KNOWLEDGE, ATTITUDE AND BEHAVIOR TOWARDS PREVENTION OF HIV INFECTION AMONG MALE FACTORY WORKERS IN RAYONG PROVINCE

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KNOWLEDGE ATTITUDE AND BEHAVIOR TOWARDS PREVENTION OF HIV INFECTION AMONG MALE FACTORY WORKERS IN RAYONG PROVINCE.

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ABSTRACT

The epidemic of AIDS showed a decrease in Thailand but there are still high risk groups with high infectious rates, such as among factory workers. The study objectives were to study knowledge, attitude and behavior towards prevention of HIV infection and use of condom among male factory workers in Rayong Province.

This study was a descriptive study. Data was collected by questionnaires from 213 male factory workers in Rayong Province, during December 2006 – February 2007. Descriptive statistics included percentage, mean and standard deviation.

The results showed that mean age of workers was 31.02± 6.57 years. Most male workers had an education level of bachelor degree (46.5%). Half of them were married as well as single. The average income of workers was 26,050 ±17,022 baht per month. Most workers had a good or a fair level of knowledge about AIDS (41.3% and 44.1%, respectively). Most of them had a fair attitude towards AIDS (70.8%). Only 7.1% had a appropriate attitude towards AIDS. Regarding sexual behavior, only 13.3% of male workers had high risk behavior. In the past 6 month period 83.3% of male workers had sexual intercourse, 38.8% with commercial sex workers. Only 75.8% of them always used condoms when they had sexual relations with commercial sex workers.

In conclusion, most male factory workers had a good level of knowledge but had a fair level of attitude towards AIDS. Although most of them had low risk sexual behavior, the use of condoms was not high enough for visits to commercial sex workers. Male factory workers should receive repetitive educational activities so that they will have better knowledge, attitude and sexual behavior.

KEY WORDS: AIDS / HIV / KNOWLEDGE / ATTITUDE / BEHAVIOR / FACTORY WORKERS

60 pp.

ความรู้ ทัศนคติและพฤติกรรมการป้องกันการติดเชื้อเอดส์ของพนักงานชายในโรงงานอุตสาหกรรม จังหวัดระยอง (KNOWLEDGE ATTITUDE AND BEHAVIOR TOWARDS PREVENTION OF HIV INFECTION AMONG MALE FACTORY WORKERS IN RAYONG PROVINCE)

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บทคัดย่อ

การแพร่ระบาดของโรคเอดส์ในประเทศไทยลดลงแต่มีบางกลุ่มยังมีความเสี่ยงต่อการติดเชื้อสูง เช่นคนงานในโรงงาน การศึกษานี้ จึงมีวัตถุประสงค์เพื่อศึกษาความรู้ ทัศนคติ และพฤติกรรมการป้องกันการติดเชื้อเอดส์ของพนักงานชายในโรงงานอุตสาหกรรมในจังหวัดระยอง

การศึกษานี้เป็นการศึกษาเชิงพรรณา เก็บข้อมูลโดยใช้แบบสอบถามจากพนักงานชายในจังหวัดระยอง จำนวน 213 คน ระหว่างเดือนธันวาคม 2549 – เดือน กุมภาพันธ์ 2550 สถิติวิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณา ได้แก่ ร้อยละ ค่าเฉลี่ย และค่าเบี่ยงเบนมาตรฐาน

ผลการศึกษาพบว่าอายุเฉลี่ยของพนักงานชาย 31.02 ± 6.57 ปี ส่วนใหญ่มีการศึกษาระดับปริญญาตรี(ร้อยละ46.5). สถานภาพโสดและสมรสเท่าๆกัน รายได้เฉลี่ย 26,050 ±17,022 บาทต่อเดือนส่วนมากมีความรู้เรื่องเอดส์อยู่ในระดับดีและปานกลาง(ร้อยละ41.3และร้อยละ44.1 ตามลำดับ) ระดับทัศนคติส่วนใหญ่มีทัศนคติปานกลาง(ร้อยละ70.8).แต่ส่วนน้อยมีทัศนคติที่เหมาะสม(ร้อยละ 7.1) พนักงานที่มีพฤติกรรมเสี่ยงต่อการติดเชื้อเพียงร้อยละ13.3 พนักงานชายเคยมีเพศสัมพันธ์ในรอบ 6 เดือนที่ผ่านมา ร้อยละ 83.3 ในกลุ่มนี้มีเพศสัมพันธ์กับหญิงบริการร้อยละ 38.8 พฤติกรรมการใช้ถุงยางอนามัยทุกครั้งเมื่อมีเพศสัมพันธ์ กับหญิงบริการร้อยละเพียงร้อยละ 75.8

โดยสรุปส่วนใหญ่พนักงานชายมีระดับความรู้ดี มีระดับทัศนคติต่อโรคเอดส์ในระดับปานกลางแต่มีพฤติกรรมการป้องกันโรคเอดส์มีความเสี่ยงต่ำเป็นส่วนใหญ่ ยกเว้นการใช้ถุงยางอนามัยยังค่อนข้างต่ำโดยเฉพาะเมื่อเที่ยวหญิงบริการ ควรมีการสอนอย่างต่อเนื่องเพื่อให้พนักงานมีความรู้ดี มีทัศนคติเหมาะสมและมีพฤติกรรมทางเพศที่ดีขึ้น

60 หน้า

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CHAPTER I
INTRODUCTION

Background and Significance of Problem

Since the first AIDS case was diagnosed in 1981, in just 25 years, HIV has spread relentlessly from a few widely scattered ‘ hot spot’ to virtually every country in the world, infecting 65 million people and killing 25 million. (1) Nowadays, the numbers of people living with HIV were 40.3 millions, 38 millions of adults, 17.5 millions of women and 2.3 millions of children under 15 years. Most HIV/AIDS patient were found in Sub-Saharan Africa (25.8 millions), followed by South & South-east Asia (7.4 millions) and Latin America (1.8 millions). (2)

In Asia an estimated 8.6 million people were living with HIV and some 960,000 people became newly infected with the virus. Approximately 630,000 people died from AIDS related illnesses in 2006. (1)

In Thailand, an estimated 580,000 adults and children were living with HIV at the end of 2005.The number of new annual HIV infections continues to drop-the estimated 18,000 new infections in 2005 were 10% less than in 2004. However, a large percentage of new HIV infections are occurring in people considered to be at low - risk of infection. Approximately one third of new infections in 2005 were in married women who were probably infected by their spouses. (1)

Within the Thai population, AIDS Division Bureau of AIDS , TB and STI and STIs Department of Diseases Control Ministry of Public Health found the percentage of AIDS cases to be 25.84 % in 30-34 age groups followed by 24.26 % in 25-29, 17.31 % in 35-39, 9.42% in 40-44 , 8.59 % in 20-24, and less than 4.18% in 0-14 age groups. In 15-19 age groups the rate of AIDS cases in young women was higher than that of men. Most of AIDS cases were reported among labour groups, whose

occupations included 46.43% of labourers (general employees, industry employees, truck driver and labourers) and 20.81% were inagricultural segment. (3)

Rayong Provinces reported first case of AIDS patient in July 1988 and the cumulative number AIDS patients up to January 2006 were 7691 case. Most clients had high risk sexual behavior. Most of AIDS cases were reported among labour groups. The district which had highest numbers of AIDS patient were Muang district (53.8%) ,followed by Klang district 15.9% . (4)

Rayong Province is just beginning to gain wider popularity, because not only rich in sea-life resources but also considered to be a major agricultural and industrial province. In Muang district there are three industrial estates, the largest is Map Ta Phut Industrial Estate, followed by Eastern Industrial Estate and Padaeng Industrial Estate. Map Ta Phut Industrial Estate was developed in 1989 as the state enterprise of the Industrial Estate Authority of Thailand, Ministry of industry. Map Ta Phut Industrial Estate was established as the raw material production bases for consumption of the country in order to substitute import goods, which is harmonious with the social circumstance.

The HIV/ AIDS in one of the most important problem among workers or lebourers. They usually had high risk behavior. The researcher would like to study among them the knowledge, attitude and behavior towards prevention of HIV infection. The result of the study would help solve health problem and planning prevention of HIV/AIDS among factory workers.

Objectives of the study

1. To study knowledge of HIV/AIDS among male factory worker in Rayong Province.
2. To study attitudes towards HIV/AIDS of male factory worker in Rayong Province.
3. To study behavior towards prevention of HIV infection among male factory worker in Rayong Province.
4. To study use of condom towards prevention of HIV infection among male factory worker in Rayong Province.

Operational Definition of Terms:

Age : Number of full years begin delivery until the present of male factory workers could be categorized as age groups 15 – 24 years, 25 – 34 years , 35 – 44 years and over 45 years.

Education level: Level of formal education of the respondent at the time of interview is classified as primary school ,secondary school, vocational, diploma, bachelor degree and master degree or over

Income : Total monthly income from all sources is classified as lower than 5,000 bath,5,000 - 10,000 bath ,10,001 – 20,000 bath,20,001 – 30,000 bath and over than 30,001 bath.

Knowledge about AIDS/HIV : Factory workers have knowledge AIDS/HIV in term off cause of disease, mode of transmission and risk factors ,preventive measures and AIDS/HIV treatment . i.e. can answer 80 percent of the questions correctly .

Attitude toward AIDS/HIV and patients infection AIDS/HIV: The degree of positive or negative feelings, beliefs and intention to act toward AIDS/HIV, patients infection AIDS/ HIV and AIDS/HIV prevention will be measured by five point self rating scale of Likert.

Behavior towards prevention of AIDS/HIV infection : A practice of male factory workers to prevention AIDS/HIV infection about sexual behavior and risk behavior .

Usefulness of the study:

This study will give the change to study the knowledge , attitude and behavior of male worker which will be useful for future education, and prevention AIDS/HIV.

CHAPTER II
LITERATURE REVEIW

The following issues have been reviewed.

1. Knowledge about AIDS
2. Theory of knowledge , attitude and behavior
3. Related literature and researches

1. Knowledge about AIDS

Acquired Immunodeficiency Syndrome (AIDS) is a disease caused by virus which attacks and weakens part of the body's immune system. It leaves a person vulnerable to a variety of unusually life-threatening infections and cancers. Acquired mean it is passed from person to persons. Immunodeficiency describes the condition when the body's ability to protect itself against disease is weakened. Syndrome means a group of signs and symptoms which result from a common cause or appear in combination which presents a clinical picture of a disease. Human Immunodeficiency Virus is the causal agent of AIDS.(5)

The AIDS virus was discovered by Barre-Sinoussi, Montagnier, and colleagues at the Institut Pasteur, Paris, in 1983 and given the name lymphadenopathy associated virus (LAV). In 1984 Popovic, Gallo, and coworkers describes the development of cell lines permanently and productively infected with another AIDS virus isolate, which, in line with two previously described retroviruses, HTLV-I and HTLV-II, they referred to as HTLV-III, LAV, HTLV-III, and the other viruses since isolated from patients with AIDS and AIDS related disease in America, Europe, and Central Africa are all the same virus, and this is the virus now called HIV.

