HIV/AIDS PREVENTION BEHAVIOR AMONG ADOLESCENTS IN HIGH SCHOOL OF JAKARTA, INDONESIA

ZOLAIHA

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ABSTRACT

A cross sectional descriptive study was conducted on HIV/AIDS behavior among adolescents in one high school of Jakarta, Indonesia, with the aim of identifying the socio-demographics, knowledge, perception and cues to action. This study was conducted at one high school in Jakarta, Indonesia in February 2005. Four hundred students from grade 1 to 3 were purposively selected.

The results revealed that a slight majority of the respondents had good knowledge about HIV/AIDS transmission and how to prevent it. How ever only 27.8 percent of respondents got the correct answer as to how HIV/AIDS should be treated. They also had correct perceptions of severity, susceptibility, benefits and barriers to HIV/AIDS prevention behavior. More than one half of respondents agreed using condoms during sexual intercourse would greatly reduce sexual gratification for them or their partner. A majority of respondents got information about HIV/AIDS from the cinema. Parents were a personal influence and reminders to respondents about HIV/AIDS prevention behavior.

There were significance association between the following factors and HIV/AIDS prevention behavior of abstinence: female gender, Muslim religion, being 17 years old or under, living with parents, having a high level of knowledge, a high level perception of severity, a moderate level perception of susceptibility, getting information about HIV/AIDS from television, having parents as an influence on behavior, and having teachers as reminders of HIV/AIDS prevention behavior of abstinence. In this study were found significant associations between Muslim religions, a high level perception of barriers, high level total of perception, getting information from cinema and television and personal influence from parents with HIV/AIDS prevention behavior of being faithful.

There were association betweens having a mother educated to high school or above and monthly income of more than 200,000 rupiahs with the HIV/AIDS prevention behavior of condom use.

KEY WORDS : ADOLESCENT / HIV/AIDS RISK BEHAVIOR / HIV/AIDS PREVENTIVE BEHAVIOR/ PERCEPTION/ SUSCEPTIBILITY

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LIST OF ABBREVIATIONS

HIV	:	Human Immune Virus
AIDS	:	Acquired Immune Deficiency Syndrome
STD	:	Sexually Transmitted Diseases
WHO	:	World Health Organization
UNAIDS	:	United Nation Acquired Immune Deficiency Syndrome
AHRN	:	ASIAN Harm Reduction Network
IDUs	:	Injection Drug User
STI	:	Sexually Transmitted Infection
HBM	:	Health Belief Model
PLWHA	:	People Living With HIV/AIDS
UNDP	:	United Nation Developing Program
UNFPA	:	United Nation Foundation
IMMIM	:	Islamic preachers coordinating agency based in the provincial Capital Makasar

CHAPTER 1
INTRODUCTION

1.1 Rationale and justification of the study

In 2003 an estimated 4.8 million people (range 4.2-6.3 million) become newly infected with HIV. This is more than in any previous year. At the present time some 37.8 million people (range 34.6-42.3 million) are living with HIV, which killed 2.9 million (range 2.6-3.3 million) in 2003, and over 20 million since the first cases of AIDS were identified in 1981.

It has been estimated that by the end of year 2001, 40 million people are living with HIV/AIDS. It has also been estimated that in the year 2000, 3.9 million people has been newly infected with HIV/AIDS. This indicates that nearly 20,000 people are newly infected with HIV/AIDS every day.

Twenty years after the first clinical evidence of AIDS was reported, it has become the most devastating disease humankind has ever faced. Since the epidemic began, more than 60 million people have been infected with the virus. Worldwide HIV/AIDS is the fourth biggest killer.

In many parts of the developing country the majority of new infections occur in young adults. About one third of those currently living with HIV/AIDS are 15-24 years of age. Most of them do not know they carry the virus and many millions more know nothing or too little about HIV to protect themselves against it.

The major concentration of HIV infections is in the developing world (95% of total cases), mostly in countries least able to afford care for infected people.

