updated; December, 2004 estimates 7.1 million adult and children are living with HIV at the end of 2004. It is also estimated that the number of women of reproductive age who has been infected by HIV virus is expected to grow from 25,000 in 1990 to almost 2.1 million in the year 2004. This tendency is particularly associated with number of house-wives infected by husbands have succeeded to the number infected by sex workers and intravenous drug users [6].

In Thailand first case of HIV/AIDS was detected in September 1984 among homosexual male who had lived for some years in USA. Since the beginning of epidemic the cumulative number of HIV/AIDS infections >1,000,000; and the cumulative number of deaths 41,443,53,375; which is twice the number road traffic deaths (16,381,24,415). Total 604,000 numbers of people living with HIV/AIDS in 2003 and among these children under 15 years old is 12,000 in 2003. New HIV infection in 2003 is 19,000 and death due to AIDS 53,000. The estimated adult prevalence rate is 1.5 %. A new phase has arrived in which the epidemic becomes endemic [7].

According to the Chiang Mai Provincial profile, 2004 HIV/AIDS cases reported as a number one among the top ten leading causes of mortality, 2001 (1,629 i.e. 104.64 per 100,000 population). The same report indicate that total 1,033 cases of AIDS patients and HIV with symptomatic patients are recorded during 2002 but in the year 1995 it was 3,349. Of the total 1,033 AIDS cases in 2002, the high risk factors was classified as sexual intercourse (especially heterosexual) and 866 cases were fond in this group. The symptomatic AIDS patients classified by occupation highest in labor (45.4 percent) and the lowest among the commercial sex workers (0.29 percent), the house-wife state is 3.58 percent during the period 2002. There is almost as many AIDS related deaths from individuals living in Tambol Inthakhil or other areas of Mae Taeng District from 1995-1997 (i.e. 218) than all reported cases of Symptomatic HIV and/or AIDS cases in Mae Taeng District during this same time period (i.e. 300) [8].

1.3 Rationale and Justification

According to the report presented by CARE International (1992), the progression of the AIDS epidemic in Thailand can be described as a series of waves, based on the types of people that were infected most. "The First Wave" started with one single case of a homosexual man returning from the United States in 1984 and starting the spread of infection through the gay community. "The second wave" saw an explosion of AIDS cases among intravenous drug users in 1987. Following that; "the third wave" swept through commercial sex workers, naturally leading to "the fourth wave" when the spread of male customers' infection was facilitated by the extensive commercial sex industry networks in 1988. This inevitably resulted in "the fifth wave", which witnessed the entry of AIDS into the household, as a numerous infected male customers passed the virus to their wives [9].

HIV transmission between spouses has become a more prominent cause of new infections in countries such as Cambodia, Myanmar and Thailand—countries which, like parts of India, are already contending with serious epidemics. Twelve years ago,

approximately 90% of HIV transmission in Thailand was occurring between sex workers and their clients. Projections show that by 2002, an estimated 50% of new infections were between spouses, as current or former male clients of sex workers transmitted the virus to their wives (Thai Working Group on HIV/AIDS Projections, 2001) [10].

It is very common in Thailand, for men to go to the brothels after drinking with friends. Men who do not go to brothels after the age of 15 are not considered men. Furthermore over 90 percent of Thai men often go to brothels after the age of 19 [11]. Although the use of condom is the most effective preventive measure against HIV/AIDS, birth control pills became much more common family planning method due to the implementation of the national family planning policy of Thailand [12]. As a result, for the majority of Thai women, their major risk factors is sex with their husband or regular partner who has contact with sex workers.

In Thailand, taking care of the sick within the household is women's role. Additionally, in rural areas, women provide an agricultural workforce in addition to the domestic chores. Therefore, women bear triple burden, domestic chores, agricultural work and care for the sick. As a result, it is easily assumed that compared to men, women have less time to have a medical check, which increases the risk factor for housewives. Viravaidya (1995) points out that, unlike Western counterparts, Thai women do not go for medical checkups every six months or once a year, and some have never gone at all [13].

Women's role as primary providers of health care within the family also adds to the risk factors. They care for chronically ill and dying patients. If they do not have a proper knowledge about HIV/AIDS care, there is a possibility for them to be infected. De Bruyn (1992) states that not only do women face the psychological stress of caring for a family member with a terminal illness, but they must also cope with their own fears of infection [3].

As women's vulnerability to heterosexual transmission of HIV increased, they become a target group of prevention campaign. If we can prevent the second generation of people from HIV infection, then we must awaken women and correct distorted perception of immunity to AIDS [14]. Preventive behavior of men is more or less known, up to date, but preventive behavior of women specially house-wives is very little known, due to insufficient studies, though there exists a serious problem of HIV/AIDS in this group in Thailand and other part of the world. Senior researchers working in the field of HIV/AIDS prevention programs in Thailand have realized that lack of study among this group is very seriousness evident to concern. Similarly WHO. GPA program also advocated more study in pregnant women recently [15].

Positive preventive behavior is said to help not only in prevention, it also assist in education, counseling and homecare by wives to husbands, adolescent children, family members, relatives including the neighbors and negative behavior create a false sense of security and at more risk of acquiring HIV/AIDS disease. So this study is expected to be useful on highlighting the BC approach of ABC model of preventive behavior for the house-wives towards the HIV/AIDS risk husband which will be beneficial on further planning, modification of programs, education, health promotion, prevention, control and rehabilitation in HIV/AIDS related activities. In this regard, in order to promote condom use among couples, a large number of materials have been developed. Those, however, were mostly based on the stereotypical perception of gender roles: men are described to have a decision making power over the use of condom and take initiative for the prevention of AIDS with the emphasis on a common belief that wives are subordinate to husbands and must respect their wishes. Even many materials produced for housewives tended to portray pretty women rather than average looking ones and advises them to shape up as strategy to keep their husband away from commercial sex establishments. In the past couple of years, however, the situation has improved. A few brochures portray average (homely) housewives, and provide suggestions on how to discuss AIDS prevention with their spouses. Others portray women as taking equal role with men in AIDS prevention, including how to negotiate with men over condom use [16].

1.4 Research Questions:

-What are the HIV/AIDS preventive behaviors and it's determinants among the house-wives in the Mae Taeng District of Chiang Mai province in Thailand?

1.5 Research Objectives:

General Objective

To investigate the HIV/AIDS preventive behavior and its related factors among the house-wives of Mae Taeng District in Chiang Mai, Thailand.

Specific Objectives:

1. To describe the socio-demographic factors, knowledge, perception and identify the sources of information of house-wives and its' relationship with HIV/AIDS preventive behavior.

2. To find out the relationship between the socio-demographic factors and sources of information with the knowledge, perception and preventive behavior.

3. To determine an association between perception and the preventive behavior of housewives to cope with HIV/AIDS.

1.6 Research Hypothesis:

- There is a relationship of socio-demographic characteristic with the knowledge, perception and preventive behavior on HIV/AIDS among the house-wives in Mae Tang district of Chiang Mai, Thailand.
- House wives, who gathered the information from mass media have relations to HIV/AIDS knowledge, perception and preventive behavior
- The greater the score of knowledge and the higher the level of perception.
- The perception is more likely related with the HIV/AIDS preventive behavior.

1.7 Conceptual Framework:

It is hypothesized that demographic and socio-economic factors, knowledge, perception and sources of information concerning HIV/AIDS among the house-wife can influence the preventive behavior to cope with the HIV/AIDS. The conceptual framework has been generated using four sets of independent variables with one dependent variable. Hence on the basis of variables in the conceptual framework literature has been reviewed.

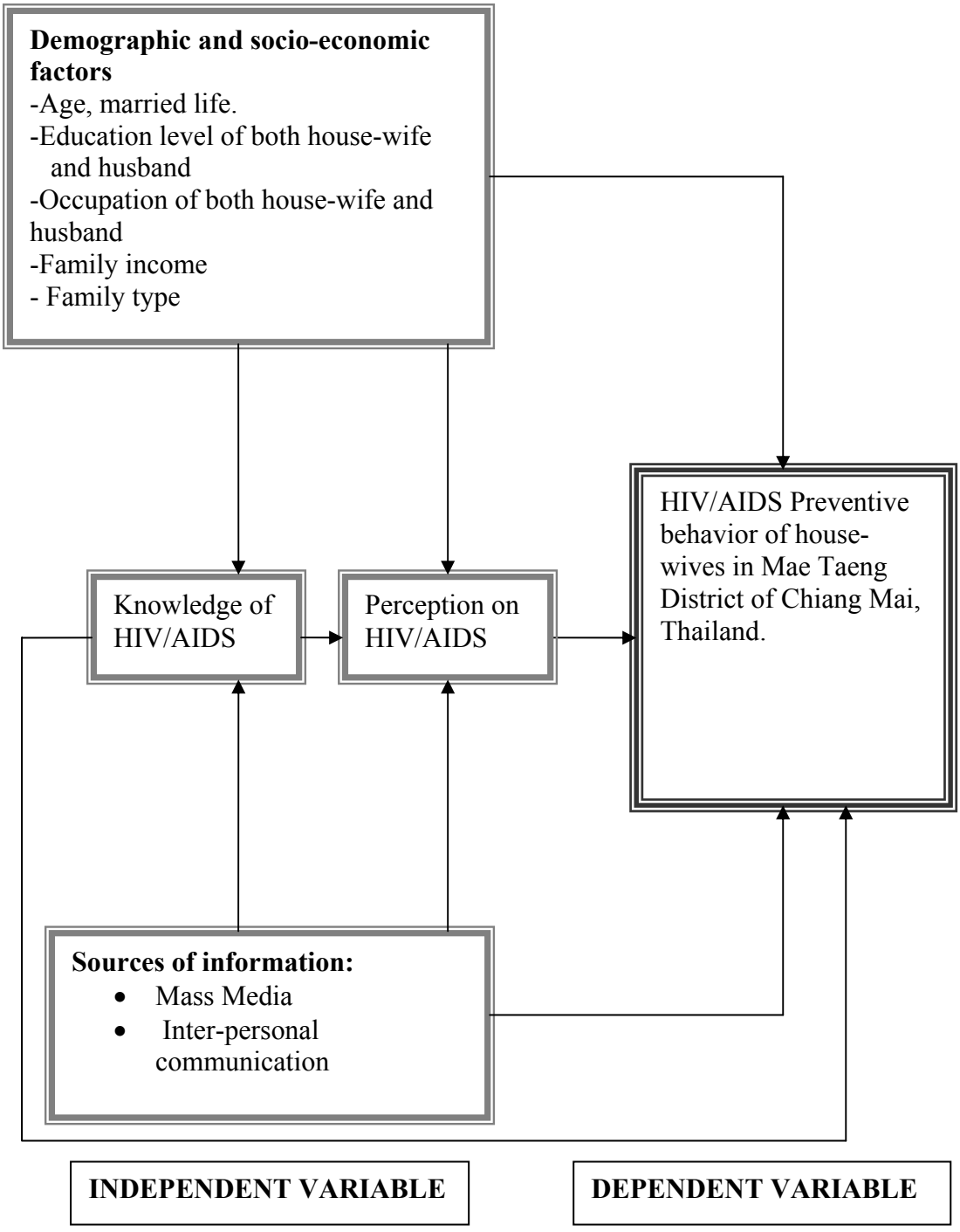

Figure 1 Conceptual frame work showing the factors related with the preventive behavior.

1.8 Operational Definition of the study variables

Based on the conceptual framework, the operational definitions of variables are as follows**:**

Age:

Refer to ages of the house wives' at last birth days in years. Here, in this study house-wife within the age of 15-50 years old is considered.

Education:

The level of educational achievement which can be measured by the number of years attending the school or the highest level of attainment such as primary, secondary, vocational/college and university or others by house-wife and husband.

Occupation:

Refers to the kind of job by which house-wife or husband earn money. In this study occupation designated as Government employee, agriculture labour, private business, factory worker, restaurant/hotel/bar worker, professional employee or merchant/trader/salesperson.

Family income:

Refer to the total monthly average income, which earned by all family members through their occupation or were sharing income from their farm.

Married Life:

Indicates the total number of years have been married.

Family type:

The types of family classes into the three categories:
Nuclear type In Mae Taeng a "nuclear family" usually refers to a couple and their unmarried children living at home.

Extended family An "extended family" refers to a household that includes other close relatives [e.g. usually the father and/or mother of the wife, and any of their close relatives that can include the unmarried or married sisters and brothers of the wife, nieces/ nephews of the wife, and any other close relative of the wife].

Knowledge:

Understanding the concept of house-wives about whether or not she knows the scientific facts on different aspects of HIV/AIDS disease such as- causes of the diseases, its transmission, symptoms and the preventive behavior.

Perception on HIV/AIDS:

The process by which the house-wives receive information about the perceived severity, perceived susceptibility, perceived benefit and perceived barrier to prevent HIV/AIDS and interprets according to her opinion.

Sources of HIV/AIDS information:

Respondents exposed to HIV/AIDS information through several sources: Broad cast media (TV, radio); printed media (news papers, magazines, posters); and interpersonal channel (Village Health Volunteers (VHV), health workers, families, relatives, friends, and other persons). HIV/AIDS information sources in this study refer to the above three sources and their combinations.

HIV/AIDS preventive behavior:

In this study preventive behavior refers to the practice and desire by house-wife to adapt B & C approach from the ABC model (A= Abstinence/delay sex; B= be faithful to each other/reduction of partner; C=use of Condom) herself during conjugal life.

CHAPTER 2
LITERATURE REVIEW

Contents of Literature of Review:

Literatures regarding to the Back ground information

Literatures regarding to the independent variables

2.1 Situation of HIV/AIDS

Since the beginning of the pandemic, AIDS has been spreading at an alarming rate worldwide. To date, an estimated total of 39.4 million people are infected by HIV/AIDS and 95% of them are in developing countries. It has also resulted in the death of 3.1 million people globally. The African continent has the highest prevalence of HIV infection in the world today with 25.4 million people being

infected. The worldwide prevalence rate is 1.1%, while that of Sub-Saharan African Region average is 7.4%. Across the continent regional difference in HIV/AIDS prevalence is considerable. However no country in the continent has escaped the virus [6].

2.2 Global Situation

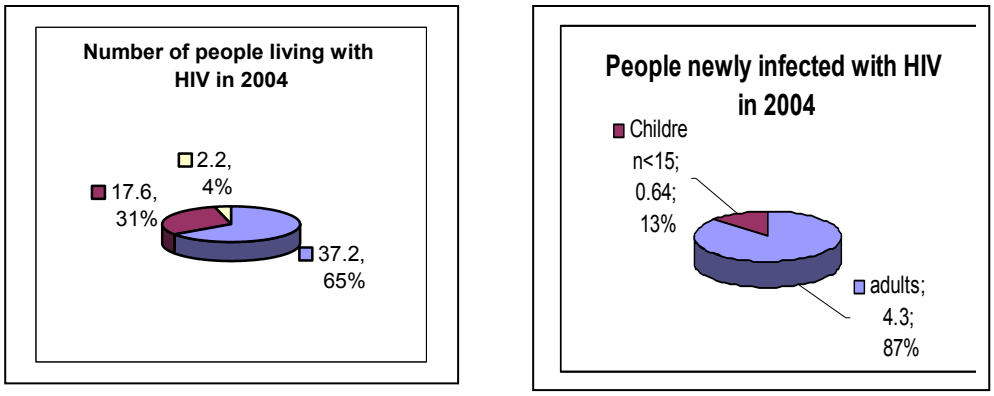

Figure 2 People living with HIV/AIDS in 2004

The latest situation on the world epidemic of AIDS & HIV were published by UNAIDS in December 2004. The report gives the latest AIDS and HIV statistics from around the world and statistics for individual countries. An estimated adults 37.2 millions; women (15-49) 17.6millions; children <15, 2.2 millions; total 39.4 million (35.9-44.3) millions. People newly infected with HIV at the same time; adults 4.9 (4.3-6.4) millions, children < 15, 0.64 millions. AIDS death in 2004 ; adults 2.6 millions, total 3.1 million (2.8-3.5 millions)[17]. Total number of AIDS deaths between 1981 and the end of 2003: 20 million. Total number of children orphaned by AIDS in Sub-Saharan Africa between 1981 and the end of 2003: 12 million. By December 2003 women accounted for nearly 50 percent of all people living with HIV worldwide, and for 57 percent in sub-Saharan Africa. Young people (15-24 years old) account for half of all new HIV infections world wide, more than 6000 become infected with HIV every day. An estimated five million people in low and middle income countries do not have the AIDS drugs which could save their lives [6].

Table 1 Regional HIV and AIDS statistics and features, end 2002 and 2004 [6]

	Adults & children living with HIV	**Adult & children newly infected with HIV**	**Adult prevalence (%)***	**Adult & child deaths due to AIDS**
Sub-Saharan Africa	25.4 million	3.1 million	7.4	2.3 million
2004	[23.4-28.4million]	[2.7-3.8 million]	[6.9-8.3]	[2.1-2.6 million]
2002	24.4 million	2.9 million	7.5	2.1 million
	[22.5-27.3 million]	[2.6-3.6 million]	[7.0-8.4]	[1.9-2.3 million]
North Africa & Middle east	540,000	92,000	0.3	28,000
2004	[230,00-1.5 million]	[34,000-350,000]	[0.1-0.7]	[12,000-72,000]
2002	430,000	73,000	0.2	20,000
	[180,000-1.2 million]	[21,000-300,000]	[0.1-0.6]	[8,300-53,000]-
South & South-East Asia	7.1 million	890,000	0.6	490,000
2004	[4.4-10.6 million]	[480,000-2.0 million]-	[0.4-0.9]	[300,000-750,000]
2002	6.4 million	820,000	0.6	430,000
	[3.9-9.7 million]	[430,000-2.0 million]	[0.4-0.9]	[260,000-650,000]
East Asia	1.1 million	290,000	0.1	51,000
2004	[560,00-1.8 million]	[84,000-830,000]	[0.1-0.2]	[25,000-86,000]
2002	760,000	120,000	0.1	37,000
	[380,000-1.2 million]	[36,000-360,000]	[0.1-0.2]	[18,000-63,000]
Oceania	35,000	5,000	0.2	700
2004	[25,000-48,000]	[2,100-13,000]	[0.1-0.3]	[<1,700]
2002	28,000	3,200	0.2	500
	[28,000-38,000]	[1,000-9,600]	[0.1-0.3]	[<1,000]
Latin America	1.7 million	240,000	0.6	95,000
2004	[1.3-2.2 million]	[170,000-430,000]	[0.5-0.8]	[73,000-120,000]
2002	1.5 million	190,000	0.6	74,000
	[1.1-2.0 million]	[140,000-320,000]	[0.4-0.7]	[58,000-96,000]
Caribbean	440,000	53,000	2.3	36,000
2004	[270,000-780,000]	[27,000-140,000]	[1.5-4.1]	[24,000-61,000]
2002	420,000	52,000	2.3	33,000
	[260,000-740,000]	[26,000-140,000]	[1.4-4.0]	[22,000-57,000]
Eastern Europe & Central Asia	1.4 million	210,000	0.8	60,000
2004	[920,000-2.1 million]	[110,000-480,000]	[0.5-1.2]	[39,000-87,000]
2002	1.0 million	190,000	0.6	40,000
	[670,000-1.5 million]	[94,000-440,000]	[0.4-0.8]	[27,000-58,000]
Western & Central Europe	610,000	21,000	0.3	6,500
2004	[480,000-760,000]	[14,000-38,000]	[0.2-0.3]	[<8500]
2002	600,000	18,000	0.3	6,000
	[470,000-750,000]	[13,000-35,000]	[0.2-0.3]	[<8,000]
North America	1.0 million	44,000	0.6	16,000
2004	[540,000-1.6 million]	[16,000-120,000]	[0.3-1.0]	[8,400-25,000]
2002	970,000	44,000	0.6	16,000
	[500,000-1.6 million]	[16,000-120,000]	[0.3-1.0]	[8,400-25,000]
Total				
2004	39.4 million	4.9 million	1.1	3.1 million
	[35.9-44.3 million	[4.3-6.4 million]	[1.0-1.3]	[2.8-3.5 million]
2002	36.6 million	4.5 million	1.1	2.7 million
	[33.3-41.1 million]	[3.9-6.2 million]	[1.0-1.2]	[2.5-3.1 million]

2.3 Regional situation of HIV/AIDS

Among the region the most affected region for HIV/AIDS at the end of 2004 is Sub-Saharan Africa. In that region 25.4 million adults and children living with HIV/AIDS; adult infection rate is 7.4 percent and deaths of adults and children is 2.3 million. The situation in South and South-East Asia region is the next position; where 7.1 millions adults and children living with HIV/AIDS; adults infection rate is 0.6 percent; deaths of adults and children are 0.49 millions. And the situation in the Oceania region is quite lowest, where adults and children living with HIV/AIDS 0.035 millions; adult infection rate is 0.2 percent and deaths of adult and children is 0.0007 millions[6].