Around 1985 another retrovirus, different from HIV, was recognised in patients with West African connections. This virus, referred to by the Paris investigators as LAV-II and more recently as HIV-II, is also associated with AIDS and

AIDS related disease, though it is structurally more like a simian retrovirus, SIV, carried by healthy African green monkeys. This virus causes an AIDS like disease in captive rhesus monkeys. Though apparently new and potentially important, HIV-II infections are uncommon outside West Africa.

There are several properties that make HIV infections unique. First is the fact that HIV genetic material (RNA) is actually integrated into the host cell's genetic material. This makes this kind of virus very ominous since it is doubtful that any kind of treatment can be developed to subsequently remove the viral genetic material. Also viruses with that property of "integration" often result in chronic neurological disease or cancer many years after infection.

Another major property of HIV is its uncanny ability to change its outer coat or "envelope protein" The molecular basis for this variation is uncertain, but it shares this property with other retroviruses. This variation in the envelope must be accounted for in developing a vaccine against AIDS and in testing for HIV.

To infect a person, HIV must enter the cells. To enter the cells, HIV must first attach itself to the outer membrane of a cell. Not all cells have receptors that allow HIV to attach; in fact, the variety of cells infected by HIV is very limited. The main class of cells infected by HIV are the "helper T-cells," or CD4 lymphocytes, which are a type of white cell responsible for orchestrating the immune response. When HIV wipes out a significant number of these cells, a person becomes susceptible to infection from other organisms.

Other cells that HIV can infect are the macrophages, which are amoeboid cells that scavenge the body for foreign matter. The consequence of infection of these cells is uncertain.(6)

Epidemiology of AIDS

The World Health Organization (WHO) publishes the number of cumulative cases of AIDS from all countries reporting to WHO. WHO distinguishes between four different patterns of the pandemic.(7)

WHO pattern I countries In Europe and North America, HIV began to spread extensively during the latter half of the 1907s, principally among homosexual and

bisexual men. Later, drug user would enter the epidemic, and by the end of the 1980s an escalating number of heterosexual men and women would become infected.

WHO pattern II countries In other parts of the world, notably sub Saharan Africa and, increasingly, Latin American and the Caribbean, HIV also started to spread during the latter half of the 1970s, principally among heterosexual men and women. Transmission from HIV- contaminated blood transfusions and unsterile medical equipment (needles, syringes, etc.) also accounted for significant numbers of new infections. Illicit drug use was an uncommon means of HIV transmission in these countries.

WHO pattern III countries In Eastern Europe, the Middle East, North Africa and most countries in Asia and the Pacific, HIV slowly began to spread during the 1980s, initially from imported blood or blood products, or contact with individuals from pattern I or pattern II countries. Commercial sex workers would become infected by the end of the 1980s, as would significant numbers of injecting drug user.

Clinical manifestation (8)(9)

The spectrum of disease produced by HIV infection is wide. A simple classification system devised by the Centre for Disease Control in Atlanta, USA illustrates the different stages. The pathogenesis of disease is multifactorial, ranging from syndromes caused directly by HIV infection to those which reflect the deleterious effect of HIV on the patient' s immune system. Major opportunistic infections and tumours in severely immunocompromized patients are discussed in later sections.

1. Acute Infection.

A non-specific viral or glandular- fever-like illness occurs at seroconversion in a minority of patients. Rarely, acute neurological syndromes are seen ; these include encephalitis, aseptic meningitis, myelopathy and neuropathy.

An incubation period of 1-6 weeks occurs before onset of symptoms. HIV antibodies are generally detected 4-12 weeks after initial exposure. Diagnosis is confirmed by testing an acute phase and convalescent serum for HIV antibodies. In view of the implications - medical, social and psychological – of a positive diagnosis, the possibility should be fully discussed with the patient and consent sought to carry

out HIV serological tests. An acute viraemia may be detected before the appearance of antibodies by assaying for an HIV core protein (P24).

2. Asymptomatic phase.

Following seroconversion, most people infected with HIV may not show any symptoms for month and even years. This period of silent infection is called the latency period. During the latency period, it is difficult to detect the virus in the blood, although antibodies to HIV can be detected. The latency period is long and variable, and may range from 4 months to longer than 10 years. A period of 5 years without symptoms is typical. (10)

3. AIDS related conditions (ARC).

In this phase, many individuals may develop a variety of indicators of unhealthy due to HIV infection without developing major opportunistic infection or secondary cancers. The clinical sign includes weight loss, diarrhea, fever, night sweats, and swollen lymph glands, which can persist for several week. (11)

4. AIDS. This is the final stage of HIV infection.

It is a disease process caused by HIV itself and other opportunistic organisms or cancers. AIDS is characterized by opportunistic infection and malignancies that occur only in people with very low immunity. Tuberculosis, pneumocystis carinii pneumonia, and cryptococcal meningitis are opportunistic infections commonly found in AIDS patients. Kaposis sarcoma is a typical cancer. (12)

4A : Constitutional disease - Fever persisting > 1 month
- Weight loss of 10% baseline within 3 months
- Diarrhea persisting > 1 month

4B : Neurological disease : dementia, myelopathy, peripheral neuropathy.

4C : Secondary infectious disease : Infection by HIV or indicative of defect in cell- mediated immunity.

4C1 : Specified in CDC surveillance definition of AIDS.
- PCP
- Chronic cryptosporidiosis
- Toxoplasmosis
- Extraintestinal strangiloidiasis
- Isosporiasis

- Candidiasis (esophageal, bronchial or pulmonary)
- Cryptococcosis
- Histoplasmosis
- Mycobacterium aviumintracellulare
- M. kansasii
- CMV
- HSV infection
- Multifacial encephalopathy

4C2 : Other infections

- oral hairy leukoplakia
- multidermatomal herpes Zoster
- nocardiosis
- oral candidiasis
- tuberculosis
- salmonellosis

4D : Secondary cancers : specified in CDC surveillance definition of AIDS

- Cancer associated with HIV or indicative of defect in cell-mediated immunity
- Kaposi' s sarcoma
- Non-Hodgkin's lymphoma
- Primary lymphoma of brain

4E : Other conditions : e.g. chronic lymphocytic interstitial pneumonitis, patients with constitutional disease not fulfilling IV A, other infections or tumors not listed in IV C1 or IV D.

Recognition of HIV Infection (12)

Suggestive Clinical Findings :

1. Generalized lymphadenopathy (extrainguinal)
2. Weight loss of more than 10%
3. Fever for more than 1 month
4. Diarrhea for more than 1 month

5. Mucocutaneous manifestations
    a. Kaposi' s sarcoma
    b. Infections (severe or recurrent)
        - herpes zoster
        - herpes simplex
        - hairy leukoplakia
        - warts
        - molluscum contagiosum
        - oral thrush
        - papulonecrotic lesions
        - folliculitis
        - vulvovaginitis
    c. Others
        - seborrheic dermatitis
        - chronic pruritic popular eruptions
        - psoriasis
        - Reiter' s syndrome

6. Neurological manifestation e.g. seizures, motor or sensory deficits, dementia, or progressive headache.
7. Chronic cough for more than 1 month or unexplained respiratory distress.
8. Cytomegalovirus retinitis
9. Acute HIV syndrome which usually presents with flu-like illness
10. Tuberculosis
11. Recurrent pneumonia
12. Invasive cervical carcinoma

HIV Transmission (11)

HIV is transmitted through sexual contact and exposure to infected blood or blood components and, perinatally, from mother to neonate. Transmission potentials can be conveniently categorized into four major domains of possible exposure:

- Drug use
- Sexual transmission

- Vertical transmission
- Iatrogenic transmission

Drug use

Individuals who use injectable drugs account for the secondary largest group of individuals who have contracted HIV infection, both in the United States and in Western Europe. In the European Community (EC), by 1989, the incidence of new AIDS cases among injecting drug user had become equal to that occuring among homo/bisexual men. In the United Kingdom, the known prevalence of HIV infection among injecting drug users remain low, being estimated at less than 2 per cent in most parts of the country. However, there are high prevalence areas in Scotland where, in Edinburgh and Dundee, approximately 25 per cent of drug injectors are thought to be injected and in England where, in London, approximately 8 per cent of drug injectors are probably infected.

HIV infection is transmitted by sharing blood-contaminated needles, syringes and injecting paraphernalia. However, drug users are, by and large, sexually active individuals, and may acquire HIV infection as a result of sexual exposure. Other, non-injectable drugs which often remove protective behavioural inhibitions may increase the risk of drug users to infection, as will trading or selling sex for drugs or money.

Vertical transmission

AIDS in children was first reported in 1982. The risks of an HIV-infected mother infecting her infant exist principally either in utero or during delivery (intrapartum). Postpartum risks exist from infections breast milk, especially if the mother was postnatally infected. It is not absolutely clear when most maternal infant transmission takes place.

Sexual transmission

The majority of persons who have become infected with this virus have done so as a result of sexual exposure to HIV. Sexual behaviors which can efficiently facilitate HIV transmission can occur in both heterosexual and homosexual encounters

and globally, the vast majority of persons infected sexually are as a result of heterosexual exposure

The chief route of HIV transmission is via sexual activity. Homosexual (and heterosexual) anal intercourse is an efficient means of transmission, due to the presence of both potentially infected semen and small amounts of blood, which are common in penetrative rectal intercourse.

Iatrogenic transmission

Iatrogenesis refers to the creation of additional problems or complications resulting from treatment or care. The number of individuals becoming infected via iatrogenic exposure will continue to decline in the industrialized world as the epidemic continues but, although they currently account for only a small percentage of those who have become infected, they continue to haunt the public perception of risk completely out of proportion to the actual risk.

- Blood and blood products
- Organ transplants and artificial insemination by donor semen

Specific infectious complications of AIDS

1.Pneumocystis carinii pneumonia by bronchoalveolar lavage.

2.Cytomegalovirus

CMV is commonly isolated from AIDS patients, and evidence of tissue involvement is more common in patients at autopsy than is recognized during life. It causes disseminated infection; the most common recognized forms are chorioretinitis, enterocolitis, and pneumonia. Adrenalitis is ofen present at autopsy and sometimes causes clinically detectable adrenal insufficiency (13)

3.Mycobacterium avium-complex

Infection with M. avium complex (MAC; also M.*avium-intracellulare* or MAI) has developed in half of AIDS patients at MSKCC. The infection is a late complication in many AIDS patients with median survivals from the time of diagnosis of around three months. Symptoms are often surprisingly mild despire bacteremia and may include fevers, rigors, cramping abdominal pain, and diarrhea. (14)

4.Tuberculosis

In countries where tuberculosis is endemic, it is a major complication of AIDS. The recent increase in reported cased of tuberculosis in the United States marks the first rise in the incidence of tuberculosis since the beginning of the twentieth century. This increase is due mainly, although not entirely, to reactivation of tuberculosis in HIV infected people. (15)

5.Herpes Simplex

Individuals at risk for ulcerative herpes simplex infection usually have histories of genital or oral herpes. Severe, persistent, ulcerative perianal herps simplex infection was one of the first infections recognized among AIDS patients. Other forms of herpes infections include herpetic esophagits. Herpes simplex is sometimes isolated from the brain and lungs of AIDS patients and may cause encephalitis. The appearance of the persistent, raw, painful ulcers is highly suggestive, and the diagnosis is easily confirmed by virus isolated. (16)

6.Salmonella

Salmonella gastroenteritis, which must be looked for in AIDS patients, is often complicated by bactermia. Relapses of bacteremia and disseminates infection may occur when treatment is discontinued. (17)

7.Candida sp.