HIV/AIDS came late to Asia compared to the rest of the world. Until the late 1980s, no country in the region had experienced a major epidemic. Now it is the second most affected region in the world after Sub-Sahara Africa.

An estimated 7.4 million people (range 5.0-10.5 million) in Asia are living with HIV. Around a half-million individuals (range 330,000-740,000) are believed to have died of AIDS in 2003, and about twice as many---1.1 million---(range 610,000-2.2 million) are thought to have become newly infected with HIV. Among young people 15-24 years of age, 0.3% of women (range 0.2-0.3%) and 0.4% of men (range 0.3-0.5%) were living with HIV by the end 2003. Epidemics in this region remain largely concentrated among injecting drug users, men who have sex with men, sex workers, clients of sex workers and the latter's sexual partners.

China and India include the world's most populous countries. National HIV prevalence in both countries is very low: 0.1 % (range 0.1-0.2%) in China and between 0.4% and 1.3% in India. But a closer look at this situation reveals that both countries have extremely serious epidemics in number of provinces, territories, and states.

In Thailand the number of new infections has fallen from a peak of around 140,000 a year in 1991, to around 21,000 in 2003. This remarkable achievement came about mainly because men began to use condoms regularly, and they also reduced their visits to brothels. Despite Thailand's indisputable success in dealing with the epidemic, the current level of prevention activities is still inadequate to address the existing HIV/AIDS situation.

Among the 5.3 million newly infected global HIV/AIDS cases, 3.8 million of these individuals reside in Sub-Sahara Africa. Of the 24 million AIDS deaths, this region accounts for 58% of the total global AIDS mortalities. In addition 12.1 million children have been orphaned in this region.

In Asia the prevalence rate of AIDS is comparatively low and approximately 6 million people, in this region, are living with HIV/AIDS, in spite of the fact that approximately half of world population reside in Asia.

In Latin and North America 1.4 million and 0.92 million people respectively are living with HIV/AIDS. Here the epidemic is mainly transmitted through homosexuality. Although these industrialized countries are spending a huge amount of money in providing anti-retroviral therapy and reducing vertical transmission from mother to child, the incidence of HIV/AIDS is nevertheless constantly increasing.

In summary HIV/AIDS is continuously spreading all over the world but its distribution varies considerably from region to region. At the present time, and for the immediate future, Sub- Sahara Africa will be the most affected region. Asia, however, is rapidly emerging are a serious HIV/AIDS zone because there are inadequate funds, poor economic situations in many countries, non availability of antiretroviral therapy due to its high cost, no proper screening at antenatal clinics to avoid vertical transmission in children, poor perception, knowledge and health education regarding HIV/AIDS, highly congested populations, lack of employment, and many other factors associated with a spiraling HIV/AIDS situation. According to UNAIDS/WHO 1 out of 100 sexually active persons of reproductive age (15-40 years) is infected with HIV/AIDS world wide, and it has been estimated that if the epidemic continues at its current pace, then the number of people affected suffering from HIV/AIDS will exceed 40 million by the end of the year 2000.

With the onset of HIV/AIDS in the 1980s, the problem of injecting drug use in Asia entered a new and more dangerous era. In addition to other means, the AIDS virus is transmitted through infected blood that can be disseminated by sharing contaminated needles, syringes, and other paraphernalia employed by drug users.

In the past two decades many countries in the Asian region have witnessed dramatic changes in drug–use patterns, with more individuals switching from smoking to injecting. These changes have resulted in the deterioration of the health status of

drug users. Newer and more potent forms of drugs have flooded the Asian markets, and there has been a rapid increase in the numbers of drug users all across Asia. Legal and social impediments to needle and syringe availability have caused users to inject with inappropriate equipment under unhygienic circumstances. We have begun to see ugly wounds and abscesses among the injecting drug users (IDUs) and a rapid increase in the number of drug users infected with hepatitis B/C and HIV.