2.4 South-East Asia and the Pacific

Table 2 HIV and AIDS statistics and features, end of 2002 and 2004 [6]**.**

	Adults and children living with HIV	**Number of women living with HIV**	**Adults and children newly infected with HIV**	**Adult prevalence (%)**	**Adult and child deaths due to AIDS**
2004	8.2 million [5.4–11.8 million]	2.3 million [1.5–3.3 million]	1.2 million [720 000–2.4 million]	0.4 [0.3–0.6]	540 000 [350 000–810 000]
2002	7.2 million [4.6–10.5 million]	1.9 million [1.2–2.8 million]	1.1 million [540 000–2.5 million]	0.4 [0.2–0.5]	470 000 [300 000–690 000]

National HIV infection levels in Asia are low compared with some other continents, notably Africa. But the populations of many Asian nations are so large that even low national HIV prevalence means large numbers of people are living with HIV. Latest estimates show some 8.2 million [5.4 million–11.8 million] people (2.3 million [1.5 million–3.3 million] adult women) were living with HIV at the end of 2004, including the 1.2 million [720 000–2.4 million] people who became newly infected in the past year. AIDS claimed some 540 000 [350 000–810 000] lives in

2004. Among young people 15–24 years of age, 0.3% of women [0.2–0.6%] and 0.4% of men [0.3–0.8%] were living with HIV by the end of 2004 [6].

Asia is not just vast but diverse, and HIV epidemics in the region share that diversity, with the nature, pace and severity of epidemics differing across the region. Overall, Asian countries can be divided into several categories, according to the epidemics they are experiencing. While some countries were hit early (for example, Cambodia, Myanmar and Thailand), others are only now starting to experience rapidly expanding epidemics and need to mount swift, effective responses. They include Indonesia, Nepal, Viet Nam, and several provinces in China. In Myanmar and in parts of India and China, HIV has become well-entrenched in some sections of society, despite modest efforts to halt the virus' spread. Other countries are still seeing extremely low levels of HIV prevalence, even among people at high risk of exposure to HIV, and have golden opportunities to pre-empt serious outbreaks. These countries include Bangladesh, East Timor, Laos, Pakistan, and the Philippines (MAP, 2004) [6].

2.5 Thailand overview

Thailand is a Southeast Asian country located on the Indo-Chinese peninsula. It is bordered by Myanmar on the West, Laos in the North, and Northeast, Cambodia on the East and Malaysia to the South . It covers an area of 513,115 square kilometres, and is divided into four (South, North, Northeast and Central) geographic regions, each with their own distinct culture and customs [17]. The administrative structure of Thailand is centralised and divided into 4 divisions: Province (jangwat), District (amphur), Sub-district (tamboon) and village (moo baan). The population is estimated at 62,362,000 with women making a little over half, with a male-female ratio of 1:1.008. The population growth rate is 1.0% per annum with total fertility rate at 1.9.

2.6 Gender relations & Sexuality

In terms of sexuality, the cultural setting of Thailand brings to bare a double standard in premarital sexuality with male sexual activity being accepted more than female sexual activity and with women holding more traditional views than men [18, 19]. Premarital sexual intercourse is acceptable for many youth if part of a stable, affectionate relationship. Females place a higher value on virginity and disapprove strongly of premarital sexual relations for women but not for men. This approval for single men having sex with anyone indicates an acceptance of sexual activity with prostitutes [20]. Though changes in attitudes concerning premarital sex have been occurring among these adolescents as the society has developed, differences in attitudes and experience of premarital sexual relations are very pronounced between sexes. The period of exposure to sexual activities is also lengthened because the average age at menarche continues to decline.

2.7 Situation of HIV/AIDS in Thailand

2.7.1 National Situation

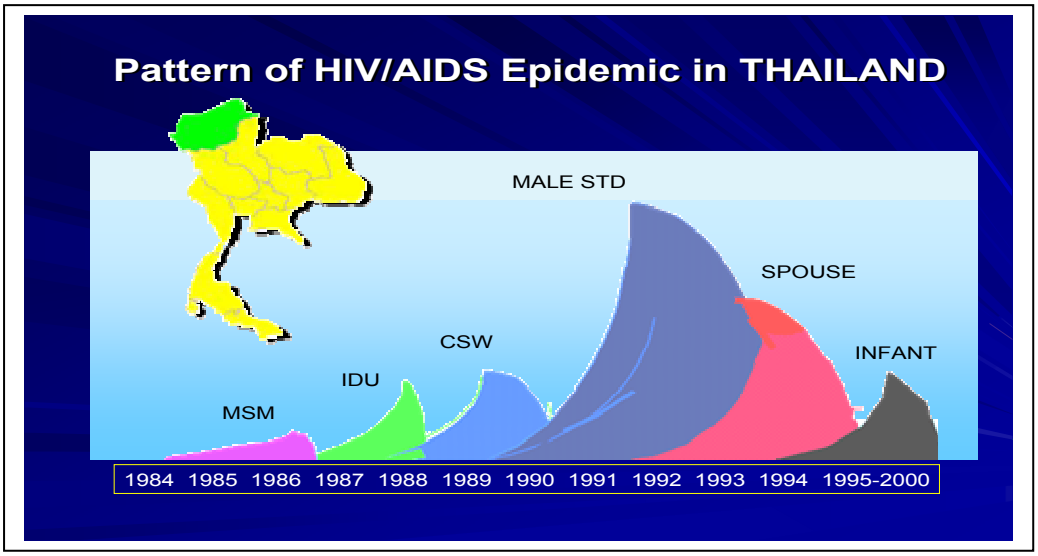

Figure 3 Patterns of HIV epidemics in Thailand.

HIV/AIDS epidemiological information systems include reporting, sentinel sero-prevalence surveillance, STI incidence and behavioral surveillance. The data sources allow calculations for cumulative number of reported AIDS cases (as of June 30, 2004) of 239,477. More than 26.1% of the cases are in the age group of 25-29 years

and followed by age group 30-34 years (25.6%), age group 35-39 years (16.1%), age group 20- 24 years (9.7%) and age group 40-44 years (8.6%). The proportion between male and female are 2.7 : 1. Sexual transmission accounts for 83.6% of reported AIDS cases while infection among injecting drug users accounted for 4.7%. Transmission of HIV from mother-to-child was 4.2%. Approximately 44.3% were labor, agriculture about 20.8%, unemployee 5.6% and shopkeeper 4.4%. In the year 2004, from a total population of 61 million, it was estimated that 1,074,155 persons were infected with HIV since the beginning of the epidemic. Among these, 501,600 had died and 572,500 are currently living with HIV and AIDS in the country of which 55,000 would develop serious AIDS illness and approximately the same number will die of AIDS complications. It was also estimated that 19,500 new infections would occur during this year compared to 143,000 new infections in 1990 [7].

Since the current infection rate, according to the ministry of public health, is around 19,000 cases annually, which is a dramatic reduction from the 143,000 new HIV cases reported in 1991 - on record as Thailand's worst year. Thailand has over 600,000 people living with HIV/AIDS out of a population of 63 million. Since the pandemic was first detected in this country in the 1980s, over 450,000 people have died due to the disease. Thailand has shown that a well-funded, politically supported and shrewdly-implemented response can change the course of the HIV/AIDS epidemic. After peaking at 143,000 in 1991, the annual number of new HIV infections has fallen to about 19,000 in 2003 – making Thailand one of a handful of countries to have reversed a serious HIV/AIDS epidemic. The national adult HIV prevalence continues to edge lower, with the latest estimates pegging it at a little over 1.5 percent at the end of 2003. This outstanding achievement translates into millions of lives saved [7].

2.7.2 Regional Level:

After the first AIDS cases were reported in the mid 80s, the MOPH established a system to report the number HIV/AIDS cases. The statistics were gathered from government and selected private health institution in every province throughout the country. In the early 90s the highest number of HIV/AIDS cases were to found in the

central region with 30 percent; followed by Bangkok 27.8 percent; North 22.7 percent, South 10.9 percent; and Northeast 8.6 percent (Im-em,1999). However in1997, there was a shift in the geographical setting then, 50.0 percent of the HIV/AIDS cases were reported in the Northern region followed by the Central 22.9 percent, Northeast 10.7 percent, Bangkok 9.2 percent and South 6.6 percent. According to Im-em (1999), it can be assumed that a large number of people found to HIV-positive in 1991 were migrant from the North who contracted the virus while working in Bangkok and the central region. Thus, the number of AIDS deaths in the North was high in the subsequent years, as people with HIV returned to their home provinces in the North when disclosing their HIV positive status. In addition, information obtained from several local health personnel suggested that they did not report all PWHAs detected, fearing that their health institution would be blamed for not able to control the AIDS situation; thus they would report only some HIV/AIDS cases (Im-em, 1999) [21]. The figure shows Aids patients per 100,000 by region and year. The North had the highest rate, followed by the Central and the South, while the Northeast has the lowest rate. The rates drop sharply in the North over the years. In 2003, the Northeast has lowest rate, but the rates of the three other regions are still over 20 [22].

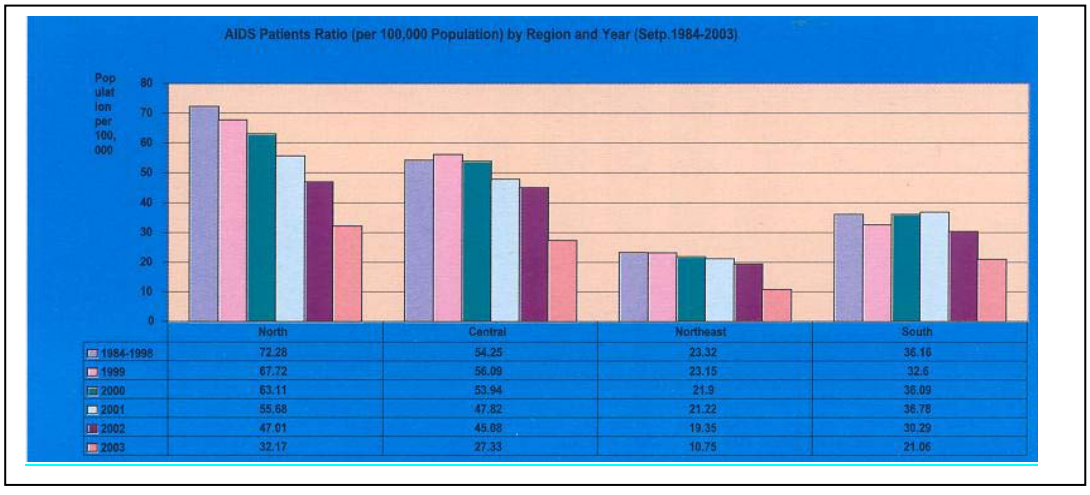

Figure 4 AIDS patients ratio (per 100,000 population) by region and year 1984-2003.

There are six provinces in region-10, with a total population of 4.8 million people. The HIV/AIDS situation, according to the Leusaree Tasana of office of

Disease Prevention and Control Region 10 (31st January, 2004) the cumulative number of AIDS cases 57,592 and died from total at the same time 19,265. The cumulative number of symptomatic HIV (31st oct.2003) 22,753 cases and died 2,990 cases. The AIDS reported cases in 2003, 1909 and died due to AIDS at the same time 331. According to the sex distribution the total male AIDS patients are 1065 and female 844. The Se-related risk factors identified as highest (82.6 percent). Table 3 & 4 demonstrated the distribution of age patients according to the age and occupation [23].

Table 3 Age distribution in AIDS patients in region-10.

	0-4	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**<60**
2003	4	13	6	5	23	118	207	109	75	38	22	4	9
2002	34	74	25	16	173	648	983	729	387	196	88	35	29
2001	63	94	19	28	289	1058	1303	898	459	233	88	46	35
2000	76	115	8	20	348	1318	1398	965	518	213	86	43	53

Table 4 Occupation of AIDS patients in Region-10.

	1999	**2000**	**2001**	**2002**
Prisoner	0.45	0.44	0.3	0.4
CSW	0.17	0.16	0.23	0.29
Children	4.95	5.05	5.78	6.85
Official	2.47	2.08	1.88	1.61
Housewives	3.27	3.62	3.88	3.58
Business	3.32	4.08	4.3	4.04
Unemploy	3.44	3.86	4.85	4.7
Other	6.18	3.62	3.61	2.44
Agriculture	34.55	36.31	34.29	36.64
Labor	41.1	40.8	40.2	45.4
Total	100.00	100.00	100.00	100.00

2.8 Demographic Health Data and HIV/AIDS situation in Mae Taeng District[24]

Mae Taeng is a district situated north of the provincial capital of Chiang mai. It is one of the larger districts in terms of geographic size. It is comprised of 13 sub-districts containing 118 villages and 18,809 households.

Mae Taeng has a population of 76,879 people. The gender break-down is almost identical [i.e. 38,531 males (50.1%) and 38,348 females (49.9%)]. The district contains a total of 18,671 women of reproductive age [i.e. both married and unmarried women who are 15-44 years of age]. Of this number only 8,943 are in the category of "married" women of reproductive age (MWRA).

Table 5 The demographic data for Mae Taeng according to sub-district.

Name of Sub-District	# of Villages	# of Households	# of MWRA	# MWRA Using a Contraceptive Method	CPR
Khee Lekh	10	2,208	981	914	93.2%
San Maha Phon	10	1,696	742	673	90.7%
Cho Lae	6	1,471	530	453	85.5
Inthakhil	19	3,066	1,466	1,370	93.5
Sob Poeng	13	2,080	1,083	932	86.1
Pa Pae	13	1,365	652	558	85.6
Mae Hor Phra	9	1,555	974	935	96.0
Ban Pao	7	1,088	565	483	85.5
San Pa Yang	5	1,068	526	424	80.6
Ban Chang	5	928	368	345	93.8
Keud Chang	8	325	292	280	95.9
Muang Kai	5	810	158	141	89.2
Mae Taeng	8	1,149	606	506	83.5
Total	118	18,809	8,943	8,014	89.6

As in most districts of Chiang mai and northern Thailand the Contraceptive Prevalence Rate (CPR), or the percentage of married women of reproductive age using a contraceptive or family planning method, is very high. Of the 8,943 married women of reproductive age living in Mae Taeng District, 8,014 (i.e. 89.6%) of them are using a contraceptive or family planning method. The overwhelming majority are using temporary hormonal contraceptive methods [i.e. oral pills (3,732 or 41.7%), injectable contraceptives (2,187 or 24.5%), and long-term hormonal implants (i.e. 46 or 0.5%)]. The remainder of the family planning acceptors are using the following methods: IUDs (82 or 0.9%), female sterilization (1,686 or 18.9%), male sterilization (85 or 1.0%), and condoms (196 or 2.2%). These figures have relevance for the proposed study as condoms are clearly not used either as an "effective contraceptive method" or as a "back-up barrier method" to ensure that wives and regular partners are not infected by HIV/AIDS and/or other STIs. It should be noted, however, that these statistics are extrapolated from family planning service delivery records or surveys and do not include those individuals [especially males] who may use condoms outside of their marriage.

The HIV/AIDS data, enumerated in Tables 6 & 8 is highly under-reported, according to the field researcher. During the time that one renowned researcher (Zankel S,1999) was conducting his own research on HIV/AIDS related deaths in Tambol Inthakhil for the period 1995-1999, the researcher collected more than 300 names of individuals [from village burial societies in Tambol Inthakhil] who supposedly died of AIDS related illnesses. Of this number more than 80% were confirmed, from hospital records, of suffering from full-blown AIDS. For the three year period 1995-1997 there were a total of 245 confirmed AIDS related deaths from individuals who were members of the 17 village burial societies in Tambol Inthakhil. Since individuals living outside of Tambol Inthakhil could be members of these "burial societies", the residence of those people dying from an AIDS related illness has shown in table-8 [24].

Table 6 Cumulative Number of Symptomatic HIV and AIDS Cases in Mae Taeng District in order to Sub-District.

Sub-District	Numbers of AIDS Cases	Numbers of symptomatic AIDS cases.	Total Numbers of symptomatic HIV/AIDS cases.
Inthakil	53	53	106
Sobpoeng	37	28	65
Khee Lek	64	34	98
Mae Hor Phra	22	12	34
Mae Taeng	22	13	35
San Mahaphol	29	19	48
Pa Pae	19	26	45
Ban Pao	17	14	31
Ban Chang	11	9	20
Cho Lae	23	11	34
Keud Chang	2	12	14
San Pa Yang	33	14	47
Muang Kai	13	4	17
TOTAL	345	249	594

As from the data in Table 6, there is almost as many AIDS related deaths from individuals living in Tambol Inthakhil or other areas of Mae Taeng District from 1995-1997 [i.e. 218] than all reported cases of Symptomatic HIV and/or AIDS cases in Mae Taeng District [Table 5] during this same time period (i.e. 300) [25].

Table 7 Residence of Tambol Inthakhil Village Burial Society Members Who Died From an AIDS Related Illness During the Period 1995-1997

Living Within one of the 17 Villages Located in Tambol Inthakhil	Living Within Another Tambol Located in Mae Taeng District	Living Within Another District of Chiang mai Province	Residence of Deceased Unknown	Total
182	36	26	1	245

Table 8 Cumulative number of symptomatic HIV and AIDS cases in Mae Taeng District according to year.

Year	Number of AIDS Cases	Number of Symptomatic HIV Cases	Total number of HIV+ and/or AIDS Cases
1991	1	1	2
1992	6	8	14
1993	26	21	47
1994	50	29	79
1995	76	44	120
1996	56	60	116
1997	29	35	64
1998	18	9	27
1999	15	6	21
2000	14	6	20
2001	5	2	7
2002	11	2	13
2003	1	2	3
2004	2	0	2
TOTAL	**310**	**225**	**535**

2.9 Epidemiology of HIV/AIDS among women

During the last decade, special efforts were need to obtain information about the magnitude of HIV infection in women and children. It soon became obvious that, as with other sexually transmitted diseases (STD), women are more likely to get HIV from infected men than to infect their male partners [26].

It is estimated that the globally total number of HIV infected women in reproductive age (15-49 years) is approximately 17.6 million by the year December, 2004 [6].

Table 9 Regional HIV statistics and features for women, end 2002 and 2004 [6]

Name of the region	Year	Number of women (15-49) living with HIV	Percent of adults (15-49) living with HIV who are women (%)
Sub-Saharan Africa	2004	13.3 million [12.4-14.9 million]	57
	2002	12.8 million [11.9-14.3 million]	57
North Africa & Middle east	2004	250,000 [80,000-770,000]	48
	2002	200,000 [62,000-620,000]	48
South & South-East Asia	2004	2.1 million[1.3-3.1 million]	30
	2002	1.8 million [1.1-2.7 million]	28
East Asia	2004	250,000 [120,000-400,000]	22
	2002	160,000 [79,000-250,000]	21
Oceania	2004	7,100 [4100-11,000]	21
	2002	5,000 [3,000-7500]	18
Latin America	2004	610,000 [470,000-790,000]	36
	2002	520,000 [390,000-690,000]	35
Caribbean	2004	210,000 [120,000-380,000]	49
	2002	190,000 [110,000-360,000]	49
Eastern Europe & Central Asia	2004	490,000 [310,000-710,000]	44
	2002	330,000 [220,000-480,000]	39
Western & Central Europe	2004	160,000 [120,000-200,000]	25
	2002	150,000 [110,000-190,000]	25
North America	2004	260,000 [140,000-410,000]	25
	2002	240,000 [120,000-390,000]	25
Total	2004	17.6 million [16.3-19.5 million]	47
	2002	16.4 million [15.2-18.2 million]	48

Early in the epidemic, men vastly outnumbered women among people infected with HIV. Since 2002, the number of women living with HIV has increased in every region. Millions of young people are becoming sexually active each day with no access to prevention services. Today, nearly 50% of adults living with HIV globally are women. The figure is close to 60% in sub-Saharan Africa. In sub-Saharan Africa,

76% of young people aged 15 to 24 living with HIV are female. Young women are about three times more vulnerable to HIV infection that their male counterparts [27].

In Russia, which has the biggest epidemic in Eastern Europe and Central Asia, the Russian Federal AIDS Center found that in 2003, 38% of people living with HIV were women – compared to 24% in 2001. In the United States, AIDS disproportionately affects African American and Hispanic women, with AIDS ranked among the top three causes of death for African American women aged 35 to 44 years In Asia, some 8.2 million people are estimated to be living with HIV, including 1.2 million people newly infected in the past year. The number of women living with HIV has increased by 56% since 2002, bringing the total number of women currently living with the virus to around 2.3 million. AIDS claimed some 540,000 lives in Asia this year. East Asia has experienced the sharpest rise with 56% in two years, followed by Eastern Europe and Central Asia with 48% [27].

The rate of HIV infection among young people worldwide is rapidly increasing. Of particular concern are the dramatic increases in HIV infection among young women, who now make up 60% of the 15- to 24- year olds living with HIV/AIDS. Globally, young women are 1.6 times more likely to be living with HIV/AIDS than young men. Throughout sub-Saharan Africa, girls and young women (15-24 years) are now three times more likely to be HIV infected as young men. This trend continues in the Caribbean where young women are up to 2.5 times more likely to be infected. Where prevalence rates are low young men usually have higher rates of infection than young women but in countries with higher HIV infection rates young women typically surpass young men of the same age. In East Asia 28% of the young people (15-24 years) living with the virus are women and in South and South East Asia this figure rises to 40% [28].

Women become infected with HIV through all the known routes of transmission. The route of transmission to women is overwhelmingly through heterosexual transmission, and the result is a growing AIDS burden on women. Heterosexual

activity in the context of marriage may well be the predominant risk factor for HIV infection in women worldwide with estimates that as many as 1500 women who have only their own husband as e sexual partner are becoming infected on a daily basis [29].

Women are the most at risk through unprotected sexual; intercourse with an infected man whether vaginal or anal; whether with a husband, steady partner, occasional partner or sex client; and whether he became infected through intravenous drug use, blood transfusion, or sex with another man or women. Sharing of used syringe and needles and unscreened infected blood transfusions also continue to put many women at high risk [30]**.** In many countries throughout the world, pregnant women attending anti-natal clinics are showing a high prevalence of infection. Studies of women Attending anti-natal clinics found that many are monogamous and have been infected by their one partner their husband. [31].

Various research on sexual behavior and risk for HIV among young people had been carried out in north America and Japan shown that the majority of boys and girls would be at high risk of HIV because they married late, had bad sexual partners before marriage. A high incidence of pregnancy and STDs in married adolescence means that they were at high risk of HIV/AIDS [32]**.**

Since there is no treatment currently available that cures the disease, the only option is prevention. Interventions are mainly concentrated on breaking the mode of transmission including promoting reduction in the number of sexual partner, encouraging delay in the onset of sexual commencement among adolescents, promoting the use and availability of condoms and strengthening programs for STD control and others [33].

2.10 Behavioral Theory

A greater understanding of determinants of risk related and preventive behavior in target population is an important precursor to the development of a successful

AIDS preventive programme. Major models of transmission of HIV relate to behavior of people that is associated with demographic, socio-economic, cultural, and behavioral aspects of society, therefore the determinants of changing behavior related to HIV prevention is very complex.

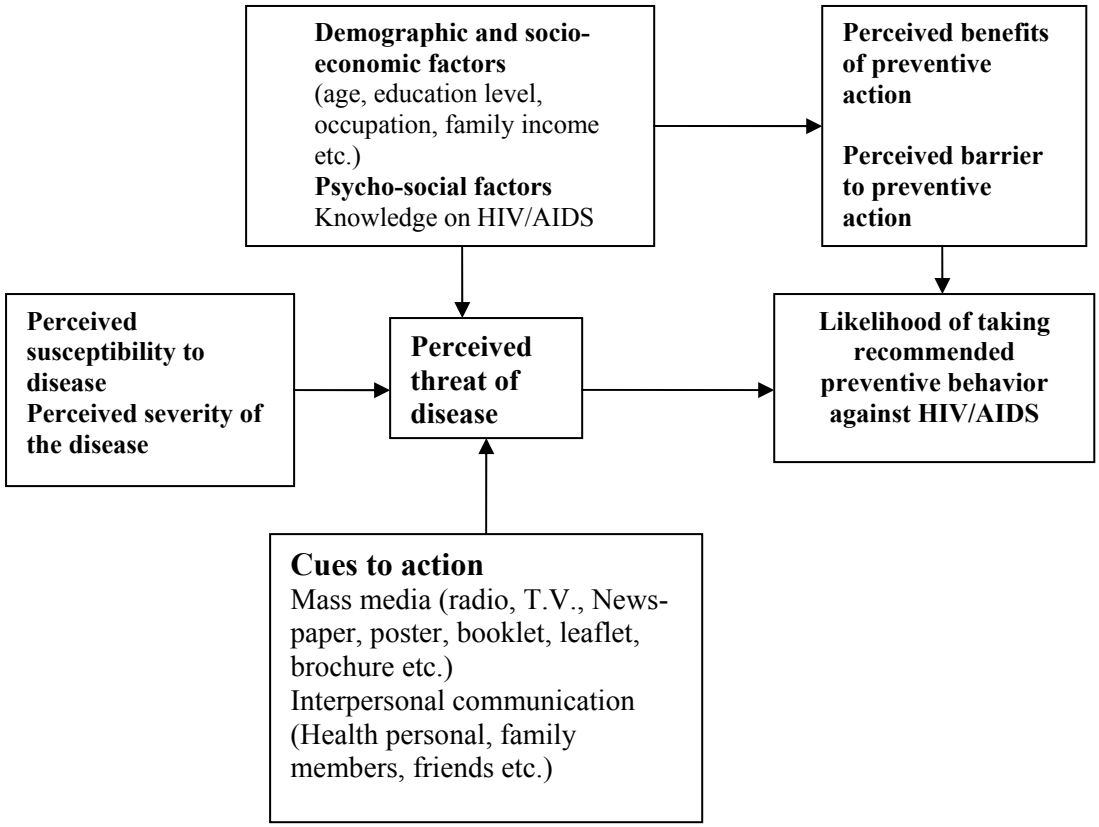

Figure 5 Health-Belief Model

There are many explanations as to why behavior changes, in part this depends on different populations and cultures. However, every HIV prevention program relies on theories about why people change their behavior. There are four commonly held theories of behavior change in HIV prevention. These theories provide four models of how the changing behavior process is believed to occur [34].

So far, there are several models and community cited theories in HIV/AIDS preventive programs or endeavors. Of these the most advocated ones are, Health Belief model (HBM), theory of Reasoned action (TRA), AIDS Risk Reduction Model (ARRM), Social cognitive theory (SCT) and others [35, 36].

Health Belief model is a psychosocial model that attempts to explain and predict health behavior by focusing on attitude and belief of an individual. The key variable of health belief model is perceived susceptibility, perceived severity, perceived benefit and perceived barrier [37]. The premises of Social Cognitive Theory (SCT) states that new behaviors are learned either by modeling the behavior of others or by direct experience. Theory of Reasoned action (TRA) is based on the assumptions that human beings are usually quite rational in making systematic use of the information available to them. The theory of Reasoned action is conceptually similar to health Belief model, but adds the construct of health behavioral intention as a determinant of health behavior [38]. In this study health belief model is used to explain the findings.

2.11 Marriage and HIV/AIDS

Even marriage is not a protection for women against HIV/AIDS in many countries. Across the developing world, the majority of women will be married by age 20 and have higher rates of HIV than their unmarried, sexually active peers. Women's infidelity is not only frowned upon but actually criminalized in certain places, whilst men's extramarital sexual relationships and use of female sex workers are seen as being almost acceptable, or to be expected. Much of the HIV prevention work in developing countries now focuses in sexual abstinence until marriage, but remaining faithful to her husband would not help a women to stay safe from HIV, if he is the who infects her. In fact, this is one of the most common ways in which women are infected in many places.

Older married women also appear to be at high risk for HIV/AIDS. In sub-Saharan Africa, 60 to 80 per cent of HIV-positive women report having had sexual relations only with their husbands. On Colombia's Atlantic Coast, 25 per cent of all HIV cases are among women, nearly 50 per cent of whom are either married or in a stable relationship [39].

In India, "marriage is actually women's primary risk factor," according to Suneeta Krishnan, an epidemiologist studying HIV and gender issues in Bangalore [40]. A UNIFEM community-based research project in India pointed to some of the reasons for the increased vulnerability of married women: condom use was extremely rare, adult women had little negotiating power about sexual matters within marriage and men who suggested using protection were suspected of infidelity [41]. Another study, at a health clinic in Pune, India, found that of 400 women—93 per cent of whom were married—25 per cent had sexually transmitted infections (STIs) and 14 per cent were HIV-positive. Ninety-one per cent had never had sex with anyone but their husbands [42].

Some of the reasons for the high rates of HIV infection among married women are linked to the very reasons that some people marry: they want to have children. But with no way to conceive and protect themselves from HIV at the same time, they frequently put themselves at risk of HIV infection. Often couples assume their marriage will be monogamous—even in communities where men's promiscuity is encouraged—and stop using condoms as a sign of faithfulness. In many cases, gender roles make it difficult for women to discuss sex with their husbands and for men to admit they are worried about STIs [43].

2.12 Demographic and socio-economic characteristics associated with HIV/AIDS preventive behavior

Demographic and socio-economic status (SES) (e g. Age, educational attainment, income, occupation) are very important factor affecting access to information about, attitude towards, health and disease [44].

Age

Age is an important factor influencing the level of health related knowledge. Generally, increasing age leads to increases in knowledge. In many situations, the older generation is deprived of getting appropriate information due to lack of sufficient exposure. Individuals of 50 years and older are often found to be less well informed about HIV/AIDS compared to younger individuals and very little attention have been paid to them, as it is assumed that they are not sexually active at that stage of life. This difference has been demonstrated in adult populations from a variety of developed countries like france, United Kingdom, Denmark and Australia [45].

Even in a country like Thailand, where levels of AIDS related knowledge are widely assumed to be high, there are significant deficiencies of knowledge among the older Thais [46]. Thus, research reveals that though age is positively related with knowledge about HIV through early and middle adulthood, but older adults have slightly lower level of HIV related knowledge than do younger persons.

Though, a significant relationship is usually found between age and level of HIV/AIDS knowledge, with the younger generation, generally more knowledge about HIV/AIDS, still it was found that knowledge about sexuality and HIV transmission is rather low among American Indian young adults [47].

Not only in developed countries, but also in the developing countries, it is found that knowledge level varies among age groups. In Vietnum, it was found that individuals whose ages were above 20 years had higher level of HIV/AIDS knowledge than those who were below 20 years [48]. In India, HIV/AIDS knowledge was greatest among those older than 20 years [49]. Therefore, the general relationship appears to be that among individuals who are younger than 20 years of age, they are less likely to be knowledgeable about HIV than are others.

Research in America revealed that age are correlated with knowledge about HIV. The specific signal of HIV epidemic is that HIV infected persons are largely concentrated in the young adult population [50]. Studies show that age is negatively

associated with HIV knowledge and positively associated with misperceptions about HIV transmission [51]. In India, another study had shown that AIDS knowledge was greatest among those older than 20 years [52].

Age is one of the characteristics that merits consideration as a predictor of HIV/AIDS knowledge. Epidemiological studies show that infection rates are highest among the adolescent women [53]. An increase in age reflects an increase in knowledge, because young people are not getting access to the right information about HIV/AIDS [54, 55]. However, there is argument that age is negatively associated with HIV/AIDS knowledge, because the HIV/AIDS pandemic affects younger people more than older people. In Madagascar age was negatively correlated significantly with HIV/AIDS knowledge test scores, with younger participants performing better [56].

Occupation

Knowledge of HIV/AIDS is associated with occupation in many studies. Women who are employed, for example, are generally found to have higher levels of knowledge of HIV/AIDS than those who are not employed, as their work outside the home provide exposure to information [57]. Those work in the private or public non-agricultural sector. Differences in occupational status also determine income and social staus, which in turn, influence people in terms of accessibility, affordability and acceptability to information and knowledge [58].

In Thailand and Bangladesh found that knowledge was associated with women occupation. Employed women have significant role in influencing sexual decision making and discouraging risk behaviors of their husbands. These studies have shown that high occupation group of women had significantly higher role in sexual decision making [59].

Of the cumulative AIDS cases, the largest proportion (36%) is in the upper Northern Provinces. Agriculture worker and wage laborers together accounted for close to 70% of those with AIDS. Global trend of urbanization, cultural transition and

economic rrcession erode the traditional mechanisms. Which guide young women and men through the transition from childhood to adulthood [60].

The transformation of Thai work force from agriculture to wage-labor has been seen as a main determinant of a vulnerable environment to HIV and AIDS by the majority of poor population in Northern Province of Thailand. This has been accompanied with changing lifestyles of the younger population. Thai economy has changed from an agriculturally based economy to an industrially based economy with large number of people engaged in industrial wage labor work. Increased individual independence from the traditional community is a result of this change [61].

Education

Study in UK [62] have shown that highly educated single students, and professionals under 35 age groups, persons who know infected people personally, and who readily accept information and education activities are most likely have correct knowledge. Studies in Bangladesh [63], India [52] have found that education was the most significant predictor of AIDS knowledge and women knowledge was higher among the educated than uneducated respondents. Majority of the studies revealed that education influence on HIV/AIDS knowledge.

Education is a key defense against the spread of HIV and one of the most powerful predictor of HIV/AIDS related knowledge. There are consistence result among previous studied; the higher education the more HIV/AIDS knowledge [51, 64, 65]. The reasons why education plays a crucial role in knowledge acquisition were explained [66]: the first is communication skills. Persons with more formal education would be expected to have the higher reading and comprehension abilities that are necessary to acquire public affairs or science knowledge; the second is the amount of stored information, or existing knowledge resulting from prior exposure to the topic through mass media or formal education itself; the third is relevant social contact.

Studies in Zambia, for example, have found lower levels of HIV infection among better educated people [67], while in Kenya research has linked higher education levels with increased AIDS awareness and knowledge, higher rates of condom use, and greater communication on HIV prevention among partners.

The relationship between education and HIV is complex, though. In Burkina Faso, HIV levels among pregnant women were highest among women who only attended primary school or who failed to complete secondary school (at 2.9% and 2.6%, respectively). Prevalence was lowest among women who completed secondary school (1.6%) or who never attended school (1.9%) [68]. In Ghana, HIV prevalence among pregnant women with only primary school education was almost two times higher (2.8%) than among those with no formal schooling (1.5%) and one third higher (2.1%) than among those who .finished secondary school [69]. Meanwhile, Nigeria's latest round of HIV surveillance has found infection levels to be highest among pregnant women with only primary education (5.6%) and lowest among those with tertiary education and no formal education (4% and 3.8%, respectively) [70]. The link between no formal education and lower HIV levels may be related to geographical and other factors. However, it is clear that completing secondary school can boost women's social power, employment opportunities, economic autonomy, and reduce their risks of HIV infection.

Education is key to an effective response to HIV/AIDS. Studies show that educated women are more likely to know how to prevent HIV infection, to delay sexual activity and to take measures to protect themselves. Universal primary education is not a substitute for expanded HIV/AIDS treatment and prevention, but it is a necessary component that complements these efforts.

The benefits of education come from actual knowledge that students gain about HIV, from training in negotiation and life skills and from their increased ability to think critically and analyze situations before acting [71].

According to the Global Campaign for Education, “research shows that a primary education is the minimum threshold needed to benefit from [health information] programmes. Not only is a basic education essential to be able to process and evaluate information, it also gives the most marginalized groups in society—notably young women—the status and confidence needed to act on information and refuse unsafe sex.” [84].

A 32-country study found that women with post-primary education were five times more likely than illiterate women to know facts about HIV/AIDS. Illiterate women, on the other hand, were four times more likely to believe that there is no way to prevent HIV infection [72]. In Zambia, during the 1990s, HIV infection rates fell by almost half among educated women but showed little decline for women with no formal schooling.

Much of the research that has focused on women and education also shows that post-primary education has the most impact, providing the greatest pay-off for women’s empowerment. Higher levels of education provide much more than specific information on HIV transmission. They also provide adults and young people with the larger life skills they need to make informed choices and to develop both economic and intellectual independence. Girls and women gain self-esteem along with knowledge.

They are able to prepare for the work force, better able to protect their families’ health and less likely to die during childbirth than those who are less educated. They are also more likely to marry at a later age. Girls with less than seven years of schooling are more likely to be married by age 18, and early marriage is directly linked to an increased risk of HIV infection. [73].

Higher levels of education also seem to reduce—though not eliminate—girls’ and women’s risk of violence, another predictor of HIV infection. Regarding specific knowledge about HIV, a study conducted in Uganda over the course of the 1990s

showed that both women and men who finished secondary school were seven times less likely to contract HIV than those who received little or no schooling. [84].

Despite the overwhelming evidence of education's importance in helping to limit the spread of HIV, a recent worldwide study found that about 40 per cent of countries have not yet taken the basic step of including information about AIDS in their school curriculum. [74] Nevertheless, there have been some notable successes where such programmes have been introduced.

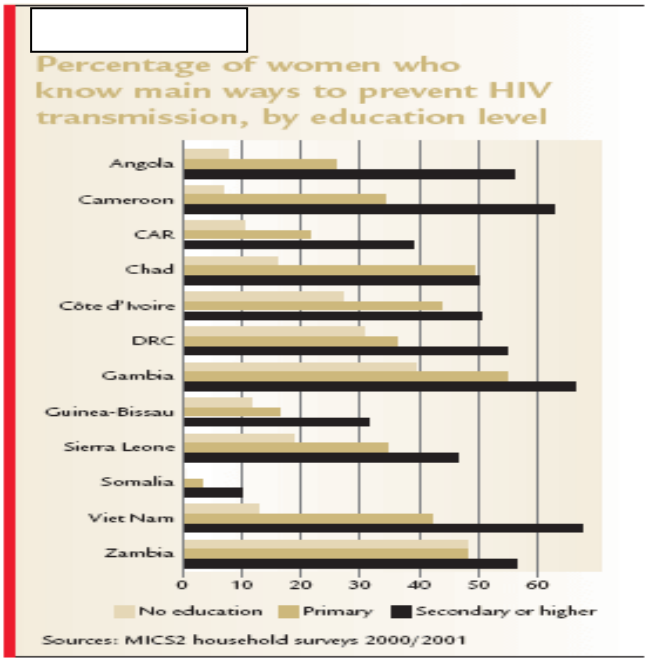

Figure 6 Percentage of women who know main way to prevent HIV transmission by education level.

This 'remarkable paradox' between higher education levels and higher rates of HIV prevalence is tied, says Sir George Alleyne, the Secretary-General's Special Envoy for HIV/AIDS in the Caribbean, to young women's inability to advocate for themselves despite their years of education. "Possibly, the skills and knowledge women acquire in the formal education system are not sufficient to enable them to take control over other parts of their lives…it may come too late to prevent them from being the victim of unwanted or transactional sex as adolescents," he says [75].

2.13 Exposure to knowledge and HIV/AIDS

In many societies both the discussion of and education about sexual matters is frowned upon. As a result, millions of people, especially girls and women, remain ignorant about HIV/AIDS, with potentially deadly consequences. According to data from the surveys, globally, more than 80 per cent of the young women did not have 'sufficient' knowledge about HIV/AIDS. Many had no idea how HIV/AIDS is transmitted and little or no information on protection methods [76].

In sub-Saharan Africa only 20 per cent of women aged 15 to 24 were able to identify the two prevention methods and the common misconceptions about HIV. In Somalia only 26 per cent of young women had heard of AIDS and only 2 per cent knew how to avoid infection. Many young women did not know that a healthy-looking person can be infected with HIV and that a condom can prevent HIV transmission. The percentages of young women who did not know these facts: 50 per cent in South-East Asia; 50 per cent in sub-Saharan Africa; 43 per cent in the CEE/CIS countries and the Baltic States; and 25 per cent in Latin America and the Caribbean [76].

In sub-Saharan Africa 53 per cent of young women know that a healthy-looking person can be infected, compared to 64 per cent of young men. In Burkina Faso the differences are 42 per cent of young women, compared to 64 per cent of young men. In Ethiopia 39 per cent of young women know that a healthy person may have HIV, compared to 54 per cent of young men [78,84].

A review of 50 sexual health education programmes in different parts of the world found that young people were more likely to delay sexual activity when they had the correct information to make informed decisions [77].

Maria De Bruyn (1992), suggest that factors making women more susceptible to contracting HIV include: lack of access to information, biological and health related factors and some sexual practices. Because the educational levels and literacy rates of

many women in developing countries are low; they are reached less effectively by anti AIDS campaigns relying on printed materials such as pamphlets, posters and brochures. In addition, women often have less access to radio and television, whereby these communication channels largely pass them by. Insufficient knowledge concerning HIV transmission naturally means that perception of risk and knowledge of prevention methods will also be low and inadequate [3].

One study in 1996 of fifty six urban women in Botswana revealed high levels of AIDS awareness and high reliance on mass media information. Many of the women expressed confusion about AIDS as an illness, that its symptoms and the latent period. Nearly all of the women were aware that the virus that leads to AIDS is sexually transmitted and believed that condoms are effective for prevention. However, one-third had incorrect knowledge about transmission, lacking a full understanding of sexual transmission and believing that transmission can occur through casual contact [79]

In a study of AIDS related knowledge, attitude, belief and practices amomg Bangkok's residents aged 15-49 years, found that 62 percent of the sampled men and women had good knowledge of AIDS learned primarily from television-but only 50 percent to take preventive measures against it (i. e. use condom), and only 22 percent actually took such action [80].

Another study conducted with knowledge of HIV/AIDS among the married women and married men in Bangladesh have shown that only 19 percent married women and 33 percent had heard of AIDS. The urban women are 4 times more likely to have heard of AIDS than their rural counterparts [81].

In Viet Nam almost half of all young women believed they could get HIV from a mosquito bite. In Cambodia and Viet Nam 30 per cent of young women believed that HIV could be contracted by supernatural means and nearly 35 per cent believed a healthy-looking person could not be infected [82].

2.14 Perception about AIDS

As no effective vaccine against HIV, nor any preventive treatment of AIDS has yet been discovered, preventive, specially safer sex behavior is still considered the only way to control the AIDS epidemic. For its effective practice in personal life, everyone must have adequate knowledge, perception about HIV/AIDS. In spite of extensive and intensive effort through health education programmes, it has been observed that the level of knowledge and awareness about HIV/AIDS in many societies were not satisfactory. Another striking fact is that many people that have good knowledge about HIV/AIDS do not use it for safe practices in their daily life.

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The linking of knowledge, perception and beliefs, and behavior together as a unit implies a degree of interconnection between them. However, as the research evidence will illustrate, in the case of heterosexual men and women and in many others situations, the linkage may imply more popular beliefs about health-related behaviors than the empirical research. The link between knowledge and behavior is not necessarily a strong one. It may be important to bear in mind the barriers and the enabling characteristics, which may be more important determinants of behavior [83].

2.15 Exposure to information sources and HIV/AIDS

Schools can be a primary source of information about prevention methods in the fight against HIV. Earlier studies show that in many countries, including the world's poorest, the more educated and skilled young people are, the more likely they are to protect themselves and the less likely they are to engage in risky sexual behavior [71].

Media access and sources of information have a definite influence on AIDS knowledge. Information sources are cues to action [85]. These sources can include mass media with broadcast media (radio, TV) as well print media like newspapers; advice from other people (family members, friends, relatives); counseling from health workers, doctors, mobile teams meetings [86]. Among information sources, the mass media play a large role in diffusing knowledge. The mass media is the best method for rapid spread of simple information and facts to a large population at low cost. Radio-ownership is high in many countries, which makes it particularly valuable, especially where literacy levels are low. Print media such as newspapers, which use the written word are only appropriate for those who can read [84].

As part of its outreach to young people, Uganda also has a lively monthly newspaper called Straight Talk that contains articles on sexuality and intimacy written by secondary school students [87].

Information sources of HIV/AIDS can include broad cast media (radio, TV) printed media (news paper, books, leaflets, and posters), interpersonal information like advise from other people (adults, family members, friends, relatives); counseling from health workers, doctors mobile team, etc. [88].

Public health education campaign in Thailand began immediately after the initial cases of AIDS appeared in 1984. Television and radio programmes covered basic issues on the meaning, causes symptoms, transmission and prevention of AIDS. Pamphlets posters and other communication messages and media have also been

widely distributed throughout the country and AIDS education has been incorporated in to the curriculum of elementary and high school [89].

Mass media are all those means of transmitting message that involve a mass medium, such as television, radio, newspapers, magazines, posters, etc. Among information sources, the mass media play an important role in diffusing knowledge because it reaches a large audience rapidly and it can create knowledge and spread information [90]. Moreover, public communication campaigns which heavily rely on mass media can play a large role in communicating information to the public, placing health on the public's agenda and contributing to change lifestyle behaviors [91]. However the proportion of people exposed to various types of media varies considerably [92, 93, 94, 95, 96]. In Sub-Saharan Africa, the proportion of women who listened the radio at least once a week varied from 39 percent in Madagascar and 41 percent in Burkina Faso to 82 Percent in Namibia. Weekly exposure to television was much lower overall, ranging from 9-11 percent in Burkina Faso, Madasker and Kenya to 34 percent in Ghana. Weekly use of news papers and magazines was lower still, ranging from 5 percent in Burkina Faso to 49 percent in Namibia [92]. While in the U.S. [93], India [94], Japan [97], China [95] Nepal [96] ,television was the mostly frequently mentioned media source for most people in getting the HIV/AIDS information. Printed media is another important source, particularly in urban areas. A study in the U.S. has indicated that women who had more information sources had the more accurate AIDS knowledge [52]. So some researchers argue that the best combination of channels for reaching target groups are combining TV, radio, newspaper, brochures or posters, counseling, theater and self-help groups [52, 85].

Interpersonal channels involve a face-to-face exchange between two or more individuals, which are more effective in persuading an individual to adopt a new idea, specially if the interpersonal channels links two or more individuals who are peers [90]. The use of peer education as effective role models in the prevention of HIV/AIDS especially young adolescents has already been supported in a number of studies in Uganda, Thailand, Nigeria, Botswana, and the U.S. [79, 98, 99, 100, 101, 102].

Some other interpersonal channels also can be implied to spread information. In 10 African countries, at least 50 percent of female respondents say they have heard of AIDS from friends or relatives [65]. In the U.S., although mass media was the most frequently mentioned source of HIV/AIDS information among low-risk and at-risk population, interpersonal sources (in particular, physicians, clinic counselors, and AIDS patients) were perceived as highly credible by a majority of individuals [93,101]. In china, one pilot project in Yannan province showed that a community based intervention (recruiting village leaders, teachers and women and youth leaders to participate in the program) can be successful in increasing HIV/AIDS knowledge and preventing drug use in rural areas [102].

Studies in UK has shown that the best combination of channels for reaching target groups are combining TV, radio, newspaper, brochures or posters, counseling and self-help groups [85]. In the U.S. [50], Mexico [104] the print media have been most successful in diffusing HIV knowledge. Other studies in America [50], and Japan [105] have found that the most common source of HIV/AIDS information is through TV followed by radio and newspaper, and then health workers.

On the other hand, studies in Ethiopia [106], India [107], Nigeria [108] have shown that primary information sources for HIV/AIDS were radio, newspaper followed by friends and relatives, then health institutions. The AIDS in The World Survey [85] and a study in Thailand [109] found that mass media create awareness, while interpersonal channels are more likely to influence attitudes and behavior. However, some studies in America [50], Mexico [104], have shown that the broad cast media is negatively associated with knowledge of HIV/AIDS, and obtaining information from TV is not related to attitude and behavioral change.

Preventive Behavior among house-wife

Prevention, whether in the form of behavioural and attitudinal change, public services or barrier methods that provide physical protection, is an important part of reversing the epidemic [82].

Data from UNICEF surveys conducted between 1998 and 2003 on condom use among 15-20 year old youth revealed that globally more than 80 per cent of young women did not have 'sufficient' knowledge about HIV/AIDS. Many had no idea how HIV/AIDS is transmitted and little or no information on protection methods. In South-East Asia only 13 per cent of young women were able to correctly identify two prevention methods (using condoms and limiting sex to one faithful, uninfected partner) and three common misconceptions about HIV/AIDS. In addition, many young women did not know that a healthy-looking person can be infected with HIV. The situation is exacerbated as in many societies both the discussion about sex education and sexual matters is discouraged. As a result, millions of people, especially girls and women, remain ignorant about HIV/AIDS with potentially deadly consequences (6).

2.17 Prevention method

The rising rates of HIV infection among girls and women require approaches to prevention that address their specific needs and realities and that are linked with other reinforcing elements along a broad continuum of prevention, treatment and care. Effective prevention is composed of many facets—including education, health services, media campaigns, behaviour change, life skills-building and job training. All these components must address the critical role that gender plays in sexual and reproductive life, and how it affects HIV prevention.

Globally, only one fifth of those who need prevention services have access to them, and in parts of the world where HIV infection rates are threatening to explode, many people, especially in rural areas, have little or no access to health care in

general, which is an important source for prevention. This is especially true for young people, who have few entry points to the existing health-care system (6).

On September 17, 2002 the U.S. Agency for International Development (USAID) state a technical meeting in Washington, D.C., to consider behavior change approaches to HIV/AIDS prevention, sometimes referred to as the ABCs of primary prevention. As Connie Carrino, Director of USAID's Office of HIV/AIDS, noted in her opening remarks, analyzing sexual behaviors and behavioral changes-such as the "ABC" approaches of Abstinence/delay of sexual debut, Being faithful/partner reduction, and Condom use-is key to understanding and combating sexual transmission of HIV [110].

2.17.1 Faithfulness

Multiple sexual partnering, which is a well-known factor that predisposes people to HIV infection, has decreased over the past decade. Study conducted in 1995 showed that the advent of HIV/AIDS has strengthened marriage and enhanced faithfulness among sexual partners [111]. Many married couples who are keen to protect themselves from HIV/AIDS consider faithfulness to each other as the best preventive measure. Some people call the practice "Zero grazing".

It was indicated in various communities that as a result of learning about HIV/AIDS, many people have abandoned casual risk behaviors, and once married remain faithful to their partners. Results from the validation exercise also show that majority of people report being faithful in last 12 month preceding the survey. It is interesting to note that only 43.4% of the women indicate to believe that their partner has had no other sexual partner in the same period. It was revealed that commonly spouses when in doubt of their partner's conduct/faithfulness can in turn indulge in causal risk behaviours, which increase chances of contracting the virus [112].

2.17.2 Condom use

According to the UN Population Division, only 4.9 per cent of married women of reproductive age use condoms. In poor regions, this ranges from 1.3 per cent in

Africa to 10.5 per cent in Eastern Europe [118]. More condoms need to be made available along with skills-building courses that can help men and women feel comfortable discussing how and when to use them [82].

The promotion, distribution and use of condoms are widely considered among the successful responses in prevention of HIV/AIDS. Government policy was 'quiet promotion of condoms with education'; MoH/ACP and other programmes embarked on educating Members of Parliament (MPs) and the general public about the use and relevance of condoms in the fight against HIV/AIDS and making them available [111, 113, 114, 115]. Condom use ranks highest among the direct approaches in the area of prevention and control of further spread of HIV/AIDS. Faithfulness and abstinence follow, while among the other best practices, VCT ranks highest followed by avoiding sharing of sharp skin-piercing instruments.

A recent analysis of 25 published studies found condoms to be about 90 per cent effective, with a high range of about 96 per cent effectiveness [116]. Yet condoms are still not readily available in many regions—less than half of all people at risk of HIV infection are able to obtain them, often simply because not enough are being produced [117].

Shelton et al present evidence that where HIV prevalence has declined among pregnant women (Uganda, Thailand, Zambia, Ethiopia, Cambodia, and the Dominican Republic) the primary reported behavior change has been partner reduction and monogamy by male, specially. Uganda's experience shows that achieving sexual deferral and partner reduction among male, particularly, may create safer environments for women, particularly women. Community norms that proscribe older male having sexual relationship with younger women may be younger especially protective [119].

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research Design

This was a cross sectional descriptive study to determine the Socio-demographic and economic characteristics, level of knowledge and perception on preventive behavior among the house-wives against the HIV/AIDS by adapting being faithfulness and condom use, and to find out relationship between the independent variable and dependent variable. The study was carried out for 3 weeks starting from the second week of February to the end of the February and included house-wives who were not infected with HIV/AIDS but their others members of the family or community might be affected. An interviewer-administered questionnaire was used for data collection.

3.2 Study population

The study population was house-wives in the different villages of three Tambols in Mae Taeng District of Chiang Mai, Thailand. In this study population, HIV/AIDS non-infected housewives were included from the age group of 15-50 years old.

3.3 Study Area & Sampling method

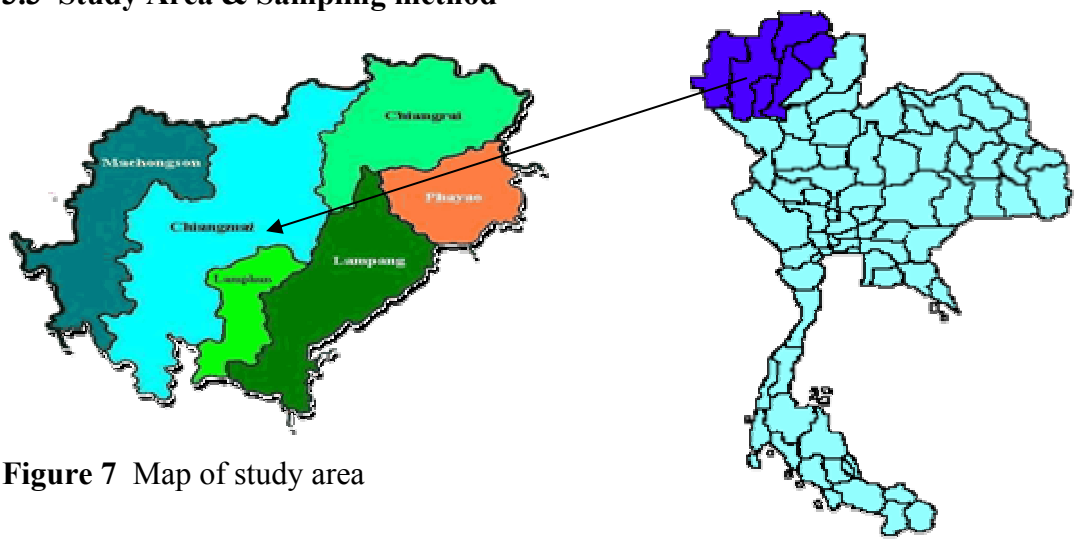

Figure 7 Map of study area

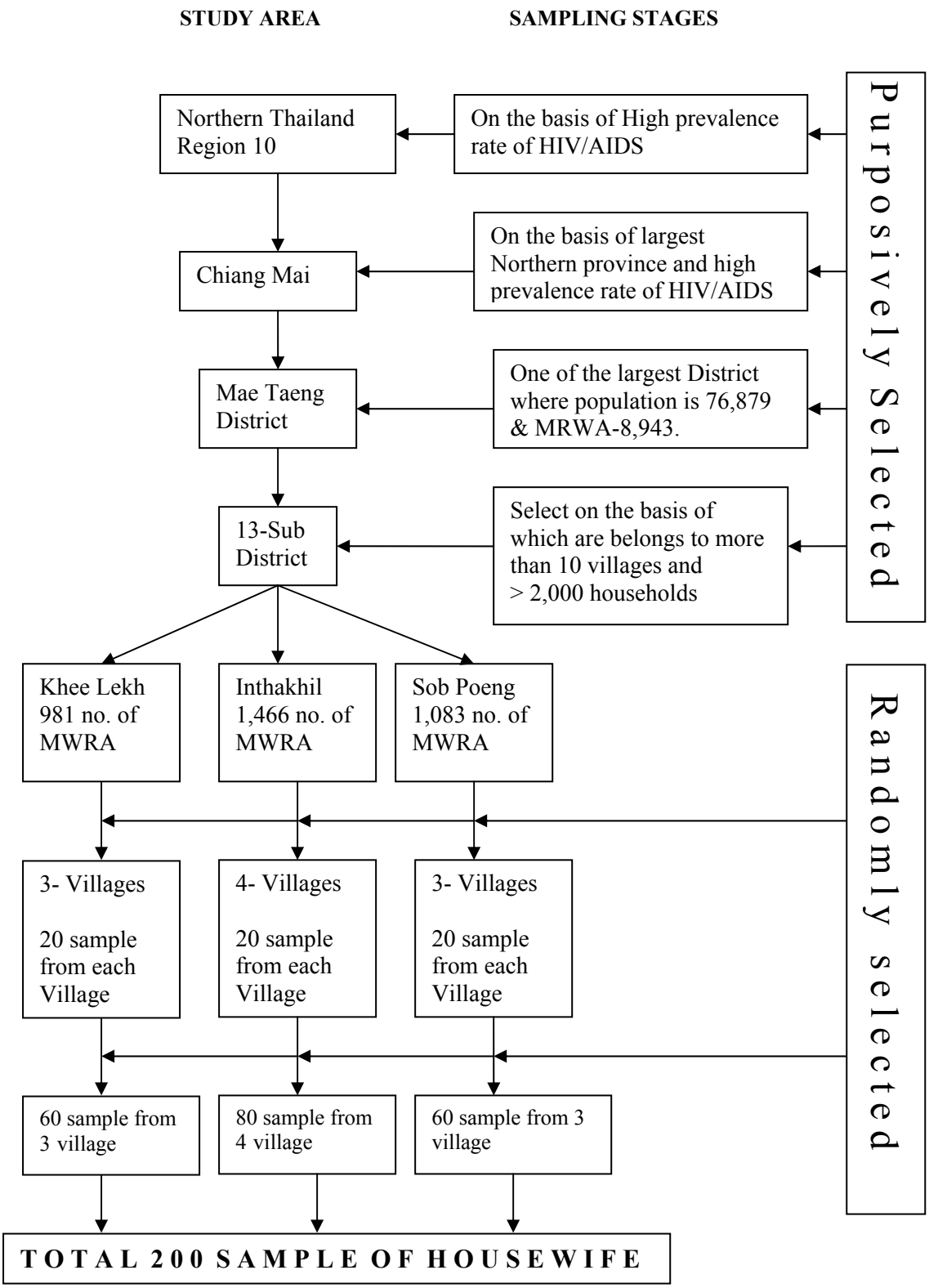

Figure 8 Diagrammatic Representation of Sampling Technique.

The study had been selected in the Mae Taeng District of Chiang Mai Province of Thailand, one of the largest District of Chiang Mai, where population is 76,879 &

Married Women of Reproductive age (MRWA) were 8,943. At first the sub-districts were selected purposively according to the criteria those have at least > 2,000 households. After that the villages were selected randomly. From KheeLekh, (Dong Pa Lan, Ram Poeng and Mae Kha Jan village); InthaKhil (Muang Khan, Hang Dong, Ban Pong and Ban den village) and Sob Poeng (Ton Un, Tha Kham and Ton Lan village) sub-district were selected respectively. From each village 20 samples and finally 200 samples were selected randomly for this study. The hill-tribes housewives were excluded from this study.

3.4 Sample Size

As the scope of the research was limited within the area of Mae Taeng District of Chiang Mai Province, in which there were 8,943 numbers of Married Women of Reproductive Age (MWRA). The calculation was done based on the Yamane (1967:886) who provides a simplified formula to calculate sample sizes.

$$n = \frac{N}{1 + N(e)^2}$$

Where 'n' is the sample size, 'N' means the population size, and 'e' indicates the level of precision. At the significant level of 0.5, with the precision level of (+/-) 7% and the population size of MWRA-8,943; the least sample size was 200 in number.

3.5 Research Instrument for the data collection

The instrument for the data collection was a structured and trained interviewer administered. The questionnaires was originally prepared in English and then translated into Thai language. A pretest was conducted before the data collection in order to improve the questionnaire and checked for the reliability of the questionnaire through MINITAB-14 version. The validity of the questionnaire also observed.

The questionnaires include the following sections:

Section 1 Demographic and Socio-Economic Background of respondent:

Section 2 Knowledge of respondent on HIV/AIDS:

Section 3 Perception of respondent on Severity/Susceptibility/Benefit/Barrier to prevent HIV/AIDS

Section 4 Sources of information that gathered by respondent about HIV/AIDS

Section 5 Preventive Behavior by house-wife through B & C approach of ABC Model (Abstinence, Be Faithful, Condom use)

Section- 1: This section describes the socio-demographic characteristics of the house-wives; include age, years of marriage, educational attainment, occupation, monthly income etc. There were (1-10) question, used to extract the respondents' characteristics**.** The age had been categorized in to 4 categories (15-<25, 25-<35, 35-<45 and ≥45 years old). The years of marriage had been categorized into 3 groups (≤10, >10-<20, ≥20 years. The Family's average monthly income was categorized into 3 groups (≤5,000, >5,000-10,000, ≥10,000).

Section-2: This section oriented by questions on knowledge about HIV/AIDS. The house wife had given the answer the all the questions according to her understanding of HIV/AIDS. Total 8 questions (from 11-18) had been asked for the measuring the respondents' knowledge. There was only one correct answer in each question; for the correct answer score '1' and for the incorrect answer respondent get '0'. To measure the knowledge of house-wives, researcher categorized this part into three- housewife with < 60% score having poor knowledge, with 60-80% fair knowledge, and with > 80% knowledge good knowledge.

Section-3: In this section perception about HIV/AIDS preventive behavior of house-wives was asked by 16 statement (from 19-34). Each statement was categorized into the house-wife's opinion into five different choices of answer:

Scores for negative statements	**Scores for positive statements**
Strongly agree = 1	Strongly agree = 5
Agree = 2	Agree = 4
Not sure = 3	Not sure = 3
Disagree = 4	Disagree = 2
Strongly disagree = 5	Strongly disagree = 1

The questions number 19-31 of this part were positive perception questions and the 32-34 were negative perception questions. The perception was measured by following formula. The mean ± s. d. was considered as to measure the level of perception of respondents. Above value of mean ± s. d was considered as the high level, below the mean ± s. d considered as the low level and within the mean ± s. d was considered as the moderate level of perception.

Section-4: The question of this section had been compiled on the basis of sources of information about HIV/AIDS. The house–wife was asked about sources of information about HIV/AIDS those she received. In this part total 5 questions (from 35-39) were asked to get information. The house-wife who was exposed to more than one source of media was considered "more exposed" and the only one source considered as "less exposed".

Section-5: This was the last part of the questionnaire. In this part questions were asked to the house-wife about the HIV/AIDS preventive behavior. The behavior here was categorized as their opinion into Good behavior and bad behavior. There are total 6 (40-45) questions of them 4 questions are Yes/No category. The score was distributed as follows:

Question no.	**Score**			
	Yes	No		
40.	1	0		
41.	1	0		
42.	2	1		
43.	1	0		
	Option 1	Option 2	Option 3	Option 4
44.	2	1	0	0
45.	1	2	3	0

The level of preventive behavior was measured by considering mean ± s. d. The respondent whose score was above mean ± s. d, considered as good and below mean ± s. d, considered as bad behavior.

3.6 Methods of Data Analysis

The objective of this study was to determine the methods of preventive behaviors those influenced by the socio-demographic factors, sources of information, knowledge and perception on HIV/AIDS. After examined and correction of returned questionnaires, the data collected through the questionnaire was edited, coded and entered into the computer for the analysis. The data was analyzed by using statistical package MINITAB-14 version.

Univariate analysis such as frequency, percentage distribution, mean, median, and standard deviation were to be used to describe individual characteristics of age, education level, occupation, income and exposure to sources of information on HIV/AIDS prevention through mass media and interpersonal channel and knowledge/perception of HIV/AIDS prevention.

Bivariate analysis was conducted using χ^2-square test and Mann-Whitney-U test to examine the relationship between the socio-demographic characteristics of respondents and exposure to sources of information with the knowledge and perception and all the independent variables with the HIV/AIDS preventive behavior.

CHAPTER 4
RESULTS

As mentioned previously this descriptive study in quantitative design was conducted on house-wives of married women of reproductive age between the 15 to 50 years old at three Tambols of Mea Taeng District in Chiang Mai, Thailand. The researcher was incorporated in survey of this study a series of questions employing the trained residents interviewer (health personnel) concerning the house-wives' socio-demographic and economic background with HIV/AIDS knowledge, perceptions, sources of information, and preventive behavior. The aim of this study was to find out the level of knowledge, perception and sources those influenced the respondents and their relationship with the preventive behavior against HIV/AIDS. Total 200 samples were collected from ten (10) villages of the three Tambols, those were: Khee lek (30%), Inthakil (40%) and the Sob Poeng (30%) by the Feb, 2005. The women infected with HIV/AIDS were excluded from the study. All the house-wives interviewed belonged to the Buddhist religion.

The results of this study were obtainable mainly in two parts: part-1 elaborates the descriptive information of respondents. The result oriented in table format from the Univariate analysis through MINITAB version14. The Part-2 trying to explores the association between the Independent and Dependent variables those leaning from the analysis of bivariate statistics such as chi-squire and Mann-Whitney-U nonparametric test through the same statistical program. For the convenient of showing the result each part of result demonstrated under the following headings:

Part 1-Result of Univariate analysis:

- Socio-demographic characteristics of house-wives.
- Status of house-wives by correct and incorrect answer of knowledge on HIV/AIDS and their level of knowledge.

- Distribution of house-wives' by their opinion on perception statement and the level of perception.
- Sharing of HIV/AIDS information from different sources among the house-wives.
- The preventive action played by house-wives against HIV/AIDS and position on the basis of level of preventive behavior.

Part-2: Result from the Bivariate analysis:

- Association between the socio-demographic characteristics of respondents' and the level of knowledge, level of perception and the preventive behavior.
- Relationship between the sources of information with the house-wives level of knowledge, perception and the preventive behavior.
- Association between the level of knowledge and perception.
- Association between the level of knowledge and preventive behavior.
- Association between the level of knowledge and perception with the preventive behavior.

Table 10 Number and percentage distribution of House-wives by socio-demographic characteristics**.**

Socio-Demographic characteristics		Number	Percent
1.Age (Years) (n=200)			
15-<25 years		17	8.5
25-<35 years		52	26.0
35-<45 years		84	42.0
≥45 years		47	23.5
	Total	200	100
2. Total married life (in years) (n=200)			
≤10years		58	29.0
> 10 - <20 years		51	25.5
≥20 years		91	45.5
	Total	200	100
3.Times of married (in numbers)			
One time		169	84.5
Two and more than two times		31	15.5
	Total	200	100
4. Educational qualification of House wife (n=200)			
Primary school		149	74.5
Secondary school		35	17.5
College/Vocational		14	7.0
University		2	1.0
	Total	200	100
5. Educational qualification of Husband (n=199)			
Primary school		143	71.9
Secondary school		38	19.1
College/Vocational		10	5.0
University		8	4.0
	Total	199	100

Table-10 Number and percentage distribution of House-wives by socio-demographic characteristics (Continued)

Socio-Demographic characteristics		Number	Percent
6. Occupation of husband (n=198)			
Government/ professional employee		48	24.2
Farmer/Agricultural labor		110	55.6
Private business/merchant/trader/sales		21	10.6
Factory worker/ restaurant/hotel/bar worker		19	9.6
	Total	198	100
7. Occupation of wife (n=198)			
Government/ professional employee		42	21.2
Farmer/Agricultural labor		100	50.5
Private business/merchant/trader/sales		29	14.6
Factory worker/ restaurant/hotel/bar worker		27	13.8
	Total	198	100
8. Average family income per month (n=188)			
5,000 and less		123	61.5
>5,000-> 10,000		45	22.5
10,000 and more		20	10.0
	Total	188	100
9. Type of family (n=190)			
Nuclear family		148	77.9
Extended family and others		42	22.1
	Total	190	100
10. Number of children (198)			
No children		23	11.6
One children		94	47.5
Two children		74	37.4
Three children or more		7	3.5
	Total	198	100

4.1 Result from the univariate analysis

4.1.1 Socio-demographic characteristics of house-wives

The general characteristics of house-wives included age, number of years being married, number of times being married, educational qualification of both wife and husband, occupation of herself and spouses, average family income, types of family and number of children displayed in table-10 & table- 3 in Apendix-A. It was revealed from the study that displayed in the table-8, nearly half of the respondents (84of 200 i e. 42%) were among the age group 35-<45 years old with the mean age of 38.58 ± 7.959 and mode age is 45 years. The near to the half of respondents (45.5%) married life within the ≥ 20 years and near to great majority (84.5%) were married once while remaining were married more than once (15.5%) i.e. 31 house-wives. The mean married life 16.47 ± 8.236 where mode is 20. The educational achievement of the sample population was three fourth (74.5%) in primary level followed by 17.5% in secondary level and 8.0% in college/vocational/university level. The husbands' educational qualification was almost same as house-wife i.e. in primary level (71.5%), in secondary level (19.1%), in college/vocational/university level (9.0%). Regarding the occupation of both husband and wife the half or slightly more than half of their livelihood as farmer or agricultural worker (55 6% and 50.5% respectively) while rest of profession was government/professional employee (24.2% and 21.2% respectively); private business/merchant/trader/work in sales (10.6% and 14.6% respectively); factory worker/restaurant/hotel/bar worker (9.6% and 13.8% respectively). Evidence from the analysis, the average family income of house-wives family higher found in category ≥5,000 Baht (61.5%) and whereas lowest in ≥12,000 category (10.0%). As I calculated and oriented in table-10 showed that more than majority (77.9%) of total 148 out of 200 house-wives live in the nuclear family. Among them less than half (47.5%) or 94 respondents have only one child.

4.1.2 The comparative number and percentage distribution by socio-demographic characteristics among the house-wives of three tambols

Appendix-A, Table-1 illustrates the comparison findings whether there were any substantial social-demographic differences between respondents from the three

tambols or not where my study was conducted. The result showed that the more than one third (35.7%) younger respondents were under the age group 15-<25 belongs to Khee lek Tambol (36.7%) and in three tambols higher respondents (35.6% to 50.6%) were fit in age group (25-<35 years). Especially in the Intha khil Tambol the half (50.6%) of the respondents were in this age group. Regarding the number of years being married more than one third (38.3%) of house-wives beneath the 10 years of marriage life living in the Khee Lek Tambol. On the other side around 50.0% of the respondents under the age group of 20 or more than 20 years were lived in the both Intha khil and Sob Poeng sub-districts. With reference to educational attainment of both hose-wife and husband, the respondents achievement in formal education mostly in primary school level; Intah khil's rate was near to the great majority (85.2%) followed by Sob Poeng (72.9%), Khee Lek Tambol (61.7%). In regards to the occupational back ground of both husband and house-wife, higher percentage belongs to the farmer and agricultural worker in three tambols but more than half (60.8%) farmers living in the Inthakhil as compared to the other two sub-districts. In relation to the average monthly family income, the most of the respondents income within 5,000 Baht and more than majority (81.8%) of this group resided in Intha Khil Tambol as compare to other two.

4.1.3 Comparative demographic and economic status of the house-wives of three tambols:

The comparative demographic and economic status of respondent in three different Tambols were measured by the mean ± s d, median, mode, and minimum and maximum value of age, number of years have been married and average monthly family income. Table-2 in Appendix-A presented that the Mean ± S.D of age was high in Intha Khil Tambol (39.94±6.777) with median value 41.00. The respondents attended in this study, the median age was high in Sob Poeng 44.00 and the mode age was 45. The younger respondent attend in this study was 17 years old and maximum age was 50. Both cases of house-wives lived in Intha Khil Tambol. In relation to number of years being married the mean ± s d high in Sob Poeng Tambol (17.47±9.170) and low in Khee Lek Sub-District. In regards to the average monthly family income the mean ± s d peak in Khee Lek Tambol (6,417.50±4,238.383)

whereas mode income 6,000 which is high in Sob Poeng Sub-district which was high as compare to the other two Tambols; median value of income was 5,000.00 in both Khee Lek and Intha Khil; minimum and maximum income showed in Intha Khil (1,200 and 40,000 baht respectively).

Table 11 Number and percentage distribution of House-wives by level of knowledge about HIV/AIDS.

Level of knowledge	**Number (n=200)**	**Percent**	**Score of knowledge**			
			Mean	**S. D.**	**Min.**	**Max.**
Good	27	13.5				
Fair	144	72.0	5.50	.987	3	8
Poor	29	14.5				
Total	200	100.00				

****Note :-poor <5; moderate 5-6 and good >6.**

4.1.4 Status of house-wives by correct answer of knowledge on HIV/AIDS and their level of knowledge:

In order to examine the respondents' knowledge and their level, the house-wives were asked about eight (8) questions on knowledge. The frequencies of giving correct answer according to the table-4 in Appendix-A; mostly all questions indicated the correct answers by the respondents. The level of knowledge of house-wives (presented in table-11), were measured as less than one fourth good (17.5%), majority moderate (72.0%) and more than one tenth was poor (14.5%). The mean ± s.d. value of score of knowledge was 5.50 ±.987. The minimum and maximum score was 3 & 8 respectively.

Table 12 Number and percentage distribution of housewives by level of perception about HIV/AIDS.

Level of perception	Number (n=200)	Percent	Score of perception			
			Mean	S. D.	Min.	Max.
High	31	15.5%				
Moderate	121	60.5%				
Low	48	24.0%	62.72	6.264	49	77
Total	200	100.0				

****Note :-low <56; moderate 56-68; and high >68**

4.1.5 Distribution of house-wives' by their opinion on perception statement and the level of perception:

In regards to determine the perception of house-wives, the respondents' were requested to set their opinion on 15 statements under the category of perception of severity, susceptibility, benefit to prevent and barrier to prevent the HIV/AIDS. The most of the respondents were able to showed strong positive opinion by strongly agree or agree in positive statement and strongly disagree and disagree on negative statement and frequencies showed in table-5 (Appendix-A). The mean ± s.d was used to conclude the level of perception (details in chapter-III). The house-wives' level of perception was high for more than one tenth (15.5%), more than half (60.5%) was with moderate and nearly one fourth (24.0%) had low perception those presented in the table-12. The mean ± s.d. value of score on perception was 62.72 ± 6.264. The minimum and maximum score was 49 & 77 respectively.

Table 13 Number and percentage distribution of housewives by getting information from different sources about HIV/AIDS.

	Sources of information		Number	Percent
Where did you learn at first about HIV/AIDS?	Formal education		42	21.8
	Mass media		81	42.0
	Health personnel		28	14.5
	Friends/neighbors/family members/HIV/AIDS infected person		27	14.0
	Training/meeting		15	7.8
Have you ever get any information about HIV/AIDS from mass media?	Yes		198	99.0
	No		2	1.0
	Name of the mass media			
If yes, from which one of the following media you get information about HIV/AIDS mostly. (multiple answer)	Radio 18.1%)	Yes	36	18.1
		No	163	81.9
	TV/Cinema	Yes	131	65.8
		No	68	34.2
	News paper	Yes	10	5.0
		No	189	95.0
	Poster/booklet	Yes	26	13.0
		No	174	87.0

Table 13 Number and percentage distribution of housewives by getting information from different sources about HIV/AIDS. (Continued.)

	Sources of information		Number	Percent
	Sources of information other than media			
Do you get any information about HIV/AIDS from the followings other than the media?	Health personnel	Yes	168	84.0
		No	32	16.0
	Family members	Yes	13	6.5
		No	187	93.5
	Friend/neighbors	Yes	25	12.5
		No	75	87.5
	Others	Yes	8	4.0%
		No	192	96.0
	Name of the sources			
Which one of the following source of information is most important in preventing HIV/AIDS	Mass media		44	22.2
	Health personnel		128	64.6
	Family members/friends/neighbors		22	11.1
	School education		4	2.0

4.1.6 Sharing of HIV/AIDS information from different sources among the housewives:

When respondents questioned (table-13) regarding the sources of information from where they heard about the HIV/AIDS; nearly half (42.0%) mentioned that they learn first about HIV/AIDS from mass media followed by formal education (21.8%), health personnel (14.5%), friends/neighbors/family members/person infected with

HIV/AIDS (14.0%). By considering the mass media respondents were selected the TV/cinema near to the majority (65.8%) as the media of getting information about HIV/AIDS mostly. In terms of choosing the sources of information other than media near to the great majority (84.0%) house-wives were spontaneously preferred the health personnel. Even in one question that was asked about the 'most important sources of information in preventing HIV/AIDS, the near to majority (64.6%; 128) of the respondents favored the health personnel.

4.1.7 Distribution of House-wives according to the preventive behavior against HIV/AIDS and their status on the basis of level of preventive behavior

Several areas were tested (table-14) in regards to find out the respondents' believe on preventive behavior against HIV/AIDS. In case of faithfulness to each other, nearly great majority (85.4%) house-wives said that they were faithful to each other, however slightly more than half (52.3%) of them mentioned that they discussed about the using condoms with their husband. Even more than half (58.0%) of total respondents' could convinced their husband to use condom but in reality of preventive action majority (70.6%) of house-wives' husband does not use condom during sex. The table-19 showed according to house-wives statement that 62.8% of wife obey husband's idea and directed to enjoy sex without condom and 71.0% of house-wife indicated confidently that their husband never use or use condom very rare when having sex with them. Table-15 showed that the house-wives were grouped according to their level of preventive behavior. This level calculated by considering the mean ± s.d. Near to the great majority (84.5%) of total respondents had the bad preventive behavior and only 15.5% were good behavior. The mean ± s.d. value of score of preventive behavior was 3.95 ±1.787. The minimum and maximum score was 1 & 10 respectively.

Table 14 Number and percentage distribution of housewives according to the preventive behavior.

Components of preventive behavior		Number	Percent
Do you believe that faithful to each other can prevent HIV/AIDS infection? (n=200)	Yes	171	85.4
	No	29	14.6
Have you discussed about using condoms with your husband? (n=197)	Yes	103	52.3
	No	94	47.7
Can you confidently Convince your husband to use condom during sex? (n=193)	Yes	112	58.0
	No	81	42.0
Does your husband use condom when having sex with you? (n=197)	Yes	58	29.4
	No	139	70.6
How often does your husband use condom when having sex with you?	Sometimes	42	21.8
	Regularly	14	7.0
	Very rare/never use condom	137	71.0
If your husband refused to use condom, what action do you take?	Obey the husband's idea and provide sex	123	62.8
	Perused husband to use condom, if he wants sex.	57	29.1
	Refuse your husband, if he insisted to have sex.	16	8.2

Table 15 Number and percentage distribution of housewives by the level of preventive behavior against HIV/AIDS.

Level of preventive behavior	Number (n=200)	Percent	Score of preventive behavior			
Good	31	15.5	**Mean**	**S. D.**	**Min.**	**Max.**
Bad	169	84.5	3.95	1.787	1	10

****Note:-Bad <6 and Good >6**

4.1.8 Distribution of House-wives by level of knowledge perception and behavior among the three Tambols

As indicated in table-6 (Appendix-A) had a comparable level of knowledge, perception, and preventive behavior among the respondents of three Tambols, the majority of the house-wife had a moderate level of knowledge and perception with bad preventive behavior. Concerning the level of knowledge, the house-wives had the fair level of knowledge higher than the majority (76.7%) lived in the Khee Lek. 21.0% of 81 housewife in Intha Khil Tambol be marked with the good knowledge which was higher as compare to Khee Lek and Sob Poeng. The poor performance of knowledge level were calculated among the respondents of Sob Poeng tambol (27.1%), the figure was high in comparison to other two (8.3%in Khee Lek , 9.9% in Intha Khil). Similarly in measuring the level of perception 60.0% to 77.0% of respondents showed the moderate level of perception and the more than majority (77.2%) were living in Sob-Poeng Tambol. The level of perception found good (28.3%), belongs to the respondents those living in Khee Lek Tambol. As we look at the figure of preventive behavior level the most house-wives (80.0% to 88.1%) of them come across with bad preventive behavior. Only 20.0% of respondent were bearing good behavior those living in Khee Lek tambol.

Table 16 Association between the socio-demographic characteristics of respondents' and the level of knowledge.

Socio-demographic characteristics	Level of knowledge				χ^2	*df*	p-value
	Good/ Fair		Poor				
	N	%	N	%			
Age							
< 35 years	65	94.2	4	5.8			
35-<45 years	61	87.1	9	12.9	11.137	2	.004*
> 45 years	45	73.8	16	26.2			
Married life							
≤10years	52	89.7	6	10.3			
> 10-<20 years	47	92.2	4	7.8	5.618	2	.060
> 20 years	72	79.1	19	20.9			
House-wife educational level							
School education	157	85.3	27	14.7	.056	1	.813
College/university/others	14	87.5	2	12.5			
House-wife occupation							
Government/professional employee	45	93.8	3	6.3			
Farmer/Agricultural worker	93	84.5	17	15.5	3.749	2	.153
Business/merchant/trader/sales/fact/hot/bar worker.	32	80.0	8	20.0			
Average family income							
≤5,000	108	87.8	15	12.2			
> 5,000-< 10,000	36	80.0	9	20.0	1.639	2	.441
≥10,000	17	85.0	3	15.0			

Table 17 Association between the socio-demographic characteristics of respondents and the level of perception.

Socio-demographic characteristics	Level of perception				χ^2	*df*	p-value
	High/ Moderate		Low				
	N	%	N	%			
Age							
< 35 years	54	78.3	15	21.7	2.201	2	.333
35-<45 years	49	70.0	21	30.0			
≥ 45 years	49	80.0	12	19.7			
Married life							
≤10years	42	72.4	16	27.6			
>10-<20 years	36	70.6	15	29.4	2.639	2	.267
≥20 years	74	81.3	17	18.7			
House-wife educational level							
School education	140	76.1	44	23.9	.010	1	.922
College/university/others	12	75.0	4	25.0			
House-wife occupation							
Government/professional employee	36	85.7	6	14.3			
Farmer/Agricultural worker	78	78.0	22	22.0	4.463.	2	.107
Business/merchant/trader/sales/fact/hot/bar worker.	38	67.9	18	32.1			
Average family income							
≤5,000	89	72.4	34	27.6			
> 5,000-< 10,000	40	88.9	5	11.1	5.208	2	.074
≥10,000	16	80.0	4	20.0			

Table 18 Association between the socio-demographic characteristics of respondents' and the level of behavior.

Socio-demographic characteristics	Level of behavior				χ^2	*df*	p-value
	Good		Bad				
	N	%	N	%			
Age							
< 35 years	11	15.9	58	84.1			
35-<45 years	12	17.1	58	82.9	.420	2	.811
≥45 years	8	13.1	53	86.9			
Married life							
≤10years	10	17.2	48	82.8			
> 10-<20 years	5	9.8	46	90.2	1.699	2	.428
≥20 years	16	17.6	75	82.4			
House-wife educational level							
School education	29	15.8	155	84.2	.120	1	.730
College/university/others	2	12.5	14	87.5			
House-wife occupation							
Government/professional employee	4	9.5	38	90.5			
Farmer/Agricultural worker	15	15.0	85	85.0	1.915	2	.384
Business/merchant/trader/sales/fact/hot/bar worker.	11	19.6	45	80.4			
Average family income							
≤5,000	16	13.0	107	87.0			
> 5,000-< 10,000	10	22.2	35	77.8	2.630	2	.269
≥10,000	2	10.0	18	90.0			

Table 19 Association between the sources of information and the level of knowledge of respondents.

Sources of information		Level of knowledge.				χ^2/Z value	df	p-value
		Good/Fair		Bad				
		N	%	N	%			
Learn at first about HIV/AIDS								
Formal and informal education.		47	82.5	10				
Mass media		66	81.5	15	18.5	5.109	2	.078
Health personnel friends /neighbors /family members/HIV/AIDS infected person.		52	94.5	3	5.5			
Which one of the following media used to get information about HIV/AIDS.								
Radio	Yes	29	80.6	7	19.4	.838	1	.360
	No	141	86.5	22	13.5			
TV/Cinema	Yes	108	82.4	23	17.6	2.743	1	.098
	No	62	91.2	6	8.8			
News paper.	Yes	8	80.0	2	20.0	.249	1	.618
	No	162	85.7	27	14.3			
Poster/booklet	Yes	24	92.3	2	7.7	1.117	1	.291
	No	147	84.5	27	15.5			
Others	Yes	19	90.5	2	9.5	.481	1	.488
	No	151	84.8	27	15.2			

Table 19 Association between the sources of information and the level of knowledge of respondents. (continued)

Sources of information		Level of perception				χ^2/Z value	df	p-value
		High/moderate		Bad				
		N	%	N	%			
Sources of information other than the media								
Health personnel	Yes	141	83.9	27	16.1	2.091	1	.148
	No	30	93.8	2	6.3			
Family members	Yes	11	84.6	2	15.4	.009	1	.590
	No	160	85.6	27	14.4			
Friend/neighbors	Yes	24	96.0	1	4.0	2.541	1	.111
	No	147	84.0	28	16.0			
Others	Yes	8	100	0	.0	1.413	1	.235
	No	163	84.9	29	15.1			
Most important name of the sources								
Mass media		40	90.0	4	9.1			
Health personnel		105	82.2	23	18.0	3.222	2	.200
School education/Family members/friends/neighbors.		24	92.3	2	7.7			

Table 20 Association between the sources of information of respondents and the level of perception

Sources of information		Level of perception.				χ^2/Z value	df	p-value
		High/moderate		Bad				
		N	%	N	%			
Learn at first about HIV/AIDS								
Formal and informal education.		45	78.9	12	21.1			
Mass media		60	74.1	21	25.9	.541	2	.763
Health personnel friends /neighbors /family members/HIV/AIDS infected person.		43	78.2	12	21.8			
Which one of the following media used to get information about HIV/AIDS.								
Radio	Yes	28	77.8	8	22.2	.047	1	.828
	No	124	76.1	39	23.9			
TV/Cinema	Yes	100	76.3	31	23.7	.000	1	.983
	No	52	76.5	16	23.5			
News paper.	Yes	9	90.0	1	10.0	.727#	1	.469
	No	143	75.7	46	24.3			
Poster/booklet	Yes	20	76.9	6	23.1	.014	1	.906
	No	132	75.9	42	24.1			
Others	Yes	17	81.0	4	19.0	.041#	1	.967
	No	135	75.8	43	24.2			

Table 20 Association between the sources of information of respondents and the level of perception (continued).

Sources of information		Level of perception				χ^2/Z value	*df*	p-value
		High/moderate		Bad				
		N	%	N	%			
Sources of information other than the media								
Health personnel	Yes	123	73.2	45	26.8	4.467	1	.035*
	No	29	90.6	3	9.4			
Family members	Yes	12	92.3	1	7.7	1.054#	1	.292
	No	140	74.9	47	25.1			
Friend/neighbors	Yes	21	84.0	4	16.0	1.003	1	.317
	No	131	74.9	44	25.1			
Others	Yes	7	87.5	1	12.5	.460#	1	.646
	No	145	75.5	47	24.5			
Most important name of the sources								
Mass media		36	81.8	8	18.2			
Health personnel		95	74.2	33	25.8	1.147	2	.564
School education/Family members/friends/neighbors.		19	73.1	7	26.9			

Table 21 Association between the sources of information of respondents and the level of preventive behavior.

Sources of information		Level of preventive behavior				χ^2/Z value	*df*	p-value
		Good		Bad				
		N	%	N	%			
Learn at first about HIV/AIDS								
Formal and informal education.		10	17.5	47	82.5			
Mass media		13	16.0	68	84.0	1.080	2	.583
Health personnel friends /neighbors /family members/HIV/AIDS infected person.		6	10.9	49	89.1			
Which one of the following media used to get information about HIV/AIDS.								
Radio	Yes	7	19.4	29	80.6	.500	1	.480
	No	24	14.7	139	85.3			
TV/Cinema	Yes	19	14.5	112	85.5	.336	1	.562
	No	12	17.6	56	82.4			
News paper.	Yes	1	10.0	9	90.0	.547#	1	.584
	No	30	15.9	159	84.1			
Poster/booklet	Yes	5	19.2	21	80.8	.547#	1	.584
	No	26	14.9	148	85.1			
Others	Yes	4	19.0	17	81.4	.370#	1	.711
	No	27	15.2	151	84.8			

Table 21 Association between the sources of information of respondents and the level of preventive behavior (continued).

Sources of information		**Level of perception**				χ^2/*Z value*	*df*	**p-value**
		High/moderate		**Bad**				
		N	**%**	**N**	**%**			
Health personnel	Yes	22	13.1	146	86.9	4.636	1	.031*
	No	9	28.1	23	71.9			
Family members	Yes	5	38.5	8	61.5	2.246#	1	.025*
	No	26	13.9	161	86.1			
Friend/neighbors	Yes	3	12.0	22	88.0	.614#	1	.539
	No	28	16.0	147	84.0			
Others	Yes	2	25.0	6	75.0	.685#	1	.493
	No	29	15.1	163	84.1			
		Most important name of the sources						
Mass media		6	13.6	38	86.4			
Health personnel		16	12.5	112	87.5	5.712	2	.058
School education/Family members/friends/neighbors.		8	30.8	18	69.2			

4.2 Results from the chi-square test

4.2.1 Association between the socio-demographic characteristics of respondents' and the level of knowledge, level of perception and the preventive behavior:

Table-16 gives details of the relationship between the socio-demographic characteristics of respondents' and the level of knowledge, level of perception and the preventive behavior. The result showed that there were not much difference between the age groups and the level of knowledge, though nearly great majority (87.1%) of respondents under the age group of 35 to <45 years old. Of total 200 sample 85.5% (171) house-wives of different age groups had the good and fair knowledge. Similarly in relation to the other socio-demographic characteristics like number of years being married, number of times being married, educational attainment and occupation of house-wives, average family income with family type and number of children of respondents; table-16 could not demonstrate mark difference in terms of percentage and number among the groups of socio-demographic variables and also within the level of knowledge near or more than great majority (80.0% to 94.2%) of respondents identified as they had good or moderate knowledge and rest (6 to 20%) of them with poor knowledge. The chi-square test demonstrated a statistical significant association with the age of respondents' and the level of knowledge (p value-.004) and number of years of being married had a little or no significant association (p value-.060).

In case of describe the relationship between the socio-demographic factors and the level of perception, table-17 presented that almost every variable of socio-demographic factors had the higher value (around 76.0%) of high and moderate perception and rest contain (around 23.0%) of low perception. There was not much differences within the subgroups of variables regarding their level of perceptions. In cross tabulation none variable of socio-demographic factors have the association with the level of perceptions but average family income showed very near to the ground of statistically insignificant association (p >.074).

In order to establish the relationship between the socio-demographic variables with the level of preventive behavior, the table-18 give us an idea about that the majority of the respondents (around 84.0%) with reference to different variables had a bad preventive behavior. Conversely within the group of different variables the level of preventive behavior was almost similar to each other (84.0% to 90.0%). There is no statistical significant association between the variables of socio-demographic factors and the level of preventive behavior.

4.2.2 Association between the sources of information and the level of knowledge, perception and the preventive behavior of respondents:

The analysis of sources of information of respondents and the level of knowledge addressed in the table-19. According to this table it was found that the nearly half (41.97%) respondents learn at first about HIV/AIDS from mass media, of them (81.5% of 41.97%%) had the good and fair level of knowledge and bad level of knowledge (18.5%) although 82.5% of 57 respondents who learn HIV/AIDS at first from formal and informal education had the good and fair level of knowledge (82.5%). The table also showed that health personnel / friends / neighbors /family members and HIV/AIDS infected person had position to learn at first concerning HIV/AIDS and were calculated almost similar level of good or fair knowledge (80.0% to 92.0%). Though the chi-square test was found no significant statistical relation (p value->.078) but it means that it has also minute statistical significant association. In relation to another variable of sources of information that use to get information about HIV/AIDS, 108 (48.22%) of total sample use TV/cinema as crucial source. Among them 82.4% had the good and moderate level of knowledge and 17.6% with bad level of knowledge. The cross tabulation showed the very negligible statistical significant (p-value:.098) of the utilizing TV/Cinema with the level of knowledge. In another question, most of the respondents (168, 84.0%) were preferred the health personnel as sources of information other than media. Even when they were asked about the most important name of the sources to get the information on HIV/AIDS majority of them identify again the health personnel followed by mass media and school education/family members etc.

The table-20 presented the analysis examining the respondents' choosing the sources of information and its association with level of perception. It showed hat more than three fourth (148 of total sample) had the high and moderate level of perception among the population who got the information from formal and informal education (30.41%), mass media (40.54%), health personnel/friends/neighbors/family members/ person infected with HIV/AIDS (29.05%). The rate using mass media like Radio, TV/cinema, news-paper, poster/booklet, had not much difference to each other (76.30% to 90.0%). In terms of preferring the sources of information other than media, more than three fourth (78.50%) of respondents were liked to answer health personnel. Among them 73.2% had the high and moderate level of perception and 26.8% with low level. . None had found statistical significant association in chi-square and Mann Whitney-U test except in case of health personnel, where there was statistical significant association found (p-value: .035) with the level of perception.

The table-21 was used to look at the scenario for both descriptive figure and cross tabulation result of association between the sources of information of respondents and level of preventive behavior**.** Some important issues need to mention that the health personnel marked as one of the most key source of information regarding HIV/AIDS other than media. The relationship between the health personnel and level of preventive behavior were found statistically significant (p value-.031); although the information from the family members showed the inversely statistical significant relation with the preventive behavior (p value-.025).

4.2.3 Association between level of knowledge and perception and level of perception with the level of preventive behavior:

The Bi-variate analysis by χ^2-test and Mann Whitney-U test according to data displayed in table-22 indicates that level of knowledge of respondents had the influence on perception and had highly significant statistical relation (p-value <.001). Data that showed in table-23 none significant relationship between the respondents' level of knowledge and preventive behavior.

In order to establish the association between the perception and the preventive behavior against HIV/AIDS, the analysis showed (table-24) that respondent with high and moderate level of perception had the bad behavior 81.6%. The p value .042 showed the significant statistical negative relationship between the level of perception and the level of preventive behavior.

Table 22 Association between level of knowledge and perception.

Level of knowledge.	Level of perception				χ^2	*df*	p-value
	High /moderate		Low				
	N	%	N	%			
Good/Fair	98	86.0	16	14.0	14.933	1	<.001
Poor	54	62.8	32	37.2			

Table 23 Association between level of knowledge and preventive behavior

Level of knowledge.	Level of Preventive behavior				χ^2	*df*	p-value
	Good		Bad				
	N	%	N	%			
Good/Fair	17	14.9	97	85.1	.070	1	.845
Poor	14	16.3	72	83.7			

Table 24 Association between the level of perception and the preventive behavior

Level of perception	Level of behavior				χ^2	*df*	p-value
	Good		Bad				
	N	%	N	%			
High and moderate	28	18.4	124	81.6	4.126	1	.042*
Low	3	6.3	45	93.8			

Note: - **'*'indicates the significant association at the level of <0.05. '#' means the value found from Mann Whitney-U nonparametric test**

CHAPTER 5
DISCUSSION

According to the one researcher, Thailand has experienced four epidemic waves: 'Starting in infection in intravenous drug users in 1988, HIV spread to female prostitutes (about 15 percent of whom where infected in 1991) and thence to their male clients in 1989. The fourth wave appeared in pregnant women in 1991' [AIDS Newsletter, 1992, 7 (12): 10]. Women in general are at risk of infection, largely due to the high risk of their partners, rather their own. A survey of sexual behavior among a stratified sample of 2801 male and female found that: Thai women show much more restricted patterns of sexuality with most sex occurring in relationships however the low use of condom puts many of these women at risk through their relationship with higher risk male partners'. [120]

Many women infected with HIV magnifying tragedy for the families. For this reason and other contextual factors are of great importance in controlling this epidemic. The women must have proper knowledge and high perception to settle in appropriate preventive behavior against HIV/AIDS. This study attempt to investigate the house-wives' socio-demographic factors, knowledge, perception and the preventive action that played by them. It also deals with the establishment of relationship of variables each other. The following discussions are resultant from the consequences in the previous chapter.

The result in this study indicates that the house-wives of Mae Taeng District in Chiang Mai have the very good and fair level of knowledge with high and moderate level of perception. The health personnel play an important role to increase the knowledge and perception that established in this study from the findings. But study of preventive behavior is still risky as we assume that their husband may be at risk of cause of transmission of such catastrophic disease to their wife. The details discussion on my findings has comprehensive below.

5.1 Socio-demographic factors of House-wives

In this study, more than four fifth of total respondent were over the age group 25. The mean age of respondent was 38.58 and mode was 45. Age was found to have influence on house-wives' knowledge on HIV/AIDS. The statistical relationship was also found between age and the level of HIV/AIDS knowledge. This result is consistent with the findings of Moatti, et al (1988); Mitchell et al (2002); Huong (1998); Battala (2001); Lahiri, et al (1995). But age has no any significant association with the level of perception though most of the older aged house-wives have the high or moderate level of perception. Even this demographic factor has no relation with the level of preventive behavior.

The numbers of years being married of house-wives have been studied to observe the transition of knowledge, perception and preventive behavior against HIV/AIDS with the experience in the family or community as a house-wife. The respondents attended in the study most (nearly two third) of them were more than 10 years of being married. The findings showed that different period of married life had similar influence on level of knowledge and perception, also in preventive behavior against HIV/AIDS. The good or fair level of knowledge and high or moderate level of perception was found in all house-wives married for shorter or longer time; findings were showed modest statistical insignificant relation. The result of this study is not alike to the findings of previous study done by Pongcharoen, K., (1996), where findings indicated that the house-wives has the poorer knowledge and perception on prevention and transmission of HIV/AIDS.

In relation to the educational background of house-wives nearly two third (74.5%) of respondents had primary level schooling, less than one fifth of respondents attended the secondary school for the formal education, very few from college/vocational/university education. Whether the respondents' from educated, the level of knowledge and perception was showed mostly good or moderate and high or moderate level respectively. This might be due to their learning from the surroundings as community affected highly since long time. This finding does not

consistence with the previous study by McCaig et al (1991), Badhan I.P. (1999), United Nations, (2002), because of higher level of educated women was not studied.

In regards to the occupation the most of the respondents' livelihood was as farmer or agricultural worker followed by trader, government or professional, employee and factory /hotel/bar worker. The result showed that the respondents who are government or professional employee had the somewhat good/fair level of knowledge and high/moderate level of perceptions. Whatever the occupations this result was not much different within the groups of profession though higher education level like from college, university had shown little extent of level of perception. The finding was not found any significant relationship with the occupation and level of knowledge, level of perception and preventive behavior. Also study has no consistence with the previous study those done by Pongchareon (1996).

The majority of the monthly family income was equal to or more than 5,000 baht. This is contrary to the expectation that the higher-income group would have more good /fair level of knowledge and level of perception on HIV/AIDS. This result is supported by one study done by Rahman N (1998). It is noted that the observations were very minute insignificant association with level of knowledge but was not with level of perception or preventive behavior.

The comparative demographic and economic status of the house-wives of three Tambols showed that in regards to the level of knowledge, level of perception and preventive behavior, the age, number of years being married and monthly family income had no influence to made the different result.

5.2 Sharing the sources of information about HIV/AIDS by house-wives:

The previous study has given emphasis on mass media, other sources like health personnel doctors, friends, family members or even infected person, attend in the training or meeting or formal education system like primary or secondary level education as a primary source of information for the HIV/AIDS. The study done by

Mann (1992), Hubley (1993), World health organization (1998), Wongkhomthong, Som-Arch, et al (1995), Rogers, E. M. (1983), Wallack, L. (1990), Witwer, M. (1997), Wolitski, R. J, et al (1996), Chatterjee, N., (1999), Thapa, S. & Mishra, V. (2003), Maswanya, E., et al (2000), Global Campaign for Education. (2004) were supported the above mentioned source as a crucial sources of information. In my study 84.0% of house-wives selected the health personnel as a most important source for the HIV/AIDS and also they thought that the Health personnel could play a important role in preventing the HIV/AIDS in the community. It likely to happened that Thailand has the very good system especially in prevention and promotion program in the Tambol level and also from the era of HIV/AIDS epidemic the government intervention related to the declining HIV/AIDS outbreaks was one of the prior health program. All programs taken by the government has been implemented by the health personnel especially Village Health Volunteers (VHV), health workers. So in the community they are actually the key person of any health promoting activities. The statistical analysis was not found any significant relation between the sources of information and level of knowledge but the health personnel especially VHV, health workers had the quite significant association with the level of perception. Though the preventive behaviors of house-wives were almost bad but thereafter health personnel had the statistical significant relation.

Perhaps reason is that the role of health workers seems to be an important source of information on HIV/AIDS. This may reflect the previous serious extent of the HIV/AIDS Epidemic in Mae Taeng District [for many years] and the need for health workers to meet with villages at community temples to discuss HIV/AIDS. Another issue may wish to discuss is the fact that many of the respondents were already “out of school” when HIV/AIDS became an important health issue in their communities. Accordingly “school education” played a minor role in providing information on HIV/AIDS to those already out of school [i.e. housewives]. In case of printing media the respondents got very little chance to read news paper or any booklets as there is no shop for such reading materials nearby their house.

5.3 Level of knowledge, perception and the preventive behavior of house-wives:

A high level of knowledge of house-wives was found in this study. It had influence on the changes of increase level of perception. Although the previous study by Ross M.W. et al. (1990), Ross and Roger (1989) proved that knowledge about AIDS is unrelated with the changes of behavior without the modification of attitude. But in this study it had shown the significant association between the knowledge and perception and no relation with preventive behavior.

In order to establish the relationship between the level of perception and the level of preventive behavior it was interesting to observe that half of the house-wives discussed with their husbands about using condoms and at the same ratio they could convince their husbands to use condoms during sex. But in action it was not applied. In one questions of using condoms, 71.0% of the house-wives said that they had never or very rare used condom during having sex with their husbands and 62.8% house-wives obey their husbands' idea and provide sex. Since, in my study condom use during sex was the key indicators of preventive behavior against HIV/AIDS, for this reason the result of this study could not show good preventive behavior although their level of knowledge and perception was very high.

The data from review shows that the likeness of house-wives to use condom during sex with their husband very low. The reason is that 85.4% of house-wives believe that the house-wife and husband has the faithful relation to each other. Secondary data from Mae Taeng District health office indicated that 89.6% married women of reproductive age in Mae Taeng District are using contraceptive or safe and effective family planning method. Only 2.2% of house-wives use condom as a back-up barrier method or effective contraceptive method to avoid unwanted pregnancies.

CHAPTER 6
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

In Thailand, the majority of the studies done have been are on the behavior of sex workers, often in conjunction with interventions, e.g. Swaddiwudhipong et al (1990a). Some surveys in Thailand have also been conducted with broader groups, however, for example: the Shah et al (1987) study on married women in Bangkok and the Swaddiwudhipong et al (1990b) survey the men's behavior and knowledge about AIDS in Maesot, Tak. This is a rare example of the study focusing on women.

However, there was aim of this study to observe the preventive behavior of house-wives, whereby the provision of information about the risks could lead to 'rational' changes in behavior. This approach ignores factors of power and the status which are involved in sexual decision making, which generally prevent house-wives from imposing new modes of behavior, due to their lack of sexual bargaining power. In this study use of condom and faithfulness was only the indicators to gauge the preventive behavior of house-wives. Since the data supported that in Chiang Mai even all through the Northern Thailand the infection rate of HIV/AIDS is very high and a common tendency to increasing heterosexual transmission rate, so it was assumed that husband and wife had the extra-marital sexual relations. There were no indicators to asses such behavior of husband/wife even very sensitive question for the house-wives to be asked and that is why researcher avoid cautiously.

From the results of this study some problems could be identified in order to find out the solution and thereby writing the recommendations. In this study most of the housewives were older age. Educational attainment of wife and husband were 74.5% & 71.9% up o the primary level. Only 21.0% first informed about HIV/AIDS from formal education. 2 percent think that school education is the most important source

to prevent HIV/AIDS So here extending HIV/AIDS education to all women can solve the problem.

The main occupation of both housewife and husband was found Agricultural 50.6% & 55.5% respectively. In Northern region the high prevalence rate of HIV-infection has found among the Agriculture worker (36.4%) & labor (45.4%). Out reach/work place information arrangement of training & meeting are the probable solutions.

Respondents learn at first about HIV/AIDS from mass media 42.0 percent and 99..0 percent get any information about HIV/AIDS from mass media. Only 14.0 percent respondents learn first HIV/AIDS from family members/friends/neighbors/infected person 65.8 percent mostly get the information from TV/Cinema But Only 18.0 percent use printing media 84.0 percent housewife response that health personnel give them information; only 19.0 percent get information from the family members and friends. 64.6 percent house-wife choose health personnel as a most important source in preventing HIV/AIDS. The way of getting the message to all women is the effective solution.

The result of this study revealed that 71.0 percent housewives never use condom 21.8 percent sometimes & only 7.0 percent regular use condom. 62.8 percent obey husbands' idea and provide sex, only 29.1 percent pursued husband to use condom Involving men, rapid development of alternatives and affordable technologies, condom should be promoted as a preventive method to prevent HIV/AIDS.

6.2 Recommendations

It is clear that heterosexual transmission is running as a dominant mode of transmission of HIV/AIDS in Thailand as well as South-East Asia and the South Pacific. Female sex workers have already been badly affected by the epidemic, and women generally-and through them children-are increasingly at risk of infection.

Drawing on the above problems and solutions, as well as from literature review, some key recommendations are highlighted below, which need to be addressed in formulating house-wives appropriate strategies for HIV/AIDS prevention and control.

1. Extending HIV/AIDS education to all women

i) Urgent need to convey the message that house-wives are not out of risk of HIV infection
ii) Public information & education must contain message which make clear the specific risk of women of casual sex, of unprotected sex with their immediate partners
iii) Formal and informal education on HIV/AIDS needs to begin at earlier ages than is generally being done
iv) In the longer term, efforts are needed to increase female literacy and enrollment rates in education at all levels, so that women have more direct access to all information about HIV/AIDS

2. Outreach/work place information, arrangement of training & meeting

i) Outreach & non-formal activities are also needed who was not attending secondary or higher education level.
ii) House-wives also need to be given training in assertiveness, in order to increase their self confidence in refusing sexual advances in general.

3. Getting the message to women

i) House-wives are more likely to be receptive to information and advice gained through family members. Micro campaigns involving discussion groups, and peer-led communication, and drawing on exsisting networks, of friends, family members etc. may be have more significant and lasting impact on house-wives than mass media.
ii) Media channels to which women has access and which they regularly use should for HIV/AIDS awareness campaigns

4. Involving men and rapid development of alternatives and affordable technologies

i) Husband as well as house-wives need to be involved in education on HIV/AIDS particularly on the need to use condoms as well as the proper way to doing so.

ii) Technological advances to develop a female controlled method that unobtrusive and permits conception while inhibiting HIV transmission

iii) In order to improve the HIV/AIDS preventive behavior among housewives in rural Northern Thailand, condom should be promoted as part of a dual contraceptive service delivery strategy (with other FP methods currently used by rural women), as well as an important barrier method to prevent HIV/AIDS and STDs.

5. Service delivery

HIV/AIDS prevention activities for women, work best when provided as one of range of services, for example: general reproductive services. There is a need to integrate HIV/AIDS related activities with broader issues of reproductive health, particularly HIV/AIDS prevention and treatment and MCH/FP services.

Integration with MCH/FP services may be positive step forward given thatr many women have access to these services at community level. However, it is not just a case of adding a new element to existing activities, but rather of reshaping the whole package. The almost exclusive focus of MCH/FP activities on women has led to a situation in the face of the HIV/AIDS epidemic, where women are being targeted with condoms that men will not use. In Thailand there have been widespread campaigns to promote family planning, which have met with some success. Positive aspects of this experience need to be drawn upon in developing HIV/AIDS education strategies in conjunction with other reproductive health services.

6. Voluntary counseling and testing

House-wife and husband should motivate to enroll in VCT. In Thailand Voluntary counseling and testing (VCT) is available at nearly all provincial and community hospitals, though the private sector and at selected health centers. VCT is an entry

point for those who seek early clinical management as well precautionary measures to prevent the spreading of HIV. It can also encourage sexual behavior change to prevent HIV.

7. Research

More research is needed on socio-economic, and socio-cultural and behavioral factors in HIV transmission, particularly with regard to gender. Further surveys on sexual behavior are needed, especially among both house-wives and husband and should include dynamics of extra marital relationships. Gender issues should be addressed in research design, data collection and analysis. Careful monitoring and evaluation of activities, including their gender impact, is also needed.

8. Organizational Implications

National AIDS Committees should include better representation of women's especially (house-wives) organizations, both official and NGO, and specific sets of measures to involve women in HIV/AIDS prevention strategies should be developed, in the national policy framework.

Women's organizations should be encouraged and supported in taking initiatives in HIV/AIDS related work, particularly where they have experience of work in relevant areas (e.g. women's health, reproductive health).

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APPENDIX

APPENDIX-A
SUPPORTING TABLE

Table 1 The comparative number and percentage distribution by socio-demographic characteristics among the house-wives of three tambols.

Characteristics	Khee Lek		Intha Khill		Sob Poeng	
	N	%	N	%	N	%
1. Age (Years)						
15-<25 years	9	15.0	2	2.5	6	10.2
25-<35 years	22	36.7	18	22.2	12	20.3
35-<45 years	22	36.7	41	50.6	21	35.6
≥45 years	7	11.7	20	24.7	20	33.6
Total	60	100.0	81	100.0	59	100.0
2. Total married life						
≤10years	23	38.3	19	23.5	16	27.1
> 10 - <20 years	17	28.3	20	24.7	14	23.7
≥20 years	20	33.3	42	51.9	29	49.2
Total	60	100.0	81	100.0	59	100.0
3.Times of married						
One time	53	88.3	68	84.0	48	81.4
Two times and more	7	11.7	13	16.0	11	15.3
Total	60	100.0	81	100.0	59	100.0
4. Educational qualification of House wife						
Primary school	37	61.7	69	85.2	43	72.9
Secondary school	13	21.7	10	12.3	12	20.3
College/Vocational	8	13.3	1	1.2	3	5.1
University	2	3.3	1	1.2	1	1.7
Total	60	100.0	81	100.0	59	100
5. Educational qualification of Husband						
Primary school	39	65.0	67	83.8	37	62.7
Secondary school	12	20.0	8	10.0	18	30.5
College/Vocational	7	11.7	3	3.8	0	0.0
University	2	3.3	2	1.3	4	6.8
Total	60	100.0	80	100.0	59	100.0

Table-1 The comparative number and percentage distribution by socio-demographic characteristics among the house-wives of three Tambols (continued).

Characteristics	Khee Lek		Intha Khill		Sob Poeng	
	N	%	N	%	N	%
6. Occupation of husband						
Government/ professional employee	15	25.4	17	21.0	16	27.1
Farmer/Agricultural labor	25	42.4	55	67.9	30	50.8
Private/business/merchant/trader/sales	9	15.3	2	2.5	10	16.9
Factory/worker/restaurant/hotel/ bar worker	10	16.9	6	7.4	3	5.1
Total	59	100.0	80	100.0	59	100.0
7. Occupation of wife						
Government/ professional employee.	19	31.7	9	11.4	14	23.7
Farmer/Agricultural labor	24	40.0	48	60.8	28	47.5
Private/business/merchant/trader/sales	7	11.7	12	15.2	10	16.9
Factory worker/ restaurant/hotel/bar worker	10	16.7	10	12.7	7	11.9
Total	60	100.0	79	100.0	59	100.0
8. Average family income per month						
5,000 and less	33	55.0	63	81.8	27	52.9
>5,000->10,000	17	28.3	8	10.4	20	39.2
10,000 and more	10	16.7	6	7.8	4	7.8
Total	60	100.0	77	100.0	51	100.0
9. Type of family						
Nuclear family	43	74.1	61	77.2	44	83.0
Extended family and others	15	25.9	18	22.8	9	17.0
Total	58	100.0	79	100.0	53	100.0
10. Number of children						
No children	7	11.7	5	6.3	11	18.6
One children	34	56.7	42	53.2	18	30.5
Two children	17	28.3	30	38.0	27	45.8
Three children or more	2	3.3	2	2.5	3	5.1
Total	60	100.0	79	100.0	59	100.0

Table 2: Comparative demographic and economic status of the house-wives of three tambols**.**

	Khee Lek			Intha Khil			Sob Poeng		
	Age	**Married life**	**Family income**	**Age**	**Married life**	**Family income**	**Age**	**Married life**	**Family income**
Mean ± S.D	35.50 ± 7.899	14.17 ± 7.694	6,417.50 ± *4,238.38*	39.94 ± *6.777*	17.44 ± *7.644*	4,988.83± *4,602.18*	39.85 ± 8.745	17.47 ± *9.170*	5,558.82± *2,253.10*
Median	35.00	14.00	5,000.00	41.00	20.00	4,000.00	44.00	19.00	5,000.00
Mode	35	20	3,000.00	41	20	5,000.00	45	28	6,000
Minimum	20	2	2,000	23	2	1,200	17	1	2,000
Maximum	48	28	30,000	49	30	40,000.00	50	33	12,000

Table 3 Summary of demographic factors by some measures

	Mean ± S.D	**Median**	**Mode**	**Mini.**	**Maxi.**
Age	38.58±7.959	41.00	45	17	50
Total married life	16.47±8.236	18.00	20	1	33
Average monthly family income	5,599.41±4,238.383	5,000.00	3,000	1,200	40,000

Table 4 Number and percentage distribution of House-wives by correct answer of knowledge according to the questions those asked about HIV/AIDS.

Knowledge of respondents on HIV/AIDS	**Correct answer**	
	N	**%**
What is the causal agent of HIV/AIDS? (n=200)	198	99.0
Which one of the following statement is not true related to the HIV/AIDS transmission? (n=200)	2	1.0
How can you recognize exactly the HIV positive virus? (n=200)	189	94.5
How long does it take being infected with HIV until AIDS appear? (n=200)	137	68.5
Which group is considered the highest risk group likely to be infected with HIV/AIDS in your community at present? (n=198)	161	80.5
Which one of the following methods can prevent the HIV/AIDS? (n=200)	135	67.5
How does HIV positive pregnant women infect her baby?(n=199)	115	57.2
Can HIV/AIDS be cured? (n=200)	162	81.0

Table 5 Number and percentage distribution of House-wives by their opinion on perception statement.

Statement	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
Perception of Severity					
Getting infected with HIV/AIDS is very dangerous. (n=198)	143 (72.2)	43 (21.7)	9 (4.5)	2 (1.0)	1 (0.5)
All infected person will die due to HIV/AIDS.(n=198)	80 (40.4)	67 (33.8)	33 (16.7)	18 (9.1)	00
HIV/AIDS reduce the family income. (n=197)	73 (37.1)	84 (42.6)	22 (11.2)	17 (8.6)	1 (0.5)
HIV/AIDS infected family face discrimination in the society.(n=198)	40 (20.2)	64 (32.3)	28 (14.1)	48 (24.2)	18 (9.1)
HIV/AIDS can not be cured.(n=196)	89 (45.4)	73 (37.2)	24 (12.2)	10 (5.1)	00
Perception of susceptibility					
If you have any wound in your body & contact directly to HIV/AIDS infected person, you have chance to get HIV infection.(n=197)	64 (32.5)	83 (42.1)	43 (21.8)	4 (2.0)	3 (1.5)
Sexual intercourse with husband without condom use may cause HIV infection. (n=199)	53 (26.6)	53 26.6)	49 (24.6)	36 (18.1)	8 (4.0)
Children who are delivered from HIV infected mother have chance to be infected with HIV. (n=200)	54 (27.0)	94 (47.0)	43 (21.5)	7 (3.5)	2 (1.0)
Sharing Needle and syringe with HIV/AIDS infected person has chance to get HIV infection. (n=199)	114 (57.3)	74 (37.2)	9 (4.5)	1 (.5)	1 (.5)
Oral/Anal sex with HIV/AIDS infected person has a chance to be infected with HIV infection. (n=200)	67 (33.5)	88 (44.0)	37 (18.5)	7 (3.5)	1 (.5)
Multiple sexual partners increase risk of HIV infection. (n=198)	108 (54.5)	63 (31.8)	22 (11.1)	5 (2.5)	00

Table-5 Number and percentage distribution of housewives by their opinion on perception statement (continued).

Statement	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)
Perception of Benefit to prevent HIV/AIDS					
Be faithful to each other during marital life can prevent the HIV/AIDS infection. (n=198)	89 (44.9)	76 (38.4)	23 (11.5)	8 (4.0)	2 (.5)
Using condoms, during sexual intercourse, can prevent the transmission of HIV/AIDS. (n=200)	91 (45.5)	71 (35.5)	30 (15.0)	8 (4.0)	00
Perception of Barrier to prevent HIV/AIDS					
Abstinence during married life is somewhat tough. (n=199)	21 (10.6)	44 (22.1)	44 (22.1)	57 (28.6)	33 (16.6)
Husband feels unhappy and discomfort when using condom. (n=198)	15 (7.6)	35 (17.7)	89 (44.9)	47 (23.7)	12 (6.1)
Use condom makes loose the sexual potency. (n=199)	13 (6.5)	20 (10.1)	73 (36.7)	66 (33.2)	27 (13.5)

Table 6 Comparative number and percentage distribution of House-wives by level of knowledge perception and behavior among the three Tambols**.**

Level	Khee Lek		Intha Khil		Sob Poeng	
	N	%	N	%	N	%
Level of knowledge						
Good	9	15.0	17	21.0	1	1.7
Moderate	46	76.7	56	69.1	42	71.2
Poor	5	8.3	8	9.9	16	27.1
Total	60	100.0	81	100.0	59	100.0
Level of Perception						
High	17	28.3	10	12.3	4	7.0
Moderate	35	58.3	42	51.9	44	77.2
Low	5	8.3	21	25.9	9	15.79
Total	57	100.0	73	100.0	57	100.0
Level of preventive behavior						
Good	12	20.0	12	14.8	7	11.9
Bad	48	80.0	69	85.2	52	88.1
Total	60	100.0	81	100.0	59	100.0

APPENDIX B

QUESTIONNAIRES

HIV/AIDS PREVENTIVE BEHAVIOR AMONG THE HOUSE-WIVES OF MAE TAENG DISTRICT IN CHAING MAI, THAILAND

This questionnaire is prepared for thesis writing for Master of Primary Health Care Management course (M.P.H.M.) at the ASEAN Institute for Health Development, Mahidol University. This study intends to achieve better understanding about HIV/AIDS Preventive behavior among the house-wives of Mae Taeng District.

Please try to answer every question by yourself. Your answer will be kept completely confidential and not exposed to any other purpose.

Thank you for your participation.

A. K. M. Humayun Kabir
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Questionnaire Form

(***This questionnaire can be used to interview of housewives living in the rural community in the village of Mae Taeng District of Chiang Mai, Thailand)***

Village: _____ Tambol: _____

District: Mae Taeng Province: Chiang mai

Section 1: Demographic and Socio-Economic Background of Interviewee:

Instructions for the Interviewer:

(a) **Kindly put a '√' mark on the □ sign according to the respondent's answer.**
(b) Kindly make sure that the respondent answers all questions.
(c) Kindly check to make sure that you have put a **'√' mark** on all appropriate questions.

1. What was your age on your last birthday? _____Years

2 Are you currently married? _____
If so, for how many years have you been married? ____Years

3. How many times have you been married? _____

4. What is your educational background? [Kindly indicate the number of years of schooling
that you have completed]:
(1) □ Primary School (Grade:_____)
(2) □.Secondary School (Grade: _____)
(3) □ Commercial/Vocational College (Grade: _____)
(4) □ University (Number of Years Completed or Type of Degree: _____)
(5) □ Other (Specify): _____

5. What is the educational background of your husband?
(1) □ Primary School (Grade: _____)
(2) □ Secondary School (Grade: _____)
(3) □ Commercial/Vocational College (Grade: _____)
(4) □ University (Number of Years Completed or Type of Degree: _____)
(5) □ Other (Specify): _____

6. What is the occupation of your husband? [If your husband has more than one occupation, kindly place a "1" after his "primary occupation" and a "2" after his "secondary occupation(s)"].
(1) □ Government employee
(2) □ Agriculture Laborer
(3) □ Private Business
(4) □ Factory Worker
(5) □ Restaurant/Hotel/Bar Worker
(6) □ Professional Employee (Specify): _____
(7) □ Merchant/trader/salesperson:
(8) □ Other (Specify): _____

7. What is your occupation? [If you have more than one occupation, kindly place a "1" after your "primary occupation" and a "2" after your "secondary occupation(s)"].

(1) □ Government employee
(2) □ Agriculture Labor.
(3) □ Private Business.
(4) □ Factory Worker.
(5) □ Restaurant/Hotel/Bar Worker.
(6) □ Professional Employee (Specify): _____
(7) □ Merchant/trader/salesperson:
(8) □ Housewife:
(9) □ Other (Specify): _____

8. Kindly indicate your family's average monthly income: _____Baht

9. In what type of family do you live?
(1) □ Nuclear family
(2) □ Extended family
(3) □ Other(Specify) _____

10. How many children do you have?
(1) □ None
(2) □ One
(3) □ Two
(4) □ Three
(5) □ Four
(6) □ Other (specify): _____

Section 2: Knowledge of HIV/AIDS:

Instructions for the Interviewer:
(a) **Kindly put a '√' mark on the □ sign according to the respondent's understanding of HIV/AIDS**.
(b) Kindly make sure that the respondent answers all questions.
(c) Kindly make sure that you have put a **'√' mark** on all appropriate questions.

11. What is the causal agent of HIV/AIDS?-
(1) □ Virus
(2) □ Bacteria
(3) □ Parasite
(4) □ Fungi

12. Which of the following statements is not correct with respect to the transmission of HIV/AIDS?
(1) □ The disease can be transmitted by hugging an HIV/AIDS infected person
(2) □ The disease can be transmitted from an HIV/AIDS infected mother to her newborn infant
(3) □ The disease can be transmitted by sharing syringes/needles used by an HIV/AIDS infected person.
(4) □ The disease can be transmitted by engaging in oral or anal sex with an HIV/AIDS infected person without using a condom.

13. How can you recognize an HIV-positive person?
(1) □ By their physical signs and symptoms.
(2) □ By testing their blood.
(3) □ By testing their saliva.
(4) □ By testing their urine.

14. How long does it usually take for a person to exhibit signs and symptoms of AIDS from the time he/she is initially infected with the HIV virus?
(1) □ Within a one-week period
(2) □ From one-week to one-year
(3) □ From one-year to ten-years
(4) □ After more than ten-years

15. Which group is considered the highest risk group likely to be infected with HIV/AIDS in your community at present.
(1) □ Homosexuals
(2) □ Heterosexuals
(3) □ Intravenous drug abusers
(4) □ Bisexuals
(5) __ Others (Specify): _____

16. Which one of the following methods can prevent the HIV/AIDS?
(1) □ Being abstinent until marriage
(2) □ Being faithful to one's spouse after marriage
(3) □ Proper condom use
(4) □ All of the above

17. How can an HIV-positive pregnant women infect her fetus or newborn infant?
(1) □ By the mother's blood passing into baby's blood
(2) □ By breast-feeding
(3) □ All of the above
(4) □ By the infected mother handling the baby after birth.

18. How can HIV/AIDS be treated?
(1) □ By medication
(2) □ By a vaccine
(3) □ By traditional medicine
(4) □ HIV/AIDS is cannot be cured

Section 3: Perception of Severity/Susceptibility/Benefit/Barrier to Prevent HIV/AIDS

Instruction for the Interviewer:

(a) **Kindly put a '√' mark under the number that reflects the respondent's opinion.**
(b) Kindly make sure that the respondent answers all questions
(c) Kindly make sure that you have put a **'√' mark** in all appropriate statements

[Measurement Scale: -1=Strongly agree; 2=Agree; 3= Not sure; 4=Disagree; 5=Strongly Disagree]

No	Statement	5	4	3	2	1
	Perception of Severity					
19.	Getting infected with HIV/AIDS is very dangerous.					
20.	All HIV infected persons will eventually die from HIV/AIDS.					
21.	HIV/AIDS can reduce family income					
22.	HIV/AIDS affected families often face discrimination in their community.					
23.	HIV/AIDS cannot be cured.					
	Perception of Susceptibility	**5**	**4**	**3**	**2**	**1**
24.	If you have any open-wound on your body and come into direct contact with an HIV/AIDS infected person, you have chance to become infected with the HIV virus.					
25.	Having sexual intercourse with one's husband, without using a condom, may result in an HIV infection.					
26.	Newborn infants, whose mothers have an HIV infection, have a chance to become infected with the HIV virus.					
27.	Sharing needles and syringes with an HIV/AIDS infected person can result in an HIV infection.					
28.	Engaging in either oral or anal sex with an HIV/AIDS infected person can result in an HIV infection.					
29.	Having multiple sexual partners can increase the risk of an HIV infection					
	Perception of Benefit to Prevent HIV/AIDS	**5**	**4**	**3**	**2**	**1**
30.	Being faithful to one's spouse during marriage can reduce the risk of becoming infected with HIV/AIDS.					
31.	Using condoms, during sexual intercourse, can prevent the transmission of HIV/AIDS.					
	Perception of Barrier to Prevent HIV/AIDS	**1**	**2**	**3**	**4**	**5**
32.	Abstinence during married life can be difficult.					
33.	Husbands feel unhappy and/or experience discomfort when using a condom.					
34.	Many males feel that by using a condom they will lose their sexual potency.					

Section 4: Sources of Information About HIV/AIDS

Instruction for the Interviewer:

(a) Kindly put a '√' mark on the □ sign that corresponds to the respondent'sanswer.

(b) Kindly make sure that the respondent answers all questions.

(c) Kindly make sure that you have put a **'√' mark** on all appropriate questions.

35. Where did you first learn, or hear about, HIV/AIDS?

(1) □ At primary school

(2) □ At secondary school

(3) □ At Commercial/Vocational college

(4) □ At University
(5) □ Other (specify): _____

36. Have you ever received any information about HIV/AIDS from the mass media?
(1) □ Yes
(2) □ No

37. If yes, from which one of the following mass media did you receive information concerning HIV/AIDS?
(1) □ Radio
(2) □ TV/Cinema
(3) □ Newspapers
(4) □ Posters/booklets
(5) □ Other (specify): _____

38. Which of the following individuals have provided you with information concerning HIV/AIDS?
(1) □ Health personnel
(2) □ Family members
(3) □ Friends/neighbors
(4) □ Others (specify): _____

39. In your opinion which one of the following sources of information is most effective in making people understand how to prevent HIV/AIDS transmission?
(1) □ Mass media
(2) □ Health personnel
(3) □ Family members
(4) □ Friends/Neighbors
(5) □ Primary school
(6) □ Secondary school
(7) __ Commercial/Vocational College
(8) __ University
(9) □ Other (specify): _____

SECTION 5: Preventive Behavior Through Adopting the ABC Approach (Abstinence, Being Faithful, Condom Use)

Instruction for the Interviewer:
(a) Kindly put a '√' mark on the □ sign that reflects the respondent's answer.
(b) Kindly make sure that the respondent answers all questions.
(c) Kindly make sure that you have put a **'√' mark** on all questions

40. Do you believe that being faithful to your spouse or partner can prevent HIV/AIDS transmission?
(1) □ Yes

41. Have you ever discussed using condoms with your husband?
(1) □ Yes
(2) □ No

42. Do you think that you can confidently convince your husband to use condom during sex?
(1) □ Yes
(2) □ No

43. Does your husband ever use condoms when having sex with you?
(1) □ Yes
(2) □ No

44. How often does your husband use condoms when having sex with you?
(1) □ Regularly

(2) □ Sometimes
(3) □ Very infrequently
(4) □ Other (specify): _____

45. If your husband refuses to use a condom, what action do you take?
(1) □ Obey your husband and consent to have sex with him
(2) □ Persuade your husband to use a condom if he wants to have sex with you
(3) □ Refuse to have sex with your husband unless he uses a condom.
(4) □ Other (specify): _____

Figure Map of the Mae Taeng District (The study fields of this research)

BIOGRAPHY

NAME	A. K. M. Humayun Kabir
DATE OF BIRTH	1st August, 1968.
PLACE OF BIRTH	Chandpur, Bangladesh
INSTITUTION ATTENDED	Faculty of Veterinary Medicine, Bangladesh Agricultural University, Mymensingh. 1988-1993 Doctor of Veterinary Medicine (D. V. M.)
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