Thrush is very common in AIDS patients. It may cause dryness or discomfort in the mouth or may be asymptomatic. Progression to candida esophagitis is common and presents with characteristic retrosternal pain on swallowing this may occur in the absence of thrush. Disseminated candidiasis is rate, even at autopsy, probably reflecting the relatively normal functioning of polymorphonuclear leukocytes in AIDS patients.

8.Crytosporidium sp.

Cryptosporidium sp., a cause of diarrhea in a variety of domestic animals, has been a cause of acute, self-limited diarrhea in veterinarians. Prior to the AIDS epidermic, cryptosporidiosis was a rarely recognized cause of serve diarrhea in severely immunocompromised patients. In AIDS patients, cryptosporidia may cause self-limited diarrhea; chronic diarrhea illness that waxes and wanes, or prolonged, profound, unrelenting watery diarrhea. (18)

9.Cryptococcus neoformans

Cryptococcal meningitis presents either as an acute or subacute illness. A high index of suspicion is necessary as symptoms may be minimal. The disease usually involves the central nervous system (CNS) and blood, and bone marrow cultures may also be positive for Cryptococcus neoformans. (19)

10.Toxoplasma gondii

Toxoplasmosis in AIDS patients is usually a CNS disease due to reactivation of a latent, earlier infection. Acute infection in adults is asymptomatic or produces lymphadenopathy. (20)

Risk groups (9)

Human Immuno-Deficiency virus can affect anybody who comes into contact with it. However, there are specific groups among the populations that have higher risk of becoming infected with the virus, and therefore contracting AIDS than other groups have. According to the CDC, the groups of persons at risk for HIV infection are as follows :

- Male homosexuals and bisexuals
- Past or present intravenous (IV) drug abusers
- Persons with clinical or laboratory evidence of infection (such as those with sign or symptoms compatible with AIDS or ARC)
- Persons born in countries where heterosexual transmission may play a major role
- Sex partners of male or female prostitutes
- Sex partners of infection persons or persons at increased risk
- Hemophiliacs who have received clotting factor, persons receiving blood transfusion
- New-born infants of high risk or infected mothers

Testing (21)

The antibody test for HIV is a two-component procedure, beginning with a screening test, commonly an enzyme immunoassay (EIA, also known as enzyme linked immunosorbent assay (ELISA). When the ELA is nonreactive, the HIV test is reported as negative. When the EIA is reactive, it must be confirmed by repeating the

EIA on the same sample. If the repeat test is still reactive, another test, usually a Western blot assay, is performed on the sample to validate the EIA (the immunofluorescence assay is sometimes used for confirmation). When both the EIA and the Western blot are reactive, the HIV antibody test is reported as positive.

For a Western blot to be fully reactive, the test must be reactive for all the relevant proteins. These proteins appear as a pattern of distinct bands on the cellolose stripe of the Western blot.

If some but not all of the virus-specific bands are present on the Western blot, the test is considered indeterminate. An indeterminate test result is equivocal; the patient could be uninfected or the patient could be in the process of seroconverting. Persons with indeterminate serologic test results should be interviewed for additional risk information and should be retested to determine true antibody status. Among recently infected persons who have an indeterminate Western blot, a repeat test is commonly positive in 6 months, whereas following tests of uninfected persons with indeterminate results often show no change.

A Western blot is nonreactive only if no virus-specific bands are present. If the EIA is reactive but the Western blot is nonreactive, the test is reported as negative.

2. Theory of knowledge , attitude and behavior

Knowledge

Merrian-Webster's Collegiate Dictionary (22) defined knowledge as:

1. Cognizance
2. The fact or condition of knowing something with familiarity gained through experience or association, acquaintance with or understanding of a science, art, or technique.

Bloom (23) defined knowledge as cognizance specially or general in process or situation stressing use of memory.

Suwon P. (24) defined knowledge as the first step of memory by cognizance, see or hear . This step of knowledge such as knows about definition, mean, true, rule, theory, structure and method's correct . This memory is not a complicated process.

In conclusion, knowledge means what is known from studied, learning, experience, rule, place, thing, person, circumstance. Knowledge take time and is not a complicated process.

Level of knowledge

Bloom (23) and Suwon P. (24) divided cognitive domain in to 6 levels as followed:

1. Knowledge or recall, which means the first step of memory about method, process, structure that can be used to describe definition, detail and truth.
2. Comprehension or understanding, which mean practice or skill of translation, interpretations and extrapolation.
3. Application defined practice or skill to understand and to correct problem by adaptation. Correct and demonstrate can be demonstrated in daily situation.
4. Analysis defined procedure to break down components of problem, situation according to conversation, rules and structure.
5. Synthesis means ability to rebuild conclusion for new process.
6. Evaluation mean ability to decide using given rule and standard.

This study researcher study knowledge of male workers about AIDS/HIV in Rayong Province .There were content about disease, symptom, transmission, prevention and risk group.

Attitude

Attitudes are a combination of concepts, information, and emotions that result in predisposition to respond favorably or unfavorably toward particular people, groups, ideas, events or objects. Many persons present mean such as:

Green et al. (25) defined in as and attitude is a relatively constant feeling, predisposition, or set of beliefs directed toward an object, person or situations.

Ajzen et al. (26) on the other hand, defined in as a person’s location on a bipolar evaluation or affective dimension with respect to some object, action, or event. An attitude represents a person’s general feeling of favorableness or unfavorableness toward some stimulus object. Conceptual framework, as a person from beliefs about an object, he automatically and simultaneously acquires an attitude toward that object. Each belief lings the object to some attitude; the person’s attitude toward the object is a function of his evaluation of these attributes.

Suwon P.(24) defined attitude as beliefs of person about things. person, behavior, situation or other in addition to position that present from idea.

Attitude has 3 ingredients these are:

1. Cognitive component, that mean ingredients of idea and understanding towards stimulus object by themselves.

2. Affective component, that mean ingredients of emotion or feeling that can be positive or negative.

3. Behavioral component, that mean ingredients of behavior or stimulus to practice.

Conclusion; attitude is the idea that contains ingredients of feeling, belief toward stimulus object. This study was study attitude towards AIDS/HIV and AIDS patient .

Behavior

Suwon P. (24) defined behavior as doing by Observe. It is ingredients as cognitive component and intention that use time and many step of decision.

Green et al. (25) defined behavior as practice is action on rhythmic or time and has objective.

Conclusion that behavior mean doing by observe. This study would like to study behavior towards prevention of AIDS/HIV and behavior towards use of condom.

3.Related literature and researches

In 1996, Surasrang Y. (27) studied determinant of risky sexual behavior associated with HIV/AIDS infection among Thai men: a case study of skilled factory – based workers in the eastern seaboard. The result showed that marital status and income were related to risky sexual behavior. Married men were less likely to practice risky sexual behavior compare to single men. Respondents with higher income tended to have higher risky sexual behavior. For condom use, married men were less likely to practice inconsistent condom use compared to single men.

In 1998, Kosaiyaganonta N. and Suan-ngarm L. (28**)** studied knowledge, health belief and behavior on prevention of HIV among industrial workers in Pathumthani Province. The result showed that their knowledge level was good, but the health belief

and behavior were poor. They understood that AIDS vaccine could prevent HIV, and that early phase of AIDS could be cure. This group belief that prevention of AIDS was more difficult than cure. They believed that three was no need for healthy men to use condom. The group had frequent visited to entertainment place (1.5% regularly and 31.9 % occasionally). They drank alcohol before engaging sexual relation (2.2% regularly and 16.0% occasionally). Majority of them used condoms with sex worked (79 -86%) but at lower percentage of condom use with regular partners (41-48%). Factors that influenced preventive behaviors were age and working duration ($p<0.05\%$). This study provided valuable data for health education by using Health Belief Model to improve HIV prevention behavior

In 2000. Viratey K. (29) studied safe sex intention to prevent HIV/AIDS its determinants among factory workers in Samphran district Nakhonpathom Province in Thailand. The result showed that most of workers (80.9%) had fair knowledge about AIDS. Most of the respondents (97.9%) knew that HIV could be transmitted through sexual intercourse without using condom, mosquito bite, blood transfusion, hair cut can not transmit HIV/AIDS .They misunderstood the fact that breast feeding con not transmit HIV infection and that there were only a small proportion who knew that having only one partner can protect them from HIV/AIDS.

In 2002, Jantharathaneewat K. (30) studied result of HIV/AIDS prevention and care activities among factory workers in Pathumthani Province. This result showed that 451 factory workers were male and 549 workers were female; most of were 25 – 34 years old with a secondary education, and the mean period of time of working was 3.4 years. The level HIV/AIDS knowledge was good (81.4%) and awareness of having a blood test before getting married and having children and the use of condoms when having sex with partners or others was at a good level. Considering risk behavior of HIV/AIDS ,70.5% had a moderate level of appropriate behaviors. Overall, male workers needed to improve their HIV/AIDS knowledge, awareness and risk behaviors of HIV/AIDS more than females.

In 2004, Plipat T. and Chemnasiri T. (31) studied behavioral surveillance system among male conscripts, Thailand 1995-2004. There were 4,299 army conscripts participated in the study, 79% of the conscripts had sexual experience, 24.0% of the conscripts had sex with commercial sex worker in the past year and 41.6% had sex with non-regular partner in the past year. The trend of the sex in past year was increasing both for the commercial partner and non-regular partner. The consistent condom use when had sex with commercial sex worker and non-regular sexual partner was also increasing but was still lower than expected, 63.1% used condom consistently when had sex with CSW and 35.3% used condom consistently when had sex with non-regular sexual partner. The HIV-related knowledge was also low.

In 2004, Plipat T. (32) studied HIV-related behavior among general population in Thailand. Most participants were married and educated at the primary school level. The mean age was 32 years. 53% of male and 81% of female had ever had sexual intercourse. In the part year, 20.1% of the male participants and 5.3 % of female participants had sex with non-regular partners. Among male participants, sex with non-regulars partners occurred more frequently sex with commercial partners. Only 51.7% had used condoms consistently when they had sex with a commercial partner in the past year and 46% had used condoms consistently when they had sex with non-regular partners in the past year. Voluntary HIV testing during the past year was reported by 32.1% of the male participants and 36.0% of the female participants.

In 2004, Paibonnsiri P. (33) studied HIV risk behavior surveillance among male factory workers in Samutprakan Province . The mean score of the knowledge of AIDS was 4.9 (full score 6) . There were no significant relations between HIV risk behaviors and age, married status, education level, the province stayed during the last 12 months and blood screening testing for HIV/ AIDS, but there was statistically significant relation with knowledge of AIDS .

In 2004, the studied of Thailand Business Coalition on AIDS (34) on knowledge, attitude and behavior toward AIDS of workers in the workplaces 19 provinces in Thailand found that a men 2,382 workers knowledge about AIDS of male

workers were good. More than 80 % of workers known antivirus drug , characteristics AIDS patient, mode of transmission , mechanism and entrance of opportunistic infection, method of prevention when had sexual relation. Only about 50% workers understood opportunistic infection that should to them negative attitude AIDS patient. When ask about more information of AIDS risk behavior or low risk towards infection (coitus interrupts) and external appearances of HIV, only about 50% of workers gave corrected answers.

In 2005 Thapanee K. (35) studied surveillance system among male workers in Thailand in 2005. The result showed that in the past 1 year male workers had 14.4% sexual intercourse with commercial sex worker, 25.7% with another woman not wife. Use of condom was found in 56.3% with commercial sex workers and 49.4% use condom with another woman not wife.

In 2002**,** Ugboga Adaji Nwokoji and Ademola J Ajuwon (36) studied knowledge of AIDS and HIV risk-relate sexual behavior among Nigerian naval personals . The result of study showed that AIDS knowledge mean score was 70%. About half of respondents believed that a cure of AIDS was available in Nigeria and that one can get HIV by sharing personal items with an infected person.

In 2004, Wee S, Barrett M E (37) Studied determinants of inconsistent condom use with female sex workers among men attending the STD clinic in Singapore **.** The aim of the study was to assess the sociodemographic, behavioral, and psychological factors associated with inconsistent condom use among clients of sex workers. The result showed that overall 45% used condoms inconsistently; these clients were more likely to have poor STD knowledge, visit sex workers five or more times in the past 6 month, have lower self efficacy, less favourable social norms for condom use, and more likely to forget condom use when intoxicated (alcohol impaired decision making). Most participants (83.8%) reported ever using a condom with a sex worker for vaginal sex in the past 6 months, while 72.6% reported using a condom at the last visit to a sex worker.

In 2004, Hesketh T, Duo L, Li H and Tomkins A M. (38) studied attitudes to HIV and HIV testing in high prevalence areas of China: informing the introduction of voluntary counseling and testing programmes. Knowledge of HIV and its modes of transmission were good in health professionals but patchy in pregnant woman. The weakest area in both groups was knowledge of maternal to child transmission. There was strong support for compulsory testing in pregnancy and at the premarital examination. Attitudes towards HIV/AIDS were negative in 23% of health professionals, in 45% of pregnant women ,48% of health professionals and59% of pregnant woman thought that HIV positive individual should not be allowed to get married, and 30% of the health professionals were not willing to treat an HIV positive individual. Levels of attitudes more positive in younger health professionals and better educated pregnant women.

CHAPTER III
MATERIALS AND METHODS

Research design

This is a descriptive study on December 2006 to February 2007 .

Population and Samples

Population : The target population were male factory workers in Rayong Province.

Study area and the population

Rayong Province was characterized by tourism, an increase in industrialization and urbanization and thus a high in flow labor workers.

Rayong Province which is an international tourist attraction .There are most popular beach resort, and entertainment place such as bars, nightclubs, massage ,parlors, and brothels can be found. Muang District is selected as a study area because it currently a growing industrial town with many factories and highest AIDS patients.

Sample size : Samples of the study were selected by two – stage random sampling with equal probability. The data was collected from 78 factory workers randomly selected from 13,809 workers. Sample size was estimated by using Daniel 's formula :

$$n = \frac{n_0}{1 + \frac{n_0}{N}} \qquad n_0 = \left[\frac{z}{d}\right]^2 \pi (1 - \pi)$$

n = Sample size

Z = Standard normal deviation at 0.05 = 1.96

P = percentage of male employees who ever had sexual experience should 65.8% = 0.658 (39)

Q = 1-P = 0.342

d = Allowable error in this study 1% of P

$$n_0 = \left[\frac{1.96}{0.066} \right]^2 \text{ x } 0.658 \text{ x } 0.342$$

$$n_0 = 198.46$$

$$n = \frac{198.46}{1 + \frac{198.46}{13,809}} \qquad (N = 13,809)$$

$$n = 196$$

In this study, 25% were added for incomplete or loss of data. The sample size in this study were 250 workers.

Random sampling was done as follow :

Step 1 The stratified random sampling selected were selected size factory.

Size factory < 500 workers select 2 factories

Size factory 500 -1,000 workers select 2 factories

Size factory > 1,000 workers select 1 factories

Factories were listed and selected by simple random sampling

Step 2 The simple random sampling was also used to select workers in each factory.

Research instrument

In this study, the instrument was questionnaires composed of four parts:

Part I : General characteristics **.**

The general characteristics included: demographic and socioeconomics factors.

Part II : Knowledge about AIDS/HIV.

The knowledge about AIDS questionnaire contained 20 items including causes, transmission and prevention. Each item had one point for the right answer, and zero for the wrong or not know answer. The total score was 20.

The classification or of low, medium and good level of knowledge. The level of knowledge was classified as follows:

Good = ≥ 80% = 16 – 20
Fair = 60 – 79% = 12 – 15
Poor = < 60% = 0 – 11

Part III : Attitude toward AIDS/HIV.

The questionnaire on attitude toward AIDS consisted of 22 items, with positive and negative items mix together. The questions included the mental network of concepts, beliefs, feelings and actions related to AIDS.

Five points rating Likert scales were applied to each questionnaire

Positive items were scored as follow:

Score 4 = Strongly agree
Score 3 = Agree
Score 2 = Uncertain
Score 1 = Disagree
Score 0 = Strongly disagree

Negative items were scored as follow :

Score 0 = Strongly agree
Score 1 = Agree
Score 2 = Uncertain
Score 3 = Disagree
Score 4 = Strongly disagree

The level of attitude was divided into three levels based on total score of attitude with 88 score. Then cut of point by percentage if the respondents who have scored equal or higher than 80 % (score 70 – 88), were classified as appropriate level of attitude groups .If they score 60 – 79 % or score 53 - 69 , they were classified as fair level of attitude. The last level cut of point of lower than 60% or score lower than 53 classified as inappropriate level.

Item of attitude

The mean score of each attitude question was examined. If the mean score was more than 3.2, it was interpreted that most workers had appropriate attitude toward the question. If the mean score was less than 2.4, there it was interpreted that most workers had inappropriate attitude toward person the question. If the mean score was between 2.4 – 3.2, it was interpreted that most workers had fair attitude toward the question.

Part IV Behavior towards prevention of AIDS/HIV

Item of behavior were 10 items. Each item had one point for the high risk answer, and zero for the low risk answer.

1. Level of behavior

Level of behavior is divided into high risk and low risk using the cutoff point as 80% .Thus ,out of total score 10 ,those who get more than or equal 8 scores are classified as high risk level and scores less than 8 scores are in low risk level of behavior.

2. Use condom

There had a question 1 items but had 5 items to sub question and selected choice for answer.

Quality control of data

1.Content validity the questionnaire was reviewed for content validity by reviewers to determine the content validity and it was then corrected and edited as suggested by the reviewers.

2. Reliability the reliability of questionnaire was determined by try out the content reviewed questionnaire with male workers in Rayong Province to measure the understanding in the questions. The reliability was then determined by Coefficients Alpha Cronbach Method with coefficient of alpha (K-R 20)and found that reliability knowledge was 0.61 and attitude was 0.71

Process in research

1. A letter from the Faculty of Graduate Studies, Mahidol University is submitted to principles of Rayong Province Public Health for in data AIDS.

2. A letter from the Faculty of Graduate Studies, Mahidol University is submitted to principles of each factory for permission in data collection.

3. Research collected all the questionnaire.

Analysis of the Data

1. Data Processing

The data collected have been processed in microcomputers using SPSS/PC for data entry and analysis.

2.Data Analysis

Descriptive statistics by using frequency, percentage, mean and standard deviation in order to describe the general characteristics, knowledge, attitude and behavior.

CHAPTER IV
RESULTS

This research on the knowledge attitudes and behavior towards prevention of HIV infection among male factory workers in Rayong Province. The data was collected from 78 factory workers randomly selected from 13,809 workers. The study was done during December 2006 – February 2007. There were 213 male workers participate in the study.

The results of this research were presented in 4 parts:

1. General characteristics**.**
2. Knowledge about AIDS/HIV.
3. Attitude toward AIDS/HIV.
4. Behavior towards prevention of AIDS/HIV

Part 1: General characteristics**.**

Age: Most of the workers (53.9 %) were 25 – 34 years old. Mean age of the workers was 31.02±6.57 years. (Table I)

Education level : Most of the male workers (46.5%) had finished bachelor degree of education. Fifteen percent of worker finished secondary school and lower. (Table I)

Marital status: Forty eight percent of workers were single and 46.9% were married. Only 3.0% of workers were divorced/widow. (Table I)

Income: Most of the workers 30.9% had income of more than 30,000 bath/month, 25.3% had income of 10,001-20,000 bath. The average income of workers was 26,050 baths. (Table I)

Birth place: Most of male workers (55.5%) were born in the central region and 25.1 % were born in the Northeast region. (Table I)

Housing status: Most of the workers (50.3%) stayed in there own house and 33.3% rent room living. (Table I)

Years of work: Most of the workers (45.3%) worked for more than 10 years. The average years of work were 9.16±6.05 years. (Table I)

Years of present work: Most of the workers (53.2 %) work in the present factory less than 4 years. Forty teen percent of workers worked 4-6 years. The average years of present work were 5.01±4.74 years. (Table I)

Table 1 : General characteristics of workers

General characteristics	**Number**	**Percent**
Age (Years)	206	100
15-24	36	17.5
25-34	111	53.9
35-44	52	25.2
≥ 45	7	3.4
MEAN = 31.02 SD = 6.57 Min-Max , 18 – 49		
Education		
Primary school	7	3.3
Secondary school	25	11.7
High school	10	4.7
Diploma	47	22.1
Bachelor Degree	99	46.5
Master Degree or Over	20	9.4
Marital Status		
Single	102	47.9
Married	100	46.9
Divorced / widow	8	3.8

Table 1 : General characteristics of workers (cont.)

General characteristics	Number	Percent
Income (bath / month)	178	100
< 5,000	18	10.1
5,000 – 10,000	23	12.9
10,001 – 20,000	45	25.3
20,001 – 30,000	37	20.8
> 30,000	55	30.9
MEAN = 26,050 SD = 17,022 Min – Max 2,200-100,000		
Birth of place		
Central	117	55.5
North	25	11.8
Northeast	53	25.1
South	16	7.6
Housing status	208	100
Dormitory of company	3	1.4
Rent room	71	33.3
Own house	120	50.3
House of relatives/friends	14	6.6
Years of work (Years)	192	100
0 – 3	37	19.3
4 – 6	37	19.3
7 – 9	31	16.1
10 years and over	87	45.3
MEAN = 9.16 SD = 6.05 Min – Max 0.06 – 36		

Table 1 : General characteristics of workers (cont.)