While the adverse consequences of injecting drug use have increased dramatically over the years, prevention, treatment, and care services provided for drug users still remains far from adequate. Most of the existing services often provide only short term detoxification or rehabilitation regimens, sometimes under inhuman and punitive conditions. Most services still do not take into account the fact that drug use is a chronically relapsing problem and needs long term treatment and care. In some parts of Asia, hospitals still refuse to treat a sick person if doctors find out that he or she is a drug user. In other parts of the region, authorities continue to jail drug users and even threaten to take legal action against those individuals and organization that attempt to provide services to them.

Despite large-scale offensives in the various "wars on drugs" in Asia, the prevalence of drug use continues to rise. In some Asian countries injecting drug use has fuelled the HIV epidemic, and we see alarmingly high prevalence rates among IDUs.

Among developing countries, the first AIDS case in Indonesia was reported in 1987. For many years very few HIV infections were found> However in the last three years this situation has begun to change. The main modes of transmission in Indonesia are sexual transmission and injecting drug use. HIV prevalence is rapidly rising in a number of at-risk populations. Registered cases up until December 2003 are as follows: HIV = 3,924 infections and AIDS = 1,239 cases.

Indonesia's epidemic is currently unevenly distributed across this archipelago nation of 210 million people. Six of the 31 provinces are particularly seriously

affected. The country's epidemic is also driven largely by the use of contaminated needles and syringes for drug injection. HIV prevalence among its 125,000-196,000 injecting drug users has increased threefold-from 16% to 48% between 1999 and 2003. In 2002 and 2003 HIV prevalence ranged from 66% to 93% among injecting drug users attending testing sites in the capital city Jakarta. Indonesia drug users are regularly arrested and sent to jail. In early 2003 25% of inmates in Jakarta's Cipinang Prison were HIV-positive.

Among Indonesia's more than 200,000 female sex workers, HIV prevalence varies widely. In many areas recent sero-surveillance studies show that HIV infection in this population group is still rare. But some areas of the country have recorded sharp rises in the past year or two, with reported HIV infection levels as high as 8-17%. Among transgender sex workers, known as *waria,* data shows a sharp increase in HIV prevalence in Jakarta; from 0.3% in 1995 to nearly 22% in 2002. There is strong evidence that various sexual and injecting-drug-user networks in Indonesia overlap significantly, thus creating an ideal environment for HIV to spread.

With an increasing number of people living with HIV/AIDS in Indonesia, the Government has initiated a HIV/AIDS control program. The objective of this program is to prevent HIV infection from spreading; thus reducing the suffering of affected populations and the socio-economic impact of HIV/AIDS. One objective of this program is to create a conducive environment, for treatment and care of people living with HIV/AIDS.

HIV/AIDS prevalence rates of more than 5% are reported in Jakarta, Bali, and Papua (the province with the highest prevalence). In Jakarta infections are concentrated among injecting drug users, where as many as 90% of known users are infected compared to a national average of 50%.

1.2 Research Question

1- What factors are related with adopting of HIV/AIDS preventive behavior among Adolescents in High School of Jakarta, Indonesia?

2- What perceptions do adolescents have with respect to adopting of HIV/AIDS preventive behavior in High School of Jakarta, Indonesia?

3- How is the level of knowledge among adolescent, expressed in undertaking of HIV/AIDS preventive behaviors in High School of Jakarta, Indonesia?

1.3 Research Objective

Objectives of the studies

General Objective

To investigate the knowledge, perceptions, and preventive behavior that can reduce the risk of adolescents, attending selected high schools in Jakarta, Indonesia from being infected with HIV/AIDS.

Specific Objective

1- To describe the socio-demographic characteristics and knowledge levels of adolescents with respect to preventing HIV transmission.

2- To assess the perception of severity, susceptibility, benefits and barriers that can influence the adoption of preventive behavior to reduce the risk of being infected with HIV/AIDS.

3- To identify an association between socio-demographic characteristics, knowledge, perception, and preventive HIV/AIDS at risk behavior, among adolescents in selected high schools in Jakarta, Indonesia

1.4 Research hypothesis

1-There is an association between certain socio-demographic characteristics and the adoption of HIV/AIDS prevention behavior among adolescents in selected high schools in Jakarta, Indonesia

2-There is an association between knowledge about HIV/AIDS and HIV/AIDS prevention behavior among adolescents in high schools in Jakarta, Indonesia

3-There is an association between perception about HIV/AIDS and HIV/AIDS prevention behavior among adolescents in high schools in Jakarta, Indonesia

1.5 Conceptual Frame work

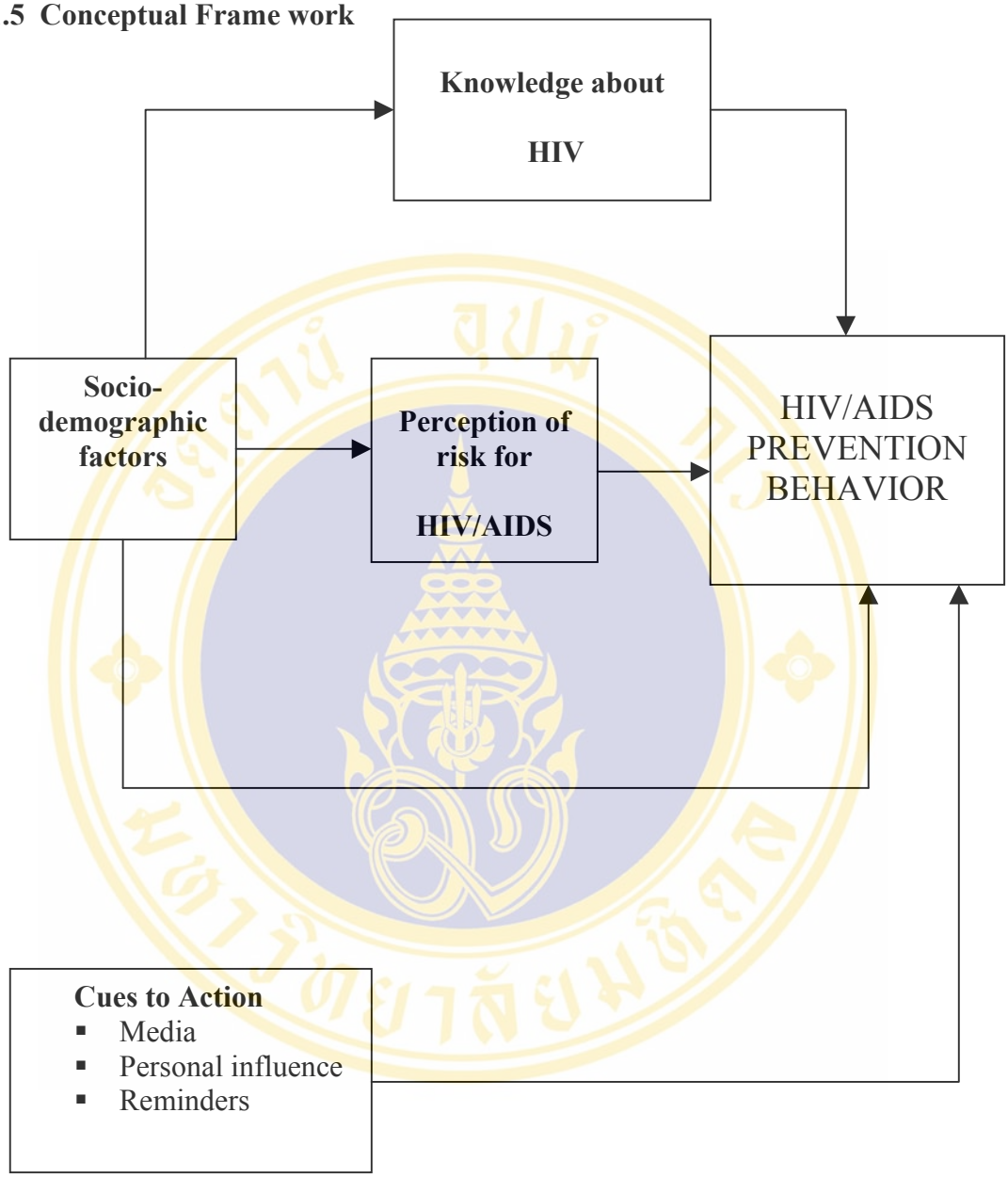


Figure 1 Conceptual Frame work

1.6 Operational Definition

1.6.1 Preventive behavior

In this study preventive behavior is abstinence, be faithful, Condom used or intending to use condoms.

1.6.2 Knowledge

It means understanding HIV/AIDS, the mode of transmission, high risks group, risk factor and how to prevent the transmission of HIV/AIDS. Knowledge of the young people about mode of transmission causes sign/symptoms, management, prevention, risk group and risk factors. Knowledge in this study comprised, question on etiology and mode of transmission, sign/symptom, treatment and prevention, risk factors/groups, the knowledge with total 8 score. That Adolescence, who got more than 4 score, got high level of knowledge. Remaining those who got less than 4 score found in low of knowledge.

1.6.3 Perception

To measure the level of perception, all mention variables below were clubbed together amalgamated under variable of perception. Perception of severity and susceptibility expressed in 7 questions, with a maximum score 21

Perception of benefits expressed in 11 question with maximum score 33 and barriers were composed of 5 questions with maximum score 15 .For the total of perception score of 30 by using Likert scale Hence and when making level of perception use Best Ranking Criteria.

1.6.3.1 Perception of severity

In this study it is discernment of HIV infections and AIDS sternness among Adolescence. It is cognitive imagination by student on the severity of HIV infections and AIDS

1.6.3.2 Perception of susceptibility

It is also cognitive imagination about perception for getting HIV infections and AIDS.

1.6.3.3 Perception of Benefit

Perception of benefit here applied to respective aggregations of all gains and cost benefit of actually engaging in the preventive behavior

1.6.3.4 Perception of barrier

Contrary to the perception of barrier here it means, the burden and non profit received by doer, which engaging in the preventive behavior. Such as not using the condom during sexual encounters, being promiscuous that is having extra marital affair o multiple inconsistent sex partner

1.6.4 Strength(s) and weakness of the study

1.6.4.1 Strength (s) of the proposed study

Self-administered questionnaire was used for collecting information regarding sensitive issue. So information bias might be minimized

1.6.4.2 Weakness / limitation of the study

Target population is only One High School in Jakarta There fore this population doesn't present the whole population of Adolescence in High School in Indonesia.

CHAPTER 2
LITERATURE REVIEW

2.1 Theoretical Model

The Health Belief Model and HIV Risk Behavior Change

The Health Belief Model (HBM) was initially developed in the 1950s by a group of social psychologists in the US Public Health Service in an effort to explain the widespread failure of the people to participate in programs to prevent or to detect disease (Hochbaum, 1958: Rosenstock, 1960, 1966, 1974). Later, the model was extended to apply to people's responses to symptoms (Kirscht, 1974) and to their behavior in response to diagnosed circularly compliance with medical regimens (Becker, 1974). Over three decades, the model has been one of the most widely used psychosocial approaches to explaining health–related behavior.

Although the model evolved gradually in response to very practical programmatic concerns that will be described later, its basis in psychological theory is provided as an aid to understanding its rationale as well as its strengths and weaknesses.

2.1.1 Components of the Health Belief Model

Over the years since Hochbaum's survey, many investigations have helped to expand and clarify the model and to extend it beyond screening behaviors to include all preventive actions to illness behaviors and to sick-role behavior (see summaries in Becker, 1974; Becker & Maiman, 1980; Janz & Becker, 1984; Kirscht, 1974; Rosenstock, 1974) In general its now believed that individuals will take action if they believe that a course of action available to them would be beneficial in reducing either their susceptibility to or the severity of the condition; and if they believe that the anticipated barriers to (or costs of) taking the action are outweighed by its benefits. Each component of the model is described in greater detail below.

2.1.2 Perceived Susceptibility

This dimension refers to one's subjective perception of the risk of contracting a health condition. In the case of medically established illness, the dimension has been reformulated to include acceptance of the diagnosis, personal estimates of susceptibility, and susceptibility to illness in general.

2.1.3 Perceived Severity

Feelings concerning the seriousness of contracting an illness or leaving it untreated include evaluations of both medical and clinical consequences (e.g. death, disability, and pain) and possible social consequences (such as effect of the conditions on work, family life, and social relations). We have come to label the combination of susceptibility and severity as perceived threat.

2.1.4 Perceived Benefit

While acceptance of personal susceptibility to a condition also believed to be serious (perceived threat) produces a force leading to behavior, the particular course of action that will be taken depends upon beliefs regarding the effectiveness of the various actions taken in reducing the disease threat, termed the perceived benefits of taking health actions. Thus an individual exhibiting an optimal level of beliefs in susceptibility and severity would not be expected to accept any recommended health action unless that action was perceived as potentially efficacious.

2.1.5 Perceived Barriers

The potential negative aspects of a particular health action, or perceived barriers, may act as impediments to undertaking the recommended behavior. The individual engages in a cost-benefits analysis where In the they weight the action's effectiveness against perceptions that my be expensive, dangerous (having negative side effects or iatrogenic outcomes), unpleasant (painful, difficult, upsetting), inconvenient, time-consuming, and so forth. Thus the combined levels of susceptibility and severity provide the energy or force to act and the perception of benefits (less barriers) provide a preferred path of action (Rosenstock, 1974).

2.1.6 Cues to action

In various early formulations of the HBM the concept of clues which trigger action were discussed and may ultimately prove to be important, but they have not been systematically studied.

2.1.7 Other variables

Diverse demographic, socio-psychological, and structural variables may effect the individual's perceptions and thus indirectly influence health-related behavior. Specifically, socio-demographic factors, particularly educational attainment, are believed to have an indirect effect on behavior by influencing the perception of susceptibility, severity, benefits, and barriers.

2.1.8 .Evidence for and against the model

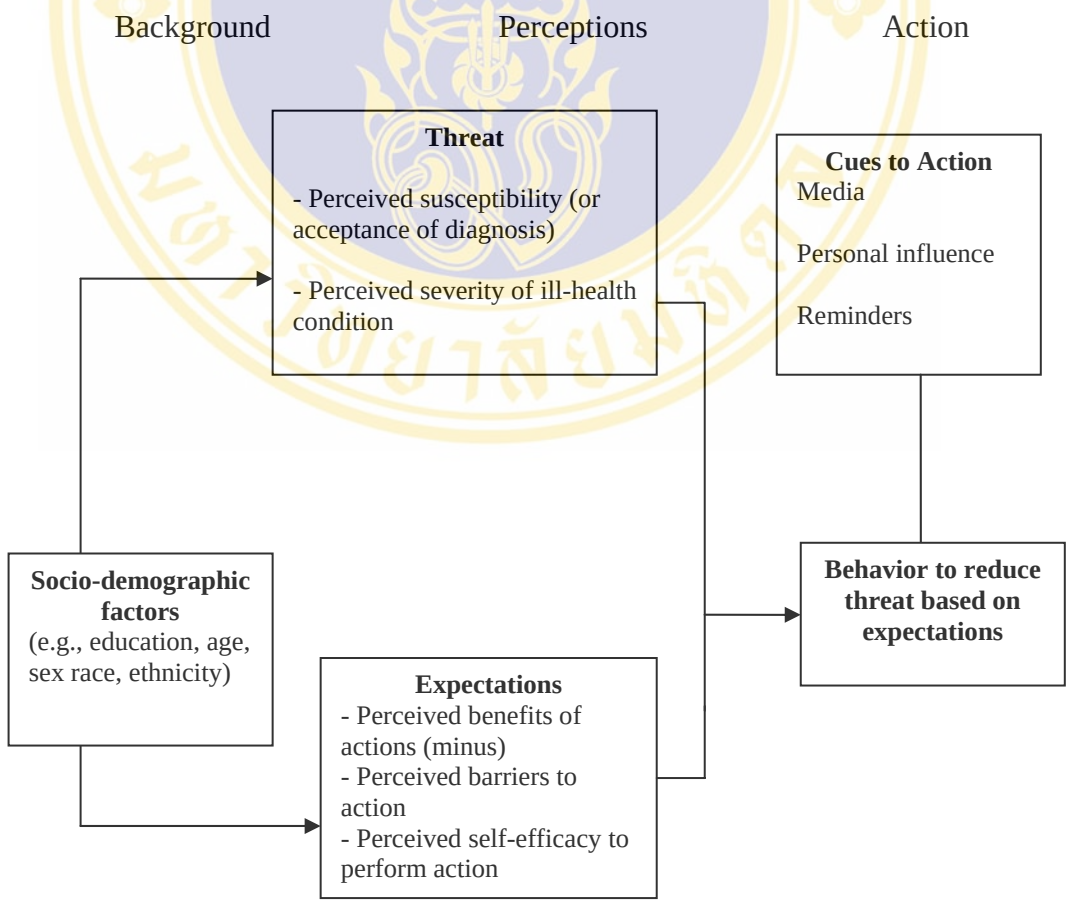


Figure 2 Schematic diagram of the components of the Health Belief Model and AIDS-protective Behavior

2.2 AIDS Epidemic and Measures in Indonesia

Since 1990 spelled out members growth HIV / aids in Indonesia tardy relative. But before 2000, speeds of accretion People Living with HIV/AIDS (PLWHA) mount fast once. Sum up the patient first merely flog the people, nowadays reach thousands of people. Even enter 2000, its epidemic storey; level have could as concentrated level academic.

Hence no wonder when UNAIDS and WHO classify the Indonesia with China as State with the serious threat of HIV / aids. Pursuant to final data statistic till September 2003, estimated there are 3.924 case HIV and 1.239 case AIDS in Indonesia. But number that noted only in the form of ices mount.

According to situs infeksi.com under Ministry of Health in this time, Indonesia estimated 80 - 120.000 PLWHA. If problem HIV / aids is not handled seriously, big possibility of Indonesia will experience of the disaster of national HIV / aids in 2010

Six provinces with the highest case are Papua, DKI Jakarta, Riau, West Java, East Java, and Bali. The cause of the increasing of amount PLWHA by tajamitu, Indonesia may be spelled out members identical by RUSIA [is] which is 90% its patient caused by hypodermic needle injecting drug user (IDU), while in Indonesia accelerate the addition of PLWHA of effect hypodermic needle of IDU about 60.

2.2.1 IDU

Initially it was thought that the increasing incidence of PLWHA was due to sexual transmission, but at the present time IDU seems to be a major cause of the quickening pace of new HIV infections. This is especially true in the three metropolitan centers of Bali, Jakarta, and Batam.

The Government of Indonesia is currently budgeting Rp 120 million for prevention and care within the HIV/AIDS National Program, to reduce the spread of the HIV via hypodermic needles and syringes. According to one result survey

conducted by the Ministry of Health, approximately 58% of drug users are below the age of 18 years. Even in Jakarta it is estimated that 3 of 10 adolescents use drugs. Steve Allen, from UNICEF, has stated that in a survey of 1,000 adolescents in Jakarta, about 84% did not know about HIV/AIDS.

2.2.2 Condom Use

According to a survey from one metropolitan center in Indonesia, 70% of commercial sex workers did not use condoms. It is estimated that as many as 7.1 million Indonesia men routinely interact with commercial sex workers, and of this number only 10% used condoