CHAPTER II

Essay

High prevalence of HIV/STD Infection among the Commercial sex workers in Cambodia

2.1 Introduction:

AIDS has become a universal problem. As the end of 1998, an estimated 33.4 million people worldwide (32.2 million adults and 1.2 million children younger than 15 years old) were living with HIV/AIDS. Approximately 43 percent of the 32.2 million adults living with HIV/AIDS worldwide are women and this proportion is growing. An estimated 5.8 million new HIV infections occurred worldwide during 1998, that is, approximately 16,000 infections each day. More than 95 percent of these new infections occurred in developing countries. Through 1998, cumulative HIV/AIDS- associated deaths worldwide numbered approximately 13.9 million- 10.7 million adults and 3.2 million children. In 1998 alone, HIV/AIDS- associated illnesses caused the death of approximately2.5 million people worldwide, including an estimated 510,000 children younger than 15 years old. Worldwide, more than 75 percent of all adult HIV infections have resulted from

heterosexual intercourse. Mother to child (vertical) transmission has accounted for more than 90 percent of all infant and children HIV infections worldwide.

Although AIDS has had an enormous impact economically, medically, and socially in all countries of the world, the disease has taken its greatest toll on the developing countries. Even though the largest number of people infected with HIV are in sub- Saharan Africa, the most rapid growth of HIV infection during the 1990's has been in South East Asia (Quinn, 1995).

The Kingdom of Cambodia has the most serious HIV/AIDS epidemic in Asia, and become one of the worst affected countries in the world, without effective intervention (The Kingdom of Cambodia, National Centre for HIV/AIDS Dermatology and STD). The National Blood Transfusion Centre in Phnom Penh reported the first HIV positive case in 1991. Their estimates include all people with HIV infection, whether or not they have developed symptoms of AIDS, alive since the beginning to the end of 1998: Total of adults (15-49) years old and of children (0-15) years old, 152,221; adults (male) total 80,746, adults (female) total 69, 254, and children 2,221. Prevalence among people (15-49) years old is 2.8 percent. AIDS occurred in 18, 612 adults and children. The number of adults and children who died of AIDS is 6,689. The numbers of uninfected children who have lost their mother or both parents to AIDS (while they were under age 15) is 5,505. HIV/AIDS started in high risk behaviour groups in all parts of the country and is beginning to spread into the low risk population groups. It increases morbidity, mortality, orphans, and health care service cost. Meanwhile it results in low production and income.

The rate of spreading HIV/AIDS is still increasing, and will continue if there is no strong intervention in the whole population.

2.2 HIV/AIDS Situation in Cambodia:

South East Asia is currently in the midst of an HIV/AIDS epidemic (Weniger and Brown, 1996). In fact the most rapid growth of HIV infection during the 1990s has been in South East Asia (Quinn, 1995). The Kingdom of Cambodia has become one of the worst affected countries in the world.

Cambodia's geographic location in the center of several countries in Southeast Asia has been a contributing factor to the arrival and spread of HIV. Provinces bordering Thailand have higher HIV prevalence rates in key populations than national averages. Between the 1996 and 1997 based upon seroprevalence surveys, it was estimated that in the Northwest provinces an average of 53 percent of the commercial sex workers and over 10 percent of the police were infected with HIV. The epidemic has moved from the north and west to the central and southern provinces of the country. The central and southern provincial clusters also contain the highest population density of the country and therefore have the capacity to be the most severely affected provinces in the country. To analyse and develop effective prevention and care strategies the country has been organised into provincial clusters. Several clusters already have high HIV prevalence. Provinces with the

highest urban/semi-urban prevalence and the highest population density have the greatest potential to be the most severely affected regions of the country.

Cambodia's central location and the rapid increase in HIV prevalence has also already begun to effect the spread of HIV in neighbouring countries due to the frequent migration of people across the Mekong region. In particular, the movement of Vietnamese women to Cambodia to work in commercial sex, fishermen from Thailand, Cambodia and Vietnamam with high risk behaviour, and the movement of migrant labour between Vietnam, Cambodia and Thailand are key factors linking the epidemic in Cambodia with its neighbouring countries. Although Thailand was the first to report a dramatic increase in the prevalence of HIV infection, it appears that other countries in the region including Cambodia may not be far behind. However, nowadays the HIV/AIDS epidemic is currently spreading faster in Cambodia than anywhere else in Asia. According to World Health Organisation (WHO) reports, the HIV seropositivity rate among female Phnom Penh sex workers has increased from 9.2 percent in 1992 to 39.4 percent in 1994 (World Health Organisation and Ministry of Health, 1994). Meanwhile the HIV positive rate among Phnom Penh blood donors has risen from 0.1 percent in 1991 to about 10 percent in 1995 (UNAIDS, 1996). It was estimated that between 20,000 and as many as 120,000 people are positive for HIV throughout Cambodia (Watkin, 1996). The wide range in the reported prevalence of infection is due to an incomplete and inaccurate reporting system coupled with sporadic and inadequate laboratory testing. Because of similar sociocultural conditions, large shifts in population from rural to urban areas, porous borders, economic

disruptions, and an increase in intravenous drug use. Thus, it is feared that the Cambodia HIV epidemic may emulate the situation which occurred in Thailand with the rapidly increasing prevalence of HIV soropositivity in sex workers spreading to their male clients and then spilling over to the men's wives, other sexual partners and their newborn infants.

When Cambodia was isolated from the rest of the world during the 1975- 89 period, prostitution and the sex trade were limited to soldiers and fishermen in the western provinces of Battambang, Banteay Meanchey and Koh Kong. With the reopening of the country in 1991, there was a boom in prostitution and the sex industry. One reason was that administrative curbs on the mobility of individuals within the country were lifted in 1991, resulting in the movement and trafficking of prostitutes to urban centres, particularly in Phnom Penh. Another reason may have to do with prosperity. The Cambodian economy experienced considerable growth between 1991 and 1997, and this resulted in increased prosperity for a large number of Cambodian males, especially those residing in the urban areas, and a consequent increase in their demand for prostitutes. Few girls choose to become CSWs: most are deceived by traffickers or sold against their will by relatives, neighbours or friends (CWDA, 1994; Human Rights Task Force, 1995). Some are even abducted or kidnapped by brothel owners or pimps.

Beside the emotional trauma inflicted on many women engaged in the sex trade, there is an additional threat of HIV/AIDS. CSWs may be in too weak a position with respect to their clients and brothel owners to insist on condom use. Further, CSWs are

usually are not free to move outside the brothel, and this restricts their access to condoms and medical care. All of these factors imply that they are at a high risk of acquiring HIV/AIDS and being doomed to a life of suffering followed by early death. Poverty is often the root cause of prostitution and trafficking. For many families living in abject poverty, the temptation of sending their daughters into prostitution to make ends meet is too great.