General characteristics	Number	Percent
Years of present work (Years)	188	100
0 - 3	100	53.2
4 - 6	26	13.8
7 - 9	22	11.7
10 years and over	40	21.3
MEAN = 5.01 SD = 4.74 Min – Max 0.01 - 25		

Part 2: Knowledge about AIDS/HIV.

2.1 Level of knowledge

Level of knowledge of male worker was over rather good .About forty percent of workers had good or fair level of knowledge (41.3% and 44.1%). Only 14.6 % had knowledge at poor level. (Table 2)

Table 2 : Level knowledge about AIDS/HIV of male factory workers. (N=213)

Level of knowledge (total score = 20)	Number	Percent
Good (≥ 80 %) (score 16 - 20)	88	41.3
Fair (60 % - 79 %) (score 12 - 15)	94	44.1
Poor (< 60 %) (score 0 - 11)	31	14.6
MEAN = 14.6 SD = 3.14 Min- Max 1 – 20		

2.2 Item of knowledge

From Table 3 Most of male workers had good knowledge 80% or more in 9 items .The percentage of male workers who gave correct answer was more than 90% in items of HIV viruses destroy CD4 with blood cells, at present there are drugs that

inhibit reproduction of HIV virus but can not cure the disease and risk sexual behavior activities of HIV virus.

They gave correct answer less than 60% in 5 items. Only 50% of there gave correct answers in most complications occurred in HIV patients are not harmful to general population and only 44% gave correct answer about coitus interruption contraception and HIV.

Table 3: Percentage and level of knowledge about AIDS of factory male workers.

Items	Correct answer	
	Percent	Level
1.HIV viruses destroy CD4 with blood cells.	92.9	good
2. At present ,there are drugs that inhibit reproduction of HIV virus but can not cure the disease.	92.0	good
3.Risky sexual behavior is one of way to contact HIV infection .	91.9	good
4.Appropriate use of condom every time of sexual intercourse is a way to prevent HIV.	87.2	good
5.HIV virus can be found in blood, semen ,vaginal discharge and breast milk .	85.8	good
6. Early stage of infected HIV/AIDS could be cured.	84.1	good
7. If CD4 white blood cell in the body was low, complication of HIV infection had high possibility of occurrence.	83.9	good
8. HIV infective by itself does not kill the patient but serious complicating of infection do.	82.5	good
9. HIV virus entries the body through wounds and mucous membranes .	82	good
10. If one is infected with HIV infection but blood test is still negative, the chance of transmission is positive.	76.9	fair
11. External appearance can identify HIV patient.	75.8	fair
12. Using sterile needle for injection can be infected with HIV infection.	75.4	fair

Table 3: Percentage and level of knowledge about AIDS of factory male workers. (cont.)

Items	Correct answer	
	Percent	**Level**
13. Complications of HIV infection can be cured but have the possibility of relapse.	73.9	fair
14. Blood donation can not lead to HIV infection because new sterile needle was used every time .	73.9	fair
15. AIDS is only transmitted among drug user, commercial sex worker and homosexual.	67.8	fair
16. HIV infected patients were different from AIDS patients because HIV infected person are still healthy and had no complication.	58.3	poor
17. Among all opportunistic infection of HIV infected patients pulmonary TB was the only transmitted disease toward general population.	53.6	poor
18. Every infant born to HIV infected mothers will be HIV infected.	53.6	poor
19. Most complications occurred in HIV patients are not harmful to general population.	50.0	poor
20. Chance of getting infected by HIV virus can occurrence when coitus interruption contraception.	44.1	poor

Part 3 Attitude toward AIDS/HIV.

3.1 Level of attitude

Attitude score of 0-4 was given to each answers to attitude question .Most of workers (70.8 %) had attitude at fair level. Only 22,2 % of them had at inappropriate attitudes and only 7.1% had attitude at appropriate level. (Table 4)

Table 4 Level of attitude about AIDS and HIV patients infection of male factory workers (N=212)

	Level of attitudes (total score = 88)		**Number**	**Percent**
appropriate	(≥ 80 %)	(score 70 – 88)	15	7.1
fair	(60 % - 79 %)	(score 53 – 69)	150	70.8
inappropriate	(< 60 %)	(score < 53)	47	22.2
MEAN = 58.11 SD = 10.01		Min- Max 17-81		

3.2 Item of attitude

The mean score of each attitude question was examined. If the mean score was more than 3.2, it was interpreted that most workers had appropriate attitude towards the question. If the mean score was less than 2.4, there it was interpreted that most workers had inappropriate attitude toward person the question.

Most male workers had appropriate attitude in 4 items of attitude question. They were knowledge about AIDS in everybody (3.47±0.92) cure of AIDS/HIV (3.26±0.99), checking blood for HIV infections before getting marriage (3.24±0.88) and Use of condom in physically strong person(3.32±0.94)

They had inappropriate attitudes in 4 items. They were self test for HIV (2.08 ±1.16) not told anyone, self secret of HIV (2.01±0.90), use of condom with lovers(2.01±1.23) and effect of premarital blood test (1.98±1.43) .(Table5)

Table 5 Items of attitude toward AIDS

Items	Score Mean±SD	Level
1. Everybody should to have knowledge about AIDS, although does not have got risk behavior.	3.47±0.92	app
2. Physically strong person needs not use condom when having sex with commercial sex worker.	3.32±0.94	app
3. AIDS/HIV can not be cured but can prevented.	3.26±0.99	app
4. Premarital blood test for HIV is necessary.	3.24±0.88	app
5. It is not necessary to use condom if sexual partner is strong or looking good.	3.03±1.06	fair
6. Treatment of AIDS/HIV cost a lot of money.	2.94±1.15	fair
7. HIV infection employee should get there same relationship as other employees.	2.88±0.93	fair
8. Using condoms is one of the effectively protective methods against HIV infection.	2.84±1.05	fair
9. Thai men should have experience with commercial sex worker.	2.79±1.03	fair
10. Everybody should be friends with AIDS/HIV persons.	2.77±0.89	fair
11. The factory should reveal with who employee HIV infection.	2.69±1.16	fair
12. Everybody should work with HIV infected person without disgust feeling.	2.67±0.87	fair
13. Drinking alcohol and using drug in the beginning of rise behavior for HIV/AIDS.	2.59±1.08	fair
14.Annual blood test for HIV infections row like	2.53±1.16	fair
15. HIV/AIDS patients were burden to the society.	2.46±0.98	fair
16. Married man having sex with prostitute is normal.	2.43±1.03	fair
17. Preemployment blood test for HIV is necessary.	2.40±0.94	fair
18. Living with HIV/AIDS infected person in a house if high risk to HIV infection.	2.40±1.12	fair

Table 5 Items of attitude toward AIDS.(cont.)

Items	Score Mean±SD	Level
19. Self blood test for HIV is not necessary.	2.08±1.16	Inapp
20. Secretly if one got HIV infection.	2.01±0.90	Inapp
21. Use of condom is not necessary when having sex with lover.	2.01±1.23	Inapp
22. Premarital blood test of HIV can not prevent AIDS/HIV.	1.98±1.43	Inapp

Part 4 Behavior towards prevention of AIDS/HIV

4.1 Level of behavior

When sexual behavior of workers was examined, most of male workers (89.7%) had level of behavior at low risk and only 10.3% had level behavior at high risk.(Table 6)

Table 6 Level behavior of male factory workers.

Level of behavior (total score = 10)	Number	Percent
High risk ≥80% (score 8 -10)	22	10.3
Low risk < 80 % (score < 8)	191	89.7
MEAN = 5.88 SD = 1.51 Min- Max 0 - 10		

4.2 Item of behavior

Table 7 the most of male workers had low risk behavior according to items no.9 and 10, that they did not tattooing using common instruments (88.9%), they never had STD (90.2%). Only 2.8% of male workers had low risk behavior masturbated instead of having sexual intercourse with commercial sex workers or multiple sex partners to prevent HIV infection, 5.2 % will go to the doctors with suspect may have got HIV, 13.1% can control sexual desired by playing sport or reading book and only 16.7% never had sexual intercourse in 6 month time.

Table 7 Percentage no risk behavior of male factory workers.

Behavior	Low risk behavior	
	Number	**Percent**
1. Frequency of masturbation to (instead of sexual intercourse with commercial sex workers or multiple sex partners) prevent HIV infection.	6	2.8
2. Go to the doctor when suspect your may be have got HIV.	11	5.2
3. Control sexual desired by playing sport or reading book.	28	13.1
4. Ever had sexual intercourse at 6 month time.	34	16.7
5 .Frequency of visit Karaoke /disco /massage	47	22.1
6. Frequency of drinking alcohol before engaging sexual intercourse.	78	36.6
7.Shaving or nail clipping with common blades or instruments	91	44.4
8. Had ever had a blood test to identify AIDS/HIV.	114	67.9
9. Ever had STD.	185	90.2
10. Tattooing using common instruments.	185	88.9

4.3 Use of Condom

In 6 month period 170 male workers (83.3%) ever had sexual intercourse .Another then workers 66(38.8%) had sexual intercourse with commercial sex workers, 116 (68.2%) with lover or friend and 81 (47.6%) with their wives. (Table 8)

When male workers had sexual intercourse with their wives 63.0% never use condom and most of male workers (75.8%) always use condom when they had sexual intercourse with commercial sex workers and only 12.2% always use condom when they had sexual intercourse with their lovers and girlfriends. (Table 8)

Table 8 Behavior condom use and sexual intercourse of male factory workers ever had sexual intercourse in 6 month period.

Condom use (N = 170)	**Commercial sex workers**		**Lovers and Girlfriends**		**Wives**	
	No.	**(%)**	**No.**	**(%)**	**No.**	**(%)**
Always	50	(75.8)	27	(12.2)	8	(9.8)
Often	2	(3.0)	19	(16.8)	11	(13.6)
Some time	6	(9.0)	29	(25.0)	11	(13.6)
Never	8	(12.1)	41	(35.3)	51	(63.0)
Total	66	(100)	116	(100)	81	(100)
%		38.8		68.2		47.6

CHAPTER V
DISCUSSION

The objectives of this study were knowledge, attitude and behavior towards prevention of HIV infection among male factory workers in Rayong Province. The discussion of this study will be divided into two parts.

Part I: Research methodology
Part II: Result of the study

Part I :

1. Research methodology

1.1 Research design

This research was descriptive study knowledge, attitude and behavior towards prevention of HIV infection and use of condom among male factory workers in Rayong Province. Data were obtained by self administered questionnaire. The questionnaire was leading to this study in part knowledge and another part questionnaire were designed from the past knowledge and research. The research design was appropriate for the objectives and the duration of the study was not very long.

1.2 Population and sample

The populations of this research were male workers in 5 factories from 78 factories in Rayong Province. Totally there were 13,809 workers in this industrial estate .There were 213 male workers participate in the study, recruited by stratified random sampling and would be representatives of male factory workers in Rayong Province. The calculation of sample size using Daenial's formula applying that the percentage of male employees who ever had sexual experience should 65.8%. The sample size 25% were added for incomplete or loss of data. The sample size was appropriate for the study.

Part II :

2. Results of the study

2.1 General characteristics

In this study ,most of male workers were age between 25 – 34 years old (53.9%), had high education (46.5% graduated bachelor degree) ,had high income mean salary 26,050 baths per month, half of them were single and years of work for rather long time (45.3% work over 10 years).

The results of this study were similar to the studies of Jantharathaneewat K. (30) that most of the workers (62.5%) were 25-34 years old. Education level of our study was in contrast with Kosaiyagannonta N.,Soan-ngarm L.(28) , Viratey K. (29) , Paiboonsiri P. (33) and Jantharathaneewat K. (30) that most of the workers of there studied had finished high school. Income in this study contrast with Kosaiyagannonta N.,Soan-ngarm L.(28) and Viratey K. (29) in which most workers had low income.

In conclusion the male workers in this study when compared with preview other studies were of high education level, high income and years of work were long time.

2.2 Objective I : Level of knowledge about AIDS.

Level of knowledge of male workers was overall rather good (44.1%).

This study were comparable with level of knowledge the to study of Jantharathaneewat K. (30) who was studied result of HIV/AIDS prevention and care activities among factory workers in Pathumthani Province this result showed that level HIV/AIDS knowledge was good (81.4%) and awareness of having a blood test before getting married and having children and the use of condoms when having sex with partners or others was at a good level.

Kosaiyagannonta N.,Soan-ngarm L. (28) was studied knowledge , health beliefs and behavior on prevention of HIV among industrial workers in Pathumthani Province. Their result showed that the workers knowledge level was good (81.5%).They understood that AIDS vaccine could prevent HIV, and that early phase of AIDS could be cure.

Ugboga Adaji Nwokoji and Ademola J Ajuwon in 2002 studied knowledge of AIDS and HIV risk-relate sexual behavior among Nigerian naval personals. The result of study showed that AIDS knowledge mean score was 70%. About half of

respondents believed that a cure of AIDS was available in Nigeria and that one can get HIV by sharing personal items with an infected person (25.3%).(36)

Hesketh T, Duo L ,H Li and Tomkins A M (38) studied knowledge attitude towards HIV and HIV testing in high prevalence areas of China. The results showed that 'health professionals' knowledge was overall good and mean score on the knowledge test was 80% .But the knowledge of the pregnant women was patchy and mean score was 57%.Over 70% correctly identified the major modes of transmission .The weakest knowledge was about maternal to child transmitting in both groups .

Item of knowledge about AIDS

Knowledge about AIDS of male workers had good knowledge were subject more than 80 % of workers known antivirus drug , characteristics AIDS patient, mode of transmission , mechanism and entrance of opportunistic infection, method of prevention when had sexual relation.

Only about 50% workers understood opportunistic infection that should to them negative attitude AIDS patient. When ask about more information of AIDS risk behavior or low risk towards infection (coitus interrupts) and external appearances of HIV, only about 50% of workers gave corrected answers. The percentage of correct answer of each items of knowledge in Thailand Business Coalition on AIDS study knowledge, attitude and behavior toward AIDS of workers in the workplaces 19 provinces in Thailand. (34)

This study were comparable with study knowledge of Viratey K. (29) who studied safe sex intention to prevent HIV/AIDS its determinants among factory workers in Samphran district Nakhonpathom Province in Thailand. The result showed that most of workers (80.9%)had fair knowledge about AIDS .Most of the respondents(97.9%)knew that HIV could be transmitted through sexual intercourse without using condom , mosquito bite ,blood transfusion ,hair cut can not transmit HIV/AIDS .They misunderstood the fact that breast feeding con not transmit HIV infection and that there were only a small proportion who knew that having only one partner can protect them from HIV/AIDS.

Although most of male workers had rather good knowledge in general items but they had inadequate about risk behavior or low risk towards infected HIV. The result showed that workers had superficial knowledge about HIV and AIDS.

2.3 Objective II : Attitude level toward AIDS/HIV.

Most of male factory workers (70.8%) had fair attitude towards AIDS. Only 7.1% had appropriate attitude towards AIDS.

The result of the study were comparable with the study of Viratey K. (29) who studied safe sex intention to prevent HIV/AIDS its determinants among factory workers in Samphran district Nakhonpathom Province in Thailand and showed most of workers (80.9%) were fair level attitude towards AIDS. Most of workers (90% - 95%) perceived the benefit of safe sex for protecting them from HIV infection such as faithful to one partner, using condom and check blood before getting marry.

The result of this study were comparable to the study of Kosaiyagannonta N.,Soan-ngarm L. (28) who studied knowledge , health belief and behavior on prevention of HIV among industrial workers in Pathumthani Province and found that most of workers (84.8%) had inappropriate attitude towards AIDS. This groups believed that prevention of AIDS was more difficult than cure. They believed that there was no need for healthy men to use condom.

The study of Hesketh T, Duo L, Li H and Tomkins A M. (38)showed that attitudes towards HIV/AIDS were negative in 23% of health professionals ,in 45% of pregnant women ,48% of health professionals and59% of pregnant woman thought that HIV pokitive individual shouldnot be allowed to get married, and 30% of the health professionals were not willing to treat an HIV positive individual. Levels of attitudes more positive in younger health professionals and better educated pregnant women.

Items about Attitude.

Most male workers (more than 80%) had appropriate attitude on the items about universal spreading of AIDS, cure of AIDS/HIV, checking blood for HIV infections before getting married and use of condom in physically strong person.

They had very inappropriate attitude (<60%) on items about unnecessary self blood test for HIV, self secret of HIV, use of condom not necessary when having sex with lover and effect of premarital blood test.

2.4 Objective III : Behavior towards prevention of AIDS/HIV.

Behavior

Most of male workers (89.7%) had low risk sexual behavior. Compare to the study of Paiboonsiri P. (33) who studied HIV risk behavior surveillance among male factory workers in Samutprakan Province. The results showed that low risk level behavior of male workers 28.3%, 48.1% fair level behavior and high risk behavior.

This study compare to studied of Jantharathaneewat K. (30) who was studied result of HIV/AIDS prevention and care activities among factory workers in Pathumthani Province this result showed that risk behavior of HIV/AIDS ,most of workers (70.5%) had moderate level of appropriate behavior.

When each items of behavior was considered, some high risk behavior were abused such as 97.2% went to have sexual intercourse with commercial sex workers or multiple sex partners, only 5.2% will go to the doctors when suspect that they may have got HIV, 12.1% can not control sexual desired by playing sport or reading book and 16.7% ever had sexual intercourse in 6 month period.

This study compare to studied of Kosaiyagannonta N.,Soan-ngarm L. (28) studied knowledge , health belief and behavior on prevention of HIV among industrial workers in Pathumthani Province the results showed that most of male workers (44.6%) level of behavior were poor. Male worker 63.3% ever had sexual intercourse in the 6 month period, 81.8% never drinking alcohol before engaging sexual intercourse.

This study showed that male worker had to have higher income and to have high risk behavior. This result comparable to Surasrang Y. (27) who studied the determinant of risky sexual behavior associated with HIV/AIDS infection among Thai men : a case study of skilled factory – based workers in the eastern seaboard area which revealed that married men were more likely to practice safer sexual behavior than were single men. There was also a positive relationship between risky sexual behavior and income. Men with higher income tended to have higher risk behavior.

Because of their financial independency, they can afford going to commercial sex workers, and did not control themselves when they had sexual desire.

Use of condom

In 6 month period 170 male workers (83.3%) ever had sexual intercourse. Most of them (68.2%) had sex with lover or girlfriends. About 40% had sex with commercial sex worker. About 50% had sex with their wives.

Form this study male workers had risk behavior because of not 100% use if condom. Their may be due to the fact that they had superficial knowledge about AIDS. Education to promote appropriate condom distribution and use would be were useful. About the use of condom when having sexual intercourse, there use of condom was still not – adequate, about 12 % never used condom when having sex with commercial sex worker and 35.3% did not use condom with lovers or girlfriends.

Their result was compare to Paiboonsiri P. (33) who studied HIV risk behavior surveillance among male factory workers in Samutprakan Province which revealed that male workers ever had sexual intercourse 88.1% . In the past 12 months, 24.2% with commercial sex workers and 70.7% of there had consistently used condoms. Sex with non – regular partners occurred in 36.0% and of these,41.8% use condom consistently.

Wee S, Barrett M E (37) studied determinants of inconsistent condom use with female sex workers among men attending the STD clinic in Singapore .The result showed that overall 55% used condoms consistently. Most participants (83.8%) reported ever using a condom with a sex worker for vaginal sex in the past 6 months, while 72.6% reported using a condom at the last visit to a sex worker.

Thapanee K. (35) was studied behavior surveillance system among male workers in Thialand in 2005. The result showed that in the past 1 year male workers had 14.4% sexual intercourse with commercial sex worker, 25.7% with another woman not wife. Use of condom was found in 56.3% with commercial sex workers and 49.4% use condom with another woman not wife.

Kosaiyagannonta N.,Soan-ngarm L. (28) studied knowledge , health belief and behavior on prevention of HIV among industrial workers in Pathumthani Province the

results showed that most of workers (79-86%) used condoms with commercial sex worker but lower percentage of use condom with regular partners (41-48%).

Surasrang Y.(27) that the selected general characteristic determinants such as age , educational and income from previous studied many groups no significant relationship to risky sexual behavior and use condom. This indicates that risk sexual behavior is widespread among Thai men at all levels.

CHAPTER VI
CONCLUSIONS

In Thailand, an estimated 580,000 adults and children were living with HIV at the end of 2005.The number of new annual HIV infections continues to drop-the estimated 18,000 new infections in 2005 were 10% less than in 2004. However, a large percentage of new HIV infections are occurring in people considered to be at low - risk of infection. Approximately one third of new infections in 2005 were in married women who were probably infected by their spouses. (1)

Within the Thai population, AIDS Division Bureau of AIDS , TB and STI and STIs Department of Diseases Control Ministry of Public Health found the percentage of AIDS cases to be 25.84 % in 30-34 age groups followed by 24.26 % in 25-29, 17.31 % in 35-39, 9.42% in 40-44 , 8.59 % in 20-24, and less than 4.18% in 0-14 age groups. In 15-19 age groups the rate of AIDS cases in young women was higher than that of men. Most of AIDS cases were reported among labour groups, whose occupations included 46.43% of labourers (general employees, industry employees, truck driver and labourers) and 20.81% were inagricultural segment. (3)

The epidemic of AIDS showed a decrease in Thailand but there are still high risk groups with high infectious rates, such as among factory workers. The study objectives were to study knowledge, attitude and behavior towards prevention of HIV infection and use of condom among male factory workers in Rayong Province.

This study was a descriptive study. Data was collected by questionnaires from 213 male factory workers in Rayong Province, during December 2006 – February 2007. Descriptive statistics included percentage, mean and standard deviation.

The results showed that mean age of workers was 31.02± 6.57 years. Most male workers had an education level of bachelor degree (46.5%). Half of them were married as well as single. The average income of workers was 26,050 ±17,022 baht per month. Most workers had a good or a fair level of knowledge about AIDS (41.3% and 44.1%, respectively). Most of them had a fair attitude towards AIDS (70.8%).

Only 7.1% had a appropriate attitude towards AIDS. Regarding sexual behavior, only 13.3% of male workers had high risk behavior. In the past 6 month period 83.3% of male workers had sexual intercourse, 38.8% with commercial sex workers. Only 75.8% of them always used condoms when they had sexual relations with commercial sex workers.

In conclusion, most male factory workers had a good level of knowledge but had a fair level of attitude towards AIDS. Although most of them had low risk sexual behavior, the use of condoms was not high enough for visits to commercial sex workers. Male factory workers should receive repetitive educational activities so that they will have better knowledge, attitude and sexual behavior.

Recommendation for Application

1. Improvement in formal education about AIDS.
2. AIDS education should be continuously provided. Update information and emphasis should be provided for factory workers.
3. Experience about AIDS should be enhanced by taking factory workers to visit place of AIDS patient such as Wat Prabath Nampoo.

Recommendation for Further Research

1. To study knowledge, attitude and behavior towards AIDS among older man (over 60 years) compare with young man (lower 15 years).
2. Appropriate method for HIV/AIDS information dissemination, development of life skill for HIV/AIDS prevention and change of attitude towards HIV/AIDS.
3. To study risk behavior of using internet on abnormal sexual behavior.

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APPENDIX

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Documentary Proof of Ethical Clearance Committee on Human Rights Related to Researches Involving Human Subjects Faculty of Medicine, Ramathibodi Hospital, Mahidol University

MURA2006/426

Title of Project	Knowledge, Attitude and Behavior Towards Prevention of HIV Infection Among Male Factory Workers in Rayong Province
Protocol Number	ID 12-49-05
Principal Investigator	Miss. Siraya Pimpakai
Official Address	Department of Obstetrics and Gynecology Faculty of Medicine, Ramathibodi Hospital Mahidol University

The aforementioned project has been reviewed and approved by Committee on Human Rights Related to Researches Involving Human Subjects, based on the Declaration of Helsinki.

Signature of Secretary
Committee on Human Rights Related to
Researches Involving Human Subjects ..... Assoc. Prof. Duangrurdee Wattanasirichaigoon, M.D.

Signature of Chairman
Committee on Human Rights Related to
Researches Involving Human Subjects ..... Prof. Boonsong Ongphiphadhanakul, M.D.

Date of Approval November 30, 2006

แบบสอบถามที่…....

การวิจัยเรื่อง ความรู้ ทัศนคติ และพฤติกรรมการป้องกันการติดเชื้อเอดส์ ของพนักงานชาย ในโรงงานอุตสาหกรรม จังหวัดระยอง

คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี

เรื่อง ขอความร่วมมือในการตอบแบบสอบถาม

เรียน ท่านผู้ตอบแบบสอบถาม

เนื่องด้วยข้าพเจ้า น.ส.สิรยา พิมพไกร นักศึกษาหลักสูตรวิทยาศาสตรมหาบัณฑิต คณะแพทยศาสตร์ โรงพยาบาลรามาธิบดี กำลังทำวิทยานิพนธ์เรื่อง ความรู้ ทัศนคติ และพฤติกรรมการป้องกันการติดเชื้อเอดส์ ของพนักงานชายในโรงงานอุตสาหกรรม จังหวัดระยอง ท่านเป็นบุคคลสำคัญยิ่งในการให้ข้อมูลครั้งนี้ จึงขอความร่วมมือในการตอบแบบสอบถาม คำตอบที่ได้ผู้วิจัยจะเก็บเป็นความลับและจะไม่มีผลต่อท่านทั้งทางตรงและทางอ้อม และไม่มีการเปิดเผยชื่อผู้ให้ข้อมูล แต่จะสรุปผลการศึกษาที่เป็นประโยชน์ต่อส่วนรวม

ผู้วิจัยขอขอบคุณทุกท่านที่ให้ความร่วมมือในการตอบแบบสอบถาม ณ ที่นี้ด้วย

สิรยา พิมพไกร
นักศึกษาปริญญาโท สาขาการเจริญพันธุ์และวางแผนประชากร
มหาวิทยาลัยมหิดล

แบบสอบถาม

แบบสอบถามเรื่อง ความรู้ ทัศนคติ และพฤติกรรมการป้องกันการติดเชื้อเอดส์ ของพนักงานชาย ในโรงงานอุตสาหกรรม จังหวัดระยอง

คำชี้แจงในการตอบแบบสอบถาม

แบบสอบถามมีทั้งหมด 4 ส่วน ขอให้ตอบทุกส่วนดังนี้

ส่วนที่ 1 แบบสอบถามเกี่ยวกับข้อมูลทั่วไปของผู้ตอบแบบสอบถาม	จำนวน	8	ข้อ
ส่วนที่ 2 แบบทดสอบความรู้เรื่องโรคเอดส์	จำนวน	20	ข้อ
ส่วนที่ 3 แบบวัดทัศนคติต่อโรคเอดส์ ผู้ติดเชื้อเอดส์	จำนวน	22	ข้อ
ส่วนที่ 4 แบบสอบถามพฤติกรรมการป้องกันโรคเอดส์	จำนวน	11	ข้อ

ส่วนที่ 1 ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

คำชี้แจง โปรดเขียนเครื่องหมาย ✓ ใน ( ) หน้าข้อความหรือเติมข้อความที่ท่านเห็นว่าตรงตามความเป็นจริงเกี่ยวกับตัวท่าน

1. อายุปัจจุบัน.....ปี.....เดือน

2 การศึกษา สูงสุดที่เรียนจบ

( ) 1.ประถมศึกษา ชั้นปีที่..... ( ) 4.อนุปริญญา

( ) 2.มัธยมศึกษา ชั้นปีที่..... ( ) 5.ปริญญาตรี

( ) 3.อาชีวศึกษา ชั้นปีที่..... ( ) 6.ปริญญาโทหรือสูงกว่า

3. สถานภาพ

( )1.โสด ( ) 2.สมรสอยู่ด้วยกัน

( ) 3.สมรสแยกกันอยู่ ( ) 4.หย่าร้าง ( ) 5.หม้าย

4. รายได้เฉลี่ย .....บาท/เดือน

5. ภูมิลำเนาเดิม

( ) ภาคกลาง ( ) ภาคเหนือ ( ) ภาคตะวันออก

( ) ภาคตะวันออกเฉียงเหนือ ( ) ภาคใต้ ( ) ภาคตะวันตก

6. สถานที่พักอาศัยปัจจุบัน

( ) 1. บ้านพักในโรงงาน ( ) 3. บ้านของท่านเอง

( ) 2. บ้านเช่า ( ) 4. อาศัยบ้านญาติ,เพื่อน

( ) 5. คอนโด/ห้องเช่า ( ) 6. อื่น ๆ ระบุ.....

7. ปัจจุบันท่านทำงาน ( ) 1. ทำงานกะ

( ) 2. ทำงานเวลาปกติ (8.00 – 17.00หรือ 7.00- 16.00)

8. ประสบการณ์การทำงาน (ตั้งแต่เรียนจบ แล้ว เริ่มทำงาน จนถึงปัจจุบัน) .....ปี .....เดือน

ระยะเวลาทำงาน ณ ที่ทำงานปัจจุบัน .....ปี.....เดือน

ส่วนที่ 2 แบบทดสอบความรู้เรื่องโรคเอดส์

คำชี้แจง โปรดใส่เครื่องหมาย ✓ ลงในช่องทางขวามือที่ตรงกับความคิดเห็นของท่านเพียงข้อเดียว

ข้อความ	ใช่	ไม่ใช่
1. ในปัจจุบันมียาต้านไวรัสที่สามารถยับยั้งการเพิ่มจำนวนของเชื้อเอชไอวีในร่างกาย แต่ไม่สามารถรักษาให้หายขาดได้		
2.โรคแทรกซ้อนส่วนมากที่เกิดขึ้นกับผู้ติดเชื้อเอชไอวี ไม่เป็นอันตรายต่อคนทั่วไป		
3.เชื้อเอชไอวีเข้าไปทำลายเม็ดเลือดขาวซึ่งมีหน้าที่ต่อสู้เชื้อโรค		
4.ถ้ามีเม็ดเลือดขาวชนิด ซี ดี โฟร์ (CD4) ในร่างกายเหลือน้อยจะทำให้ผู้ติดเชื้อเอชไอวีมีโอกาสเกิดโรคแทรกซ้อนได้		
5.ผู้ติดเชื้อเอชไอวี/เอดส์ ไม่ได้ตายเพราะเชื้อเอชไอวี แต่อาจจะตายด้วยโรคแทรกซ้อน		
6.โรคแทรกซ้อนที่เกิดขึ้นกับผู้ติดเชื้อเอชไอวีสามารถรักษาให้หายได้ แต่ก็มีโอกาสเกิดซ้ำใหม่ได้		
7.ในบรรดาโรคแทรกซ้อนฉวยโอกาสที่เกิดขึ้นกับผู้ติดเชื้อเอชไอวีมีเพียงวัณโรคเท่านั้นที่มีโอกาสติดต่อถึงคนทั่วไปได้		
8.ผู้ติดเชื้อเอชไอวี ต่างกับผู้ป่วยเอดส์ เพราะผู้ติดเชื้อเอชไอวี ยังแข็งแรงไม่มีโรคแทรกซ้อนยังคงทำงานได้		
9.เชื้อเอชไอวี เข้าทางบาดแผลและเยื่อบุอ่อนในส่วนต่างๆของร่างกาย		
10. เชื้อเอชไอวี มีในเลือด น้ำอสุจิ น้ำในช่องคลอด และน้ำนม		
11. การมีพฤติกรรมทางเพศที่ไม่ปลอดภัย เป็นสาเหตุหนึ่งของการรับเชื้อเอชไอวี		
12. การบริจาคโลหิตไม่ทำให้ติดเชื้อเอชไอวีเพราะใช้เข็มใหม่ทุกครั้ง		
13 ทารกทุกคนที่คลอดจากแม่ที่ติดเชื้อเอชไอวี จะต้องติดเชื้อเอชไอวีทุกคน		
14. เราสามารถบอกได้จากการดูลักษณะภายนอกว่าใครติดเชื้อเอชไอวี		
15. การใช้เข็มฉีดยาที่สะอาดและผ่านการฆ่าเชื้อแล้วสามารถทำให้ติดเชื้อเอชไอวี ได้		
16. โรคเอดส์มีการระบาดเฉพาะในกลุ่มผู้ใช้ยาเสพติด ผู้ให้บริการทางเพศ และชายรักเพศเดียวกันเท่านั้น		
17. การใช้ถุงยางอนามัยอย่างถูกวิธีทุกครั้งเมื่อมีเพศสัมพันธ์เป็นวิธีป้องกันการติดเชื้อ เอชไอวี		
18. เราสามารถติดเชื้อเอชไอวีได้จากการมีเพศสัมพันธ์โดยการหลั่งภายนอก		

ข้อความ	ใช่	ไม่ใช่
19. ถ้าติดเชื้อเอชไอวีแล้วแต่ผลเลือดยังไม่แสดงผลบวก จะมีโอกาสแพร่เชื้อสู่ผู้อื่นได้		
20. การติดเชื้อเอชไอวีในระยะเริ่มแรก ถ้ารีบรักษาตั้งแต่ต้นสามารถรักษาให้หายขาดได้		

ส่วนที่ 3 แบบวัดทัศนคติต่อโรคเอดส์ และผู้ติดเชื้อเอดส์

คำชี้แจง แบบวัดนี้ต้องการทราบถึง ความรู้สึกท่านที่มีต่อโรคเอดส์ และผู้ติดเชื้อเอดส์ กำหนดให้ผู้ตอบเลือกตอบได้ 5 ตัวเลือกคือ เห็นด้วยอย่างยิ่ง เห็นด้วย ไม่แน่ใจ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง อ่านแล้วทำเครื่องหมาย ✓ ลงในช่องที่กำหนดไว้เพียงคำตอบเดียว

ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1.ท่านคบเพื่อนได้ทุกคนแม้แต่คนที่ติดเชื้อเอดส์					
2 ท่านเห็นด้วยที่ทุกคนควรมีความรู้เรื่องเอดส์แม้จะไม่มีพฤติกรรมเสี่ยง					
3.ท่านเห็นด้วยว่าโรคเอดส์ไม่มีทางรักษาแต่ป้องกันได้					
4.ท่านยินดีทำงานร่วมกับผู้ติดเชื้อเอดส์					
5.ท่านเห็นด้วยเมื่อมีร่วมเพศการใช้ถุงยางอนามัยเป็นวิธีเดียวในปัจจุบันที่จะป้องกันการติดเชื้อเอดส์					
6.ท่านคิดว่าตัวท่านไม่จำเป็นต้องไปตรวจเอดส์					
7.ท่านเห็นด้วยว่าการตรวจเลือดก่อนแต่งงานไม่ช่วยป้องกันการแพร่เชื้อเอดส์					
8.ท่านเห็นด้วยการร่วมเพศกับคู่นอนหรือคู่รักไม่จำเป็นต้องใส่ถุงยางอนามัย					
9.ผู้ชายไทยควรมีประสบการณ์ทางเพศโดยการเที่ยวหญิงบริการ ท่านเห็นด้วยหรือไม่					

ข้อความ	เห็นด้วยอย่างยิ่ง	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
10. .ถ้าคู่นอนหน้าตาสวย หรือหล่อ แต่งตัวดี มีความรู้ ท่านเห็นด้วยว่าไม่จำเป็นต้องใช้ถุงยางอนามัยเมื่อร่วมเพศ					
11.การติดเชื้อโรคเอดส์ทำให้สูญเสียเงินเป็นจำนวนมากในการรักษาพยาบาล					
12.ผู้ติดเชื้อเอดส์น่ารังเกียจ เป็นภาระต่อสังคม					
13.การอาศัยอยู่บ้านเดียวกับผู้ติดเชื้อเอดส์ทำให้เสี่ยงต่อการติดเชื้อโรคเอดส์สูง					
14.สถานประกอบกิจการควรบอกพนักงานทั่วไปว่าพนักงานคนใดติดเชื้อเอดส์					
15.ผู้ติดเชื้อเอดส์ควรได้รับการปฏิบัติเหมือนพนักงานคนอื่นๆ					
16.ท่านจะไม่บอกใครถ้าท่านติดเชื้อเอดส์					
17 ผู้ชายที่แต่งงานแล้วมีเพศสัมพันธ์กับหญิงขายบริการหรือคนที่ไม่ใช่ภรรยาเป็นเรื่องปกติ					
18.ถ้าร่างกายแข็งแรงแล้วไม่จำเป็นต้องใช้ถุงยางอนามัยในการร่วมเพศกับชายหรือหญิงบริการ					
19.การดื่มแอลกอฮอล์ หรือยาเสพยาเสพติดจะเป็นจุดเริ่มต้นให้ติดเชื้อเอดส์ได้					
20.ท่านเห็นด้วยควรตรวจเลือดหาเชื้อเอดส์ก่อนแต่งงาน					
21.ท่านเห็นด้วยควรตรวจเลือดหาเชื้อเอดส์เมื่อสมัครงาน					
22. .ท่านเห็นด้วยควรตรวจเลือดหาเชื้อเอดส์เมื่อตรวจสุขภาพประจำปีพนักงาน					

ส่วนที่ 4 พฤติกรรมการป้องกันการติดเชื้อโรคเอดส์

พฤติกรรมเสี่ยง

ท่านเคยมีพฤติกรรมในเรื่องดังต่อไปนี้หรือไม่ในรอบ 1 ปีที่ผ่านมา

ทุกครั้ง หมายถึง ได้ปฏิบัติตัวต่อสิ่งนั้นอย่างสม่ำเสมอเป็นประจำ เช่น จำนวน 10 ครั้ง ปฏิบัติได้ครบ 10 ครั้ง

บ่อยครั้ง หมายถึง ได้ปฏิบัติตัวต่อสิ่งนั้น ๆ ค่อนข้างสม่ำเสมอ เช่น ในจำนวน 10 ครั้ง ปฏิบัติได้ 5-9 ครั้ง

นาน ๆ ครั้ง หมายถึง ได้ปฏิบัติตัวต่อสิ่งนั้น ๆ อยู่บ้าง แต่ไม่สม่ำเสมอ เช่น ในจำนวน 10 ครั้ง ปฏิบัติได้ 1-4 ครั้ง

ไม่เคย หมายถึง ไม่ได้ปฏิบัติตัวต่อสิ่งนั้น ๆ เลย เช่น ในจำนวน 10 ครั้งไม่เคยปฏิบัติเลย

ข้อความ	ความบ่อยของการปฏิบัติ			
	ทุกครั้ง	บ่อยครั้ง	นานๆ ครั้ง	ไม่เคย
1. เที่ยวคาราโอเกะ / ดิสโก้ / อาบอบนวด				
2. ดื่มสุราก่อนการมีเพศสัมพันธ์				
3. ไปพบแพทย์เมื่อสงสัยว่าตนเองอาจได้รับเชื้อเอดส์				
4. สำเร็จความใคร่ด้วยตนเองแทนการเที่ยวหญิงบริการหรือสำส่อนทางเพศ				
5. ท่านสามารถระงับความต้องการทางเพศด้วยการเล่นกีฬาหรืออ่านหนังสือ				

พฤติกรรมการป้องกัน

คำชี้แจง แบบวัดนี้ต้องการทราบถึง พฤติกรรมการป้องกัน อ่านแล้วทำเครื่องหมาย ✓ ลงในช่องที่กำหนดไว้เพียงคำตอบเดียว

1. ท่านเคยสักคิ้ว สักผิวหนังและเจาะหู โดยใ ช้เครื่องมือร่วมกับผู้อื่น

( ) เคย ( ) ไม่เคย

2. ท่านเคยใช้ใบมีดโกนหรือกรรไกรตัดเล็บเองร่วมกับผู้อื่น

( ) เคย ( ) ไม่เคย

3. ท่านเคยเป็นโรคติดต่อทางเพศสัมพันธ์หรือไม่

( ) เคย ( ) ไม่เคย

4. ในรอบ 6 เดือนที่ผ่านมาท่านมีเพศสัมพันธ์หรือไม่

( ) เคย ( ) ไม่เคย

5. ท่านเคยตรวจเลือดหาเชื้อเอดส์หรือไม่

( ) เคย ( ) ไม่เคย

6. ในรอบ 6 เดือนที่ผ่านมาท่านมีเพศสัมพันธ์กับใครและใช้ถุงยางอนามัยหรือไม่ดังนี้

1.หญิงบริการ / หญิงโสเภณี

เคยใช้บริการกี่ครั้ง..... ครั้ง

( ) ใช้ถุงยางอนามัยทุกครั้ง ( ) ไม่ค่อยใช้ถุงยางอนามัย

( ) ส่วนใหญ่ใช้ถุงยางอนามัย ( ) ไม่ใช้

2.สาวอาบอบนวด

เคยใช้บริการกี่ครั้ง..... ครั้ง

( ) ใช้ถุงยางอนามัยทุกครั้ง ( ) ไม่ค่อยใช้ถุงยางอนามัย

( ) ส่วนใหญ่ใช้ถุงยางอนามัย ( ) ไม่ใช้

3.พนักงานเสริฟ

เคยใช้บริการกี่ครั้ง..... ครั้ง

( ) ใช้ถุงยางอนามัยทุกครั้ง

( ) ส่วนใหญ่ใช้ถุงยางอนามัย

( ) ไม่ค่อยใช้ถุงยางอนามัย

( ) ไม่ใช้

4.เพื่อน / เพื่อนร่วมงานในบริษัท / โรงงาน

เคยมีเพศสัมพันธ์กี่ครั้ง.....ครั้ง

( ) ใช้ถุงยางอนามัยทุกครั้ง

( ) ส่วนใหญ่ใช้ถุงยางอนามัย

( ) ไม่ค่อยใช้ถุงยางอนามัย

( ) ไม่ใช้

5.คู่รัก / แฟน

เคยมีเพศสัมพันธ์กี่ครั้ง.....ครั้ง

( ) ใช้ถุงยางอนามัยทุกครั้ง

( ) ส่วนใหญ่ใช้ถุงยางอนามัย

( ) ไม่ค่อยใช้ถุงยางอนามัย

( ) ไม่ใช้

6.ภรรยา

( ) ใช้ถุงยางอนามัยทุกครั้ง ( ) ส่วนใหญ่ใช้ถุงยางอนามัย

( ) ไม่ค่อยใช้ถุงยางอนามัย ( ) ไม่ใช้

BIOGRAPHY

NAME	Mrs. Siraya Pimpakai
DATE OF BIRTH	23 June 1977
PLACE OF BIRTH	Ubonratchatanee, Thailand
INSTITUTIONS ATTENDED	Mahidol University, 2000 Bachelor of Nursing Science Mahidol University, 2007 Master of Science (Human Reproduction and Population Planning)
POSITION & OFFICE	270 Ramathibodi Hospital, Bangkok Province, Thailand Position : Register Nurse