It is believed that an important risk behaviour for HIV transmission in Cambodia is heterosexual intercourse via the commercial sex trade that has grown rapidly since 1991. In Phnom Penh alone there are approximately 1,000- 2,000 sex workers. Prostitution is also common and increasing in the Western provinces along the Thai border and in the port of Sihanoukville and Koh Kong (Ministry of Health, 1994). A considerable number of hotel and massage parlour staff also supplement their income through part- time prostitution. At the present time, the role of intravenous drug use in the transmission of HIV is still small, although it is an important risk factor in other parts of South East Asia. The risk of acquiring HIV from improperly sterilised medical and dental equipment or through unscreened infected blood is unknown.

In order to control the spread of HIV, it is essential to identify and understand the political, social, economic and cultural conditions that promote its transmission. The epidemiological situation may be unique to each region of a country since sexual and drug use patterns vary widely.

On the other hand, the report on Sentinel Surveillance in Cambodia 1998 (National Center for Dermatology, Venerology and HIV/AIDS Control, Ministry of Health, Cambodia, 1998), concluded the following about the HIV/AIDS situation in Cambodia: HIV prevalence is still high in all risk groups and will remain high for at least several more years; the number of new HIV infections will continue to be high for several more years; many HIV infected individuals are now symptomatic and are seeking care. There are eight time as many women, who are not commercial sex workers, infected with HIV as female commercial sex workers who are infected. Commercial sex workers and their clients, however, are the major source of HIV spread in Cambodia. There may be 138 times as many women who are at risk of HIV infection as female commercial sex workers. Husbands who have other sex partners present the greatest risk for HIV infection for married women in Cambodia. The prevalence of HIV infection in rural areas now appears to be similar to that in urban areas.

There are approximately 140,000 HIV infected people in Cambodia, and the cumulative number of AIDS cases by the year 2000 could be about 25,000 (Ministry of Health, 1998). This will place an increasing burden on the health care system. In Phnom Penh, 11 percent of hospital beds are now occupied by people who are HIV positive (Ministry of Health, 1998). The increase in HIV positive blood donors jumped from 0.1 percent in 1991 to 3 percent in 1997 (Ministry of Health, 1998). 41 percent of commercial

sex workers in Cambodia are infected with HIV. In Phnom Penh, more than 60 percent of commercial sex workers are infected with HIV.

2.3 Why is HIV/AIDS in Cambodia spreading faster than everywhere else in Asia?

The Kingdom of Cambodia has seen rapid increase in HIV infection over the past few years, giving it the very dubious distinction of having the most widespread and serious HIV epidemic in Asia. The epidemic has progressed so quickly that it is now estimated that approximately 100,000 individuals are infected with HIV.

The Kingdom of Cambodia faced war for many years; the outcome of which is a low male to female, sex ratio and deficit in 35- 39 year olds with post- primary education (Cambodia, National Centre for HIV/AIDS Dermatology and STD). The populations affected are among the world's least educated (Report on the Global HIV/AIDS epidemic, June 1998). They are less likely to be literate, and, therefore, will probably have less access to information. 40 percent of the population is below the poverty line; the average household is 6 persons and average monthly expenditure is US$ 116 (Cambodia, National Centre for HIV/AIDS Dermatology and STD). Most of the worst- hit countries are among the world's poorest; there is, therefore, has been a temptation to say, "AIDS is a disease of poverty " (report on the global HIV/AIDS epidemic, June 1998). The cost of accessing commercial sex is extremely inexpensive ranging from 500 Riel (US$ 0.15) to 50,000 Riel (US$ 15). Low income will tend to limit access to reasonable health care. CSWs start their

sex lives with little access to education, thus increasing the likelihood of pregnancy and a STD. Low prices for commercial sex also contribute to the frequent use of commercial sex workers and the subsequent risk of infection for both women and men. The intervention of the government, NGOs, and the National HIV/AIDS Program is still weak on HIV education and also on the distribution of condoms. Therefore the commercial sex workers are a biggest obstacle is that customers refuse to use condoms. The report on sentinel surveillance in Cambodia, 1998, shows that commercial sex workers always use condoms 83 percent of time, most of the time 7 percent, some of the time 6 percent, rarely 1 percent, and no response 3 percent (Michael Chommie, 1999).

Cumulative AIDS Cases Reported to the World Health Organization as of June 1997

Table No.:2.1

Country	No. of Cases	Male Cases (% reported)	Age at Diagnosis (%)		
			1-14yr	15-49yr	50+yr
Cambodia	406	67	17	6	78
China	117	93	0	91	9
Hong Kong	244	79	0	91	9
India	2,996	N/A	N/A	N/A	N/A
Indonesia	127	77	0	97	0

Japan	1,447	92	1	78	21
Lao PDR	30	69	6	84	9
Malaysia	580	94	2	90	8
Myanmar	1,822	81	1	95	3
Nepal	87	58	0	98	2
Pakistan	76	N/A	N/A	N/A	N/A
Philippines	295	63	2	89	8
Republic of Korea	63	89	0	87	13
Singapore	269	94	0	85	14
Thailand	59,782	81	5	91	4
Vietnam	701	90	0	96	4

N/A= not available
From World Health Organization. Global AIDS surveillance. Weekly epidemic Rec. 1997; 72:197-200

2.4 Definition:

2.4.1 HIV (Human Immunodeficiency Virus)

A virus (very small germ) that affects the immune system making the body unable to fight infection. Just because you have HIV infection does not mean you have AIDS.

HIV can take years to develop into AIDS, but if you have HIV- even if you feel fine you can still infect your sex partner or unborn child. The virus has been found in greatest concentration in blood and semen. Low concentration of virus has also been detected in tears, breast milk, urine, saliva, and vaginal/cervical secretions. However to date only semen and blood have confirmed ability to transmit the virus.

HIV causes an infected individual to develop antibodies within a short period of time (6-24 weeks). HIV infected people are most infectious to others in the "window period" in which antibodies are yet not produced. Similarly in the stage of well-advanced infection, people are more infectious because virus level in the body is very high. The incubation period is very long, for many years without symptoms at all. In general, on average it takes eleven years from time of infection to develop AIDS.

2.4.2 Commercial Sex Worker (CSW):

Commonly used abbreviation for commercial sex workers (CSW). A commercial sex worker is an individual, man, child, or women, who engages in sexual acts for the sole purpose of soliciting payment (WHO, 1997). I am going to define the commercial sex workers as women who are over 15 years old, who are Cambodian nationals, and who work in a brothel for 24 hours is called direct commercial sex workers. The commercial sex workers who work in restaurant, hotel, karaoke, beer promotion and so on, is called indirect commercial sex workers.

2.4.3 Peer Education:

Peer education involves services by individuals who are recruited from a target population. People are more likely to adopt new behavior, if they are introduced by someone, who is similar to them and is perceived to be a role model (Coates and Frienblatt, 1990).

2.5 Mode of Transmission:

Epidemiological studies throughout the world have shown that there are only three modes of HIV transmission. Sexual intercourse, whether heterosexual or homosexual, is the major route of transmission. Transmission also occurs through HIV infected blood, blood products, or transplanted organs or tissues. The use of improperly sterilized needles and syringes that have been in contact with infected blood. Finally, HIV can be transmitted from an HIV-infected woman to her fetus or infant before, during, or shortly after birth.

2.5.1 Sexual Contact:

HIV/AIDS is a primarily sexually transmitted disease. Any form of penetrative sex (anal or vaginal) transmits it. There is some uncertainty about the degree of risk in oral sex

(mouth comes in contact with semen or vaginal secretions). Oral sex is particularly risky, when a partner has sores on the sex organs or has bleeding or sores in the mouth. Anal sex has higher risk than vaginal because it is more likely to injure tissues of the receptive partner.

Women are more vulnerable to HIV infection than men because of a larger surface that is exposed, and because semen contains a higher concentration of HIV than vaginal or cervical fluids. Chance of infection is twice as likely as from female to male. Age wise, adolescent girls and women above 45 are more prone to get HIV infection. In adolescents because the cervix is less mature and thus unable to pose an efficient barrier to HIV. In post-masopausal women because the thinning of mucus at menopause is believed to lessen the protective effect.

In Cambodia the principle source of transmission is heterosexual contact, normally between men and commercial sex workers. Clients come from all walks of life, from cyclo drivers (Cyclo is one type of transportation in Cambodia) to rich foreign businessmen, and prices vary considerably. Anecdotal evidence from those working amongst commercial sex workers in Phnom Penh's largest red light district suggests that the poorer a woman is, the less influence she can exert over whether her clients wear condoms. It is thought that more highly paid women are in better position to purchase the necessary antibiotics to fight sexual transmitted diseases, to purchase condoms and to demand that condoms be used.

Most commercial sex workers are ethnic Cambodian and Vietnamese. Many are forced into commercial sex through poverty, or particularly for high valued young virgins, relatives who sell them to brothel owners or those who abduct them. Consequently they often have little or no control over whom they have sex with, frequently being forced into unprotected sex. Some of those using a condom found that men sometimes used various pills to maintain an erection all night. Lubricants often then prove to be insufficient, and condoms would rub. This led to soreness and an unwillingness to use them, while creating thousands of tiny abrasions, thus making infection even more likely.

Of particular concern though is a similarly high incidence of non- fatal STD between prostitutes and monogamous women, according to Dr. Anderson, (formerly with Voluntary Service Overseas). This suggests married men are transmitting many STD. She is not alone in her fear. An unwittingly exposed group of women are single partner, married women exposed to the risk of infection from their husbands who also have had sexual relations with other women who have multiple male partners (The Jakarta Declaration for the Advancement of Women in Asia and the Pacific, para 12).

2.5.2 Blood Contact

HIV transmitted by blood and blood products will also cause HIV. The risk of contracting HIV from transmission of a unit of infected blood is estimated to be very high, over 95 percent. The likelihood of transmission via blood depends on the dose-infected

blood. Hence risk of getting infection through a contaminated needle, syringe or any other skin- piercing instrument is much lower compared to blood transfusion. However, because of several repeated exposures in a day, drug injection users have a very high infection rate. After almost 100 percent screening of blood, it has played a minor role in the spread of HIV in developed countries. The second source of transmission is from reused syringes. Conventional intravenous drug abuse is not a cause of concern yet, but there is a general tendency by Khmer to believe that something injected is more effective than medication taken orally. Injections would typically range from antibiotics through vitamins. Administration of intravenous infusions is common practice for tiredness. According to Meyer, head of ICRC's National Blood Transfusions Programme, needle sharing is common in pharmacies and in small provincial hospitals.

Particularly in the villages, one person may own a syringe which is shared around the whole family, often with no or inadequate, sterilisation. Clearly this could, and probably will make the epidemic potentially explosive as husbands take the virus home and subsequently pass it on to their entire families.

2.5.3 Peri-natal Transmission:

A pregnant woman infected with HIV has an approximately 30 percent chance of passing the virus to her foetus or new born baby. Little is known about the precise mechanism or timing of transmission. There is evidence that infection can occur as early as

the first 12-15 weeks of gestation, but what proportion of foetuses are infected this early and what proportion become infected later in utero or during the birth process is unknown. There is only a handful of documented cases in which HIV was transmitted through breast-feeding. Researchers now think that even these results can not be generalised because each of the mothers had received infected blood immediately following birth. WHO strongly advocates for developing countries, particularly where safe and effective use of alternatives are not possible, to permit breast- feeding by the biological mother as the feeding method of choice irrespective of their HIV infection status.

Peri- natal infection is currently believed to be relatively low. No figure is available, although a number of infants have been reported as HIV positive at birth. Universally, mother-to- child transmission of HIV is by far the greatest source of infection for children, and there is no reason to believe Cambodia will be any different.

Most of Cambodia's blood supplies remain unscreened due to donations often from friends or relatives. The true picture will be reduced by a lower post- operation survival rate because of limited resources, late detection of complications, and inappropriate interventions. Conversely though, transmission could be higher due to the considerable numbers of landmine victims (currently around 300- 400 per month), who require large amounts of blood following amputations. In contrast with western countries, other sources, such as homosexual infection, are not considered to be a major cause of transmission.

2.6 Who are mainly responsible for transmission of HIV?

To determine the epidemiological features of HIV prevalence among female commercial sex workers in Cambodia, serological tests were carried out from December 1997 to January 1998. The serological tests were carried out among 296 commercial sex workers who were working in many provinces located in northwest Cambodia. The blood samples were examined for HIV antibody, Chlamidia trachomatis IgG antibody, TPHA, Hepatitis B surface antigen, and Hepatitis B surface antibody. The HIV seroprevalence rate was 43.9 percent (130 out of 296). The seropositive rate of Chlamidia trachomatis IgG antibody (C.T.- IgG- Ab) was 73.3 percent (217 out of 296). Logistic regression analysis showed a significant positive association between C.T.- IgG- Ab positive and HIV prevalence (odds ratio: 5.33; 95 percent Confidence Interval, 2.82-10.07). The existence of Chlamidia trachomatis is closely related with HIV prevalence among the commercial sex workers in Cambodia. Other STDs may also increase susceptibility to male-to--female sexual transmission of HIV. Thus the appropriate prevention against STDs will also be needed for the control of HIV prevalence in Cambodia (Nippon Koshu Eisei Zasshi, 1999).

The prevalence was highest in female direct commercial sex workers, at 42.6 percent followed by indirect commercial sex workers, at 19.1 percent. The highest

prevalence of HIV infection was in direct commercial sex workers 20-24 years old, at 44.5 percent, although the prevalence among direct commercial sex workers 15-19 years old was also high, at 41 percent. The number of women 15-49 years old in Cambodia is the maximum number of women at risk for HIV infection.

The female commercial sex workers, however, may be the reservoir of infection and the clients the bridge between them and the general population of sexually active women

Of particular concern is the fact that child prostitution is widespread in Cambodia. With the increased awareness of HIV/AIDS, there has been a tendency for male customers to increasingly seek out children for sex, as it is believed that children are unlikely to be HIV infected. In addition, there is a perception among some men that sexual intercourse with a young virgin will rejuvenate them and keep them from aging. These factors have greatly increased the demand for child prostitutes. Indeed, in recent years Cambodia has become an important destination for paedophiles from around the world. The child CSW often is not aware of the risks of acquiring STD or HIV. Even those CSWs who are aware may be in too weak a position with respect to their clients and brothel owners to insist on condom use. Further, CSWs are usually not free to move outside the brothel, and this restricts their access to condoms and medical care. All of these factors imply that they are at a high risk of acquiring HIV/AIDS and being doomed to a life suffering followed by early death.

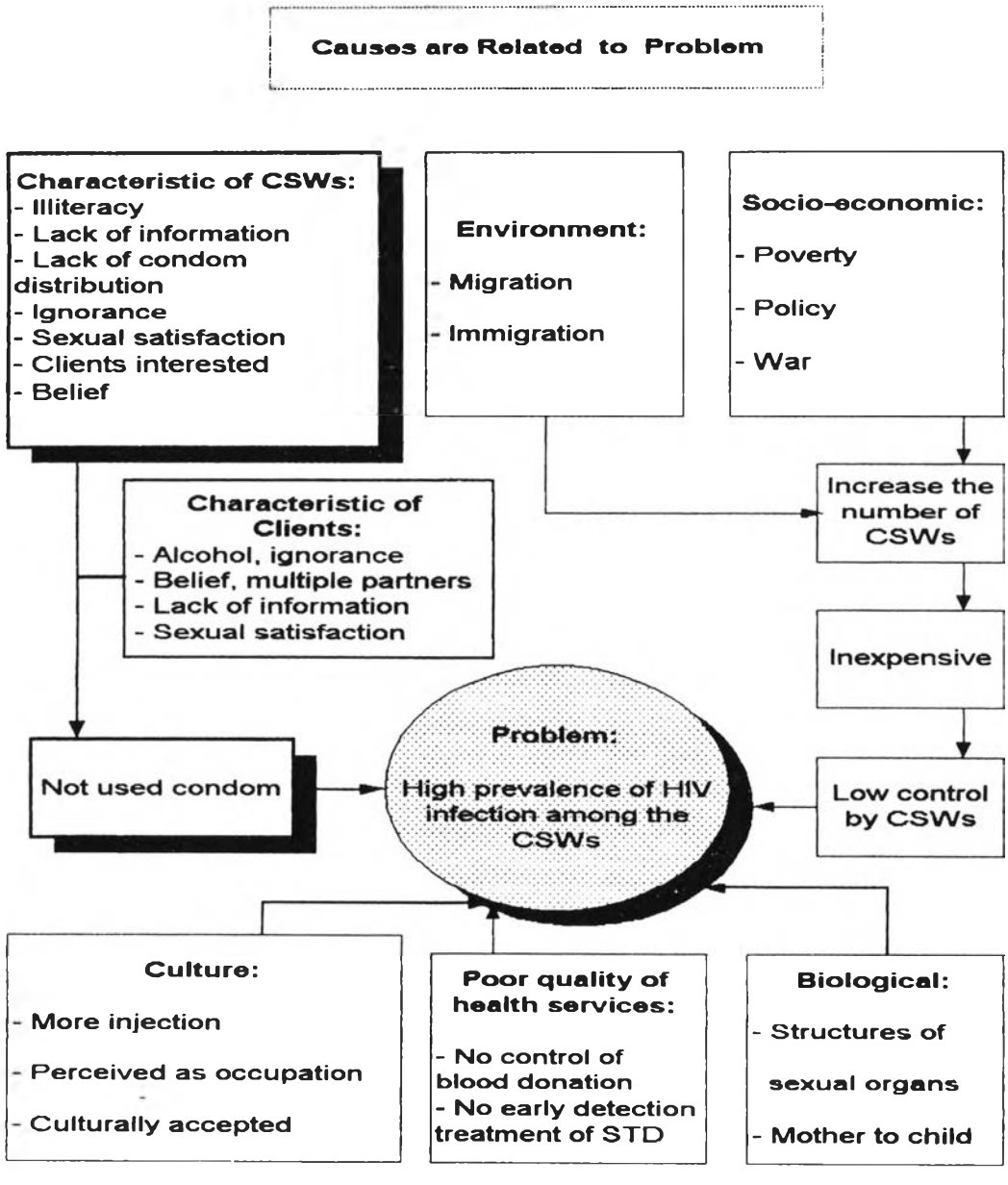
The personal trauma and loss of self-esteem to a child prostitute brought about by constant degradation is difficult to imagine. It is hard to comprehend what goes on in the minds of 13, 13 - 15 years old girls as they are forced to have sex with man after man, often by force, sometimes by rape. They suffer this knowing, in some cases, that the people who they have most trusted have allowed it to happen.

Girls who have known no other life apart from prostitution from an early age could also find it difficult to comprehend a different kind of life and behaviour. Some girls (who had been working in prostitution for a while) maintained causal sexual contacts with men on the street and with boys in the centre itself. For young girls, working in a brothel from an early age threatens to set the course for life.

For those children who have been raped by a parent, stepparent or relative, or been sold by their own families, it is difficult to contemplate a return. It is not unusual to hear of girls who repaid debt, gone home and were sold again. For others, it is difficult to return because they can't face the scorn of their families and communities arising from the fact that they have been prostitutes. This shame in fact keeps many sex workers in brothels even after they are technically free of their debt.

2.7 Causes are Related to Problem

Figure No.: 2.1

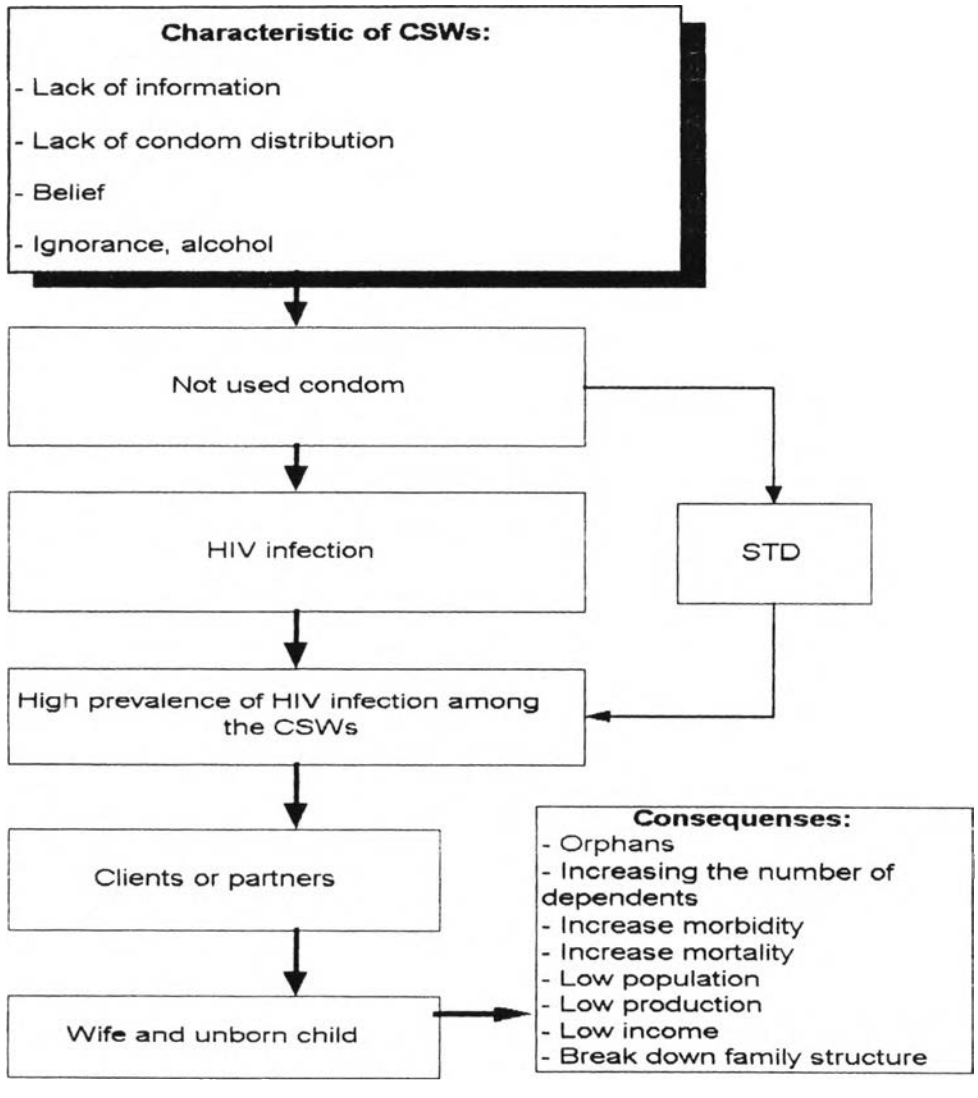


(Source: National Sentinel Surveillance in Cambodia, 1998)

2.8 Conceptual Framework

Figure No.: 2.2

Conceptual Framework to Reduce Unsafe Sexual Behavior Leading to High Prevalence of HIV Infection among CSWs



(Source: National Sentinel Surveillance in Cambodia, 1998)

2.8.1 Environment Factors:

2.8.1.1 The Migrant Workers:

Migration may become not only a contributing factor to the spread of the AIDS epidemic, but also a consequence, as deaths within a family, loss of land or unemployment force survivors to seek a livelihood elsewhere. Despite both posing a risk, and simultaneously being at risk, migrant workers in Cambodia have largely been ignored. They have fallen into the gap of not being at home for organisations working in the villages, and yet they are also not a stationary entity long enough to be the focus of attention in their work.

Most migrant workers are only seasonal, and the majority of them are traditional subsistence farmers. During the rainy season, rice becomes scarce and consequently the cost of living increases. In order to assist during this time, members of the family (predominantly men), will leave during the preceding dry season and work in the centres that provide a greater diversity of employment. They could stay on in these centres during the rainy season. But this would create too great a workload for the remaining family. One way to overcome this is for the family to hire oxen to plough the fields, to hire additional labour for manual ploughing. With the limited income from migrant work, neither option is sustainable. As a result, the migrant worker returns, bringing with him HIV.

There are two approaches to tackling the HIV spread by migrant workers, although they apply equally to commercial sex workers. The first involves looking for ways of removing them from the situation. This would embrace the environmental model, as mentioned earlier. This can be done through creating an advantage in staying in their community environment, or alternatively by penalising them by making migrant work uneconomical. This latter one may take the form, for example, of increased fees for licences for cyclos, or moto-cycles or by ensuring fines are collecte. In practice, it would prove open to widespread corruption, and would only prove vaguely workable for selected trades or professions.

Adult deaths from AIDS represent not only significant lost income but also greatly affects the welfare of surviving family and extended family members as well as the community they live in. Thus the HIV/AIDS epidemic will greatly exacerbate poverty in many Asian countries.

2.8.1.2 Increasing the number of commercial sex workers:

The war took place in Cambodia for many years. Some researchers have argued the social status of women in modern-day Cambodia has fallen with the surplus of women in the country's population, a demographic imbalance created by the higher mortality of males relative to females from Cambodia's three decades of civil strife and conflict.

Adult literacy rates are significantly higher for men (79 %) than for women (55 %). The gender difference in adult literacy is smaller in the urban areas than in the rural areas, reflecting more equality of schooling opportunities in urban centres and different parental perceptions regarding girls'education. Cambodian boys and girls start on an equal footing in school. They have roughly similar school enrolment rates up until age 10, but then girls start falling behind boys in school enrolment. By age 15, male enrolment is 50 percent greater than that of girls and by age 18 male enrolment rates are nearly three times as large as female enrolment rates. The lower enrolment rate of girls occurs not because parents never send them to school but because parents pull them out of school after a few years.

The girls are less likely to attend school than boys because the parents pull their children out of school. More than 60 percent of children dropping out of school indicate one of these two reasons for discontinuing their schooling. While a larger percentage of adult men than women report being economically active, the pattern is reversed at age 12-21. In this age group, girls are consistently more likely to work than boys.

Another important reason for not sending girls to school or secondary school is their parents always worry about means for travelling long distance or staying away from home. While boys have traditionally had the option of staying in pagoda to pursue their education away from home, no such avenues are open to girls. Few, if any, schools provide separate dormitory accommodation for girls. Parents are reluctant, therefore, to send their daughters for secondary schooling away from home because of fear of their

safety. This fear has heightened in recent years with so many cases of girls getting abducted for prostitution. Anyway, it should be concluded the illiterate women or the women, who have less or no education at all that face a big problem to find jobs in the society, and they don't have any properties. So what job should they do?. In this case the solution is perhaps to be the commercial sex workers because they can earn some income for theselves and their family.

Not only are there Cambodian commercial sex workers but also many Vietnamese prostitutes in Cambodia. In economic terms, if production or supply is high the price will decrease, and similarly the price of commercial sex workers is inexpensive too.

2.8.1.3 More Utilization of Commercial Sex Workers:

More utilization of commercial sex workers means that each of them has many clients daily. More use like this is related to the cheap price of sexual intercourse each time. Another important point is related with the opening hours; most of the brothels are open 24 hours a day. The clients can easily find the brothels every where if they want. The government should increase the tax on the brothels so that Cambodia can reduce the clients use of commercial sex workers.

2.8.1.4 Low Control by Commercial Sex Workers:

Commercial sex workers need money. To get it, they have to do what their clients are interested in. Whatever their partners like, she has to like or follow otherwise the client is going to seek another CSW. So any time they have sex, condom use is according to her partners, wish. If he doesn't want to use a condom, she has to agree with him, she can't deny or refuse even she knows the condom is for protection against the transmission of HIV infection. The money is the first priority, which she needs in order to survive and the HIV infection is the second choice for her and her family. Start from that point (money is the first priority to survive) and then she has more chance to get an infection. First of all she will probably get STDs or at the same time she will get the HIV infection.

2.8.2 Condom Not Used

2.8.2.1 Drinking Alcohol

Drinking alcohol is very popular in Cambodia, at the present time. Most Cambodians like to use alcohol when they have a party, festival or sometimes during their meals. The reasons that they use it is because they consider alcohol can improve their health. In terms of health, a little bit alcohol is good. It becomes a big problem when someone takes it excessively. It affects your brain and you careless with the condom use.

2.8.2.2 Sexual Satisfaction:

Sexual satisfaction happens in sexual intercourse when one partner puts his penis directly into the vagina without using the condom. In fact sexual intercourse is really good when performed between husband and wife. However, the same attitude is very dangerous if someone practices on multiple partners because the germs can transmitted from one who is infected to another especially there are some diseases could be transmitted such as STD or HIV virus.

To avoid transmission incidents, all people who have sexual intercourse with multiple partners have to use condoms every time or else they may get STD or HIV infection. If you are married and have multiple sexual partners you may become a bridge transmitting STD or HIV/AIDS to your wife and unborn child.

2.8.2.3 Illiteracy

People, who are illiterate, always have less access to information and misunderstanding of some events. Illiterate people tend to do the wrong thing when doing something. They cannot read a newspaper so they get their information on the television, radio and training. Unfortunately, Cambodia faces a big challenge on broadcasting the information through the whole country; it is hard to get the message on television or radio

in the rural areas. Another problem is illiterate people want to find a good job but can only find low paying work. High income for women can be earned only in the sex trade. According to a worldwide survey, "in a comparison between illiteracy and literacy, illiteracy has higher HIV/AIDS prevalence than literacy".

2.8.2.4 Lack of condom distribution:

HIV infection occurs with someone who has sexual intercourse without using a condom. The condom is not used because of some several factors: the number of condoms are not enough for the demand, the price is too high or they are inaccessible. Sometimes people want to use it but the condom is least access. The brothel owner keeps and sells condoms to the commercial sex workers.

2.9 The Impact of HIV/AIDS:

2.9.1 The Impact of HIV/AIDS on Economy

Cambodia has paid dearly for the Pol Pot years. In the eighties, society continued to suffer, albeit to a lesser extent, under the Vietnamese backed government. By the turn of the century, the country could be starting to suffer again- this time from AIDS. The cost will be felt in many areas. Economic and health costs are likely to be limited by the inability of the country to pay the price. Socially, AIDS is likely to further widen the gap between

rich and poor. The most vulnerable, notably women are likely to suffer the most. Cambodia shall include decreased labour for food production and increase medical costs while caring for the sick and dying.

At present Cambodia is an importer of rice, althought pre- Pol Pot the country was not only self-sufficient, but realised a net export. The migrant workers are likely to suffer disproportionately from the impact of AIDS, and it follows that their original trades will bear this cost. The vast majority of workers come from rice farming, and therefore it is here that repercussions would be felt the most. Supply and demand dictates that in a free market when rice production falls, the price will rise. Since rice is the staple food in Cambodia, that price would have to be paid, or imports will have to increase. In turn this would result in an adverse impact on the country's balance of trade.

Families of subsistence farmers are also at risk in a number of ways. Firstly, village credit schemes may be jeopardised through those with AIDS either dying or defaulting through the lack of income and increased cost of care. However, refusing a person a loan based on their HIV status will harm them when they are vulnerable. One possible way of preventing this would be for loans to be made to the family and to the individual. Yet this may only compound problems for the remaining family. Deprived of a source of income, the family will already be under strain. Children may be withdrawn from school to work

from a younger age, thus denying the next generation of an education without which they stand little chance of breaking out from their spiral of poverty.

Cambodia's fledgling tourism trade currently focuses on Phnom Penh and Angkor Wat. The sex industry in Phnom Penh, it attracts for foreigners, mainly serves visiting Asian businessmen. In the short term, if anything, it is likely to grow in size as a result over concerns about HIV rates in neighbouring Thailand. Concerns have been expressed by some agencies, including the UN Centre for Human Rights, over alleged child abuse. Their citizens in Cambodia made allegations in the Australian parliament about impropriety, and in 1995, a British male doctor was convicted of having sex with underage children in Phnom Penh. However, the numbers involved, whilst significant enough to cause concern, are probably not high enough to indicate that Cambodia has a tourist sex industry based upon paedophilia. For those involved in providing such services, the human cost, ranging from economic to psychological, is likely to become more apparent and to increase in the coming years.

2.9.2 The Impact of HIV/AIDS on Society:

Before developing any signs or symptoms of AIDS, a person may become stigmatised and rejected by their community. In Cambodian culture, such body contact is uncommon, even taboo. Greetings instead consist of rising ones hands together in front of

one is face, with the level signifying the degree of respect. Touching of the head, even by the dignitary, would be considered inappropriate.

The poorest in society are already disadvantaged in three ways with respect to AIDS, according to the PAHO'S dossier, "The Hidden Cost of AIDS". Firstly, it is suggested that they are less likely to be literate, and therefore will probably have less access to information. Secondly, a low income will tend to limit access to reasonable health care. Thirdly, they start their sex life with little access to education, thus increasing the likelihood of pregnancy or contracting a STD.

Cambodian society is only just beginning to recover from a gender imbalance. If HIV rates were notably higher in men than women, this could signal a return to such a state. This would mean that more women were used for heavy labouring jobs, but there is no indication that would be as well rewarded as their male counterparts. Widows of those who died from AIDS- whether infected or not- are likely to find it harder to remarry, and thus will face further stigma. Another consequence would be that with fewer men, (a possible ratio of four: six), one in three women would have little choice but to remain single.

If wives contact HIV from their infected husbands, this then creates an even greater socio-economic risk. Couples have large families in Cambodia. As increasing numbers of

children are orphaned, an excessive burden will be place on the extended family. Again, the issue of stigma becomes paramount: would the relatives want to cope? If the child is likely to bring a stigma to their adopters, then the answer is probably "no". This will have a significant impact on the ability of society to accept and care for children.

In the long term, even if a child is orphaned, and found to be HIV negative, then his/her problems may not be over. Either through stigma, or simply because the adopted parents may not have the means to provide for the "additional"child, whether day-to-day, or looking ahead to elaborate and costly weddings. In these cases, particularly for women, marriage may then prove elusive.

In social terms, compassion must be seen as the collective will and political acts that bring about resources, structures, institutions, behaviours, and norms directed at the care of the sick, the prevention of illness, and the promotion of health.

2.9.3 The Impact of HIV/AIDS on the Health Sector:

The direct economic cost of AIDS to the health sector is likely to be significant. Some have argued that this may not be the case for two reasons. Martin Foreman notes that "within many developing countries some patients do not necessarily incur higher

hospital costs than other patients. This is largely because hospitals are not adequately equipped to diagnose and treat HIV related disease. The second reason being that where high levels of HIV are reported, hospitals may find they can access additional funding. Fifty percent of HIV infected people in Cambodia also have tuberculosis (reported from National Tuberculosis Centre, Cambodia, 1994). Other opportunistic infections are likely to become more prevalent, due to a person's poor state of health and nutrition, with more infectionns likely to be passed to sero-negative infants and elderly.

At present where facilities do exist, for example at provincial or district hospitals, patients are charged for treatment. Many families spend up to a quarter of their total income on medication, which often involves multiple injections of vitamins, and poor use of antibiotics, with highly questionable benefit. Hospital staffs rarely work nights or weekends, and consequently one or more family members must stay to look after sick relatives, often many metres from home. Besides medicine and doctor fees, patients are charged for their room, and responsibility for provision of food lies with their relatives. The direct cost of this, while the patient is generating no income, and the carer is unlikely to do much work, produces further strain on the family.

2.10 What is the main problem?

There are many problems which are related to the highest prevalence of HIV/AIDS found among the young female commercial sex workers aged between 20-24 years old, at 44.5 percent, although the prevalence among the commercial sex workers 15-19 years old was also high, at 41 percent. The number of women 15-49 years old is the maximum number of women at risk of HIV infection (report on Sentinel Surveillance in Cambodia 1998). The cause of HIV transmission is highest in heterosexual intercourse with multiple partners without use of condoms. Most of the commercial sex workers wanted to use condoms but their clients always refuse to use condoms because drinking alcohol made them careless in condom use, or sometimes both partners not want to use a condom because they thought that the condom would limit their satisfaction in sexual contact.

Condom usage was significantly lower for brothel-based sex workers (AIDS Care, August 1999). This is at least in part because they are more likely to have sex with a customer even if he refuses to wear a condom. Despite their stated knowledge that condoms offered protection against sexually transmitted diseases, one quarter of commercial sex workers did not always use condoms (Report of AIDS Care, August 1999).

The commercial sex workers are predominantly young, uneducated, poor women from rural areas. They are transients, seldom in one place for any length of time, with

advancement coming from moving out of a brothel and into independent practice. A number of them are migrants specifically recruited for the industry, although information regarding indentured status is not specifically ascertained. The average age of the commercial sex workers is 22 years old. Their characteristics make them vulnerable to exploitation and susceptible to infection from the HIV. Their geographic isolation from family and village as well as linguistic barriers limit their access to health education contacts and materials. The commercial sex workers are at very high risk for becoming infected with HIV and subsequently developing AIDS.

2.11 Why is HIV/AIDS a problem?

The Kingdom of Cambodia has the most serious HIV/AIDS epidemic in Asia with many contributing factors that suggest that the epidemic has the potential to make Cambodia one of the worst affected countries in the world. National HIV prevalence in key populations is among the highest in Asia. The impact of HIV/AIDS on Cambodia since at the beginning of year 1991 until end of year 1998 is as follows: the number of AIDS cases in adults and children totaled 18,612, the number of adults and children who died of AIDS were 6,689, the number of uninfected children (under age 15), who have lost their mother or both parents to AIDS were 5,505 (report on Sentinel Surveillance in Cambodia 1998).

According to the figures above, HIVAIDS causes a major problem for the individual, family and society. HIV/AIDS increases health care cost, morbidity, mortality,

and the number of infant orphans. The Pol Pot regime killed more than 3 million Cambodians, and now the HIV virus kills them. Thus Cambodia is low in manpower for economic activity. Low population result in low production. Cambodia is facing AIDS and poverty.

2.12 Education:

Education is the most effective tool for controlling the acquired immune deficiency syndrome (AIDS) epidemic; debate continues on the most effective content and methods of education. To educate the people on HIV/STD transmission requires different methods. Each community, each population group, it has own values, norms, culture, and network of communication. Thus, most AIDS education has been targeted at a specific sector of the population (Freudenberg, 1998).

2.12.1- School Education:

HIV/AIDS education is a section of the curriculum of the study at school of some countries. School health education provides an important opportunity to get the good informatio in the health issue so that they know how to solve or prevent it. In areas where the subject has fallen into neglect, the advent of HIV may provide a catalyst to revitalise the teaching of health education. Additionally, school health education can be improved by including "life skills" in the curriculum and training teachers to use it. A ccomprehensive

health education program helps students acquire personal and social skills as well as HIV/AIDS related knowledge, attitudes and values. Therefore, it can influence a healthy lifestyle and reduce health risk behaviours.

A study in Thailand recommended that regular school-based program of education would increase awareness of preventive strategies of HIV/AIDS and sexually transmitted diseases. A survey of knowledge, attitude and practice (KAP) regarding human immunodeficiency virus was performed on 899 students from three public high schools located in Bangkok Metropolitan area. Firstly, all students completed a written questionnaire (pre-test) regarding HIV/AIDS. Following this, they attended a slide lecture presentation given by a specialist physician. The same test questionnaire was then completed by the same student six weeks (post-test) later for comparison of the previous KAP. Knowledge about HIV/AIDS and risk factors in the post-test questionnaire was significantly increased ($p<0.001$) from the pre-test status. However, their attitudes about an HIV infected person were not significantly changed in the post-test questionnaire: only the attending school question showed significantly ($p<0.05$) increased number of agreement. Similarly, the attitudes and practices to prevent HIV infection were not significantly ($p>0.05$) different between pre-test and post-test questionnaires.

A study in Bombay, India showed evaluation of a school-based HIV/AIDS educational program. The pre-test was administered to 2,919 students regarding modes of transmission and prevention of HIV/AIDS. An education program was instituted for one

half-school day at ten secondary schools. Before the educational intervention, only 50 percent of the students knew that the HIV/AIDS is transmitted sexually, only 34 percent knew that there are no medicines that cure HIV/AIDS and 24 percent thought that HIV is transmitted by mosquito bites. After the intervention, 95 percent of the students knew that HIV/AIDS is transmitted sexually, 92 percent knew that there is no HIV/AIDS cure and 76 percent knew that mosquito bites do not transmit HIV/AIDS. There was a substantial increase in correct knowledge about HIV/AIDS among students after the educational intervention program.

Another study found that an AIDS education program was developed and evaluated in a high school in a socio-economically disadvantaged, urban, African area in South Africa. This program which addressed the whole school community, aimed to raise awareness about AIDS using a variety of educational methods and operating through a number of channels. Students and teachers were actively involved in its design and implementation. Students' knowledge of attitudes towards AIDS prevention were investigated before and after the AIDS program, then compared to a neighbouring school, in which no AIDS education was conducted. The program greatly improved students' knowledge of HIV transmission and prevention. It increased levels of acceptance of people with AIDS and had a small impact on behavioural intentions.

2.12.2 Public Education:

Our society begins to create a climate that ensures that all young people know how to protect themselves and are able to take action to prevent the spread of HIV infection. In high school, AIDS educators trained a group of students to become peer AIDS educators. These peer educators provided their schoolmates with accurate information and referrals related to AIDS in informal settings such as the cafeteria or after school hours. Before the AIDS epidemic, many colleges offered training to interested students so that they could provide their peers with accurate information and referrals about contraception, sexuality, alcohol, drugs, and other health topics. AIDS became one more issue for peer educators to address. At Dartmouth College in New Hamphire, for example, peer educators lead informal dormitory discussions on abstinence, contraception, and STDs. Because small group discussions have been demonstrated to be an effective way to help people change health behaviours, this model is well suited to AIDS education. Peer educators also become advocates for AIDS prevention policies and programs in the college community. Another approach to peer education is to use resident assistants or advisors to provide information. In fall 1987, the American College Health Association and Gay Men's Health Crisis offered training for students working in college dormitories throughout New York City. Participants learned how to answer questions, make referrals, and involve students in discussions of drugs and sex.

Public education is the good way that we could provide some knowledge to the public so that they can protect themselves from HIV transmission. The means used, such as radio, television, pamphlet, poster, brochures disseminates information throughout the whole population, specially, among the clients. The clients are mostly men. The men could be college students, police, soldiers, civil servants, businessmen, motor taxi driver, and other workers of all levels. Clients of commercial sex workers have very high STDs rate, 17 percent of men examined had a STD (National Centre for HIV/AIDS Dermatology and STD, Cambodia). HIV/AIDS education was applied in all school curriculums.

AIDS education may increase knowledge and awareness about HIV transmission at an early age. AIDS education creates an environment where safer sexual behaviour can be acted upon such as providing HIV testing, treatment for other sexually transmitted diseases, helping people to acquire the skills they need to protect themselves and their partners, by empowering people and reducing their vulnerability. Education creates an environment in which people can more easily reduce or control their exposure to HIV.

The knowledge is how to prevent HIV transmission, and promote safer sex. Safer sex is a way to have sex that reduces the danger of HIV among the clients and their partners. The clients have to use condoms even with their wives or husbands, or steady partners. For oral-vaginal or oral-anal sex, completely cover the vaginal or anal area with plastic wrap. Do not share sex toys. Do not ejaculate while inside another person whether or not you are using a condom. To avoid the spread of sexual disease, limit the number of

sexual partners, avoid sex relations with persons at risk and who have many sexual partners. Limiting the number of partners is important for safer sex. Generally people who have multiple sex partners are at greater risk of HIV infection than those who have a single partner because the probability of contact with an infected individual increases as number of partners increases (Catania et al, 1992).

Safer sex could be related with the sexual act. Sexual intercourse is the major route of transmission. Anal, vaginal, and oral intercourse with an HIV-infected person are all potential routes of transmission from an infected man to a woman or to another man, or from an infected woman to a man. The risk of becoming infected through unprotected sexual intercourse depends on four main factors: the likelihood that the sex partner is infected, the type of sex act, the amount of virus present in the blood or sexual secretions (semen, vaginal or cervical secretions) of the infected partner, and the presence of the other sexually transmitted diseases and/or genital lesions in their partner.

Another method of the safer sex is condom use. The effectiveness of the condom for protection during intercourse with an HIV/STDs infected person is nearly 100 percent if properly used and there is no breakage. Spermicides and water based lubricants are important components of HIV prevention strategies. Because they reduce friction during sexual intercourse, they increase reliability of condoms.

The last of the safer sex methods is treatment of STDs. Treating STDs are very important for safer sex. When untreated STDs increase risk of HIV transmission; they should be treated as soon as possible. In order to prevent re-infection, treatment to all sex partners is necessary. In Cambodia, 44 percent of commercial sex workers examined had at least one STD. Seventeen percent of men examined had a STD.

2.12.3 CSW's Education:

Education is a good strategy to increase knowledge about ways of preventing HIV transmission and to promote and facilitate sustained behavioural changes, and to reduce the incidence of STD in local sex workers, increasing their access to local health care, reducing unsafe sexual practices by increasing the number of trained Peer Educators. Sexual behaviour changes, in the form of reductions in the number of nonregular sex partners and increased proper and consistent condom use with nonregular partners, are essential to reduce the sexual transmission of HIV.

Peer education is want to develop a mechanism for communicating with active commercial sex workers; to train commercial sex workers as peer educators; to promote awareness of STD/HIV; to encourage safer sex practices; to promote proper health seeking behavior (Nyunt Nyunt, 1996). Peer education, generally, is the sharing of information, attitudes or behaviours by people who are not professionally trained educators but whose goals are to educate (Finn, 1981). In brothel settings, peer education is conceived to engage

commercial sex workers as teacher or peer educator to their peers, getting commercial sex workers to participate by educating each other (Margulies & Ito, 1990). Peer education produces behavioural change effectively because peer education with trained commercial sex leaders allow every one to express and control their feelings and attitudes with freedom, intensity, and honesty (Finn, 1981). Furthermore, peer educators who are trained in peer education will be able to provide accurate and relevant health information whenever a friend develops a need for such information.

The peer education program will be based on self-efficacy from social study theory. A strong self-belief in one's efficacy to exercise personal control is necessary. Translating health knowledge into effective self-protection against AIDS infection requires social and self regulative skills and a sense of personal power to exercise control over sexual and drug activities which are the major modes of transmission for the AIDS viruses (Diclemente, et al, 1994).

Each peer educator has an occupation and lifestyle similar to those of her project's target audience. The ideal peer educator is respected, charismatic and literate, with good communication skills and interest in self-enhancement. Peer educators are chosen by members of the target audience. Peer educators have to report a variety of activities from informal discussion to video; most talk to more than one person at a time for 30 minutes or less.

Promoting condom use is the widespread awareness of both AIDS and the risk of unprotected intercourse with commercial sex workers found in all focus groups undoubtedly resulting in part from government and private mass media campaigns promoting AIDS awareness. A major focus in these campaigns is the encouragement of condom use during intercourse with commercial sex workers. Education efforts should be directed towards promoting 100 percent condom usage as has been shown to be successful in Thailand. Such a policy has to be applied to all sex establishments to be effective and to avoid a movement of customers to less stringent brothels. In Cambodia, one survey has shown that only three out of five of the Cambodian sex workers asked their customers to use condoms every time they have intercourse.

Throughout the peer education approach, peer educators should teach their peers until they reach a good knowledge on HIV/AIDS prevention. So their peer will have enough negotiation skills, which are essential if peers are to convince their clients to use condom without the support of pimps and brothel owners.

2.13 Conclusion:

The HIV/AIDS epidemic is a serious problem, affecting human survival and human development. The impact of this epidemic is best understood in the context of the social and economic issues in the developing countries. In Cambodia the prevalence of HIV infection among the commercial sex workers is 41 percent (Report on Sentinel Surveillance

in Cambodia, 1998). The contributing factors which affect commercial sex worker's vulnerability to HIV infection and AIDS include the characteristics of commercial sex workers themselves, health services, and environment factors. The commercial sex workers are a reservoir of HIV. When clients have sexual intercourse with the commercial sex workers who are infected with HIV. They become the bridge bringing the HIV virus to their wives and unborn children. And then the epidemic spreads throughout the whole population. The epidemic starts with a high-risk group and spreads to a low risk group.

HIV virus is transmitted almost exclusively by behaviour that individuals can modify. Educational programs that influence relevant behaviour can be effective in preventing the spread of HIV. The intervention to reduce the high-risk behaviour of commercial sex worker is the use of the Peer Education approach. Peer education is a good strategy that all countries are carrying out with apparent success.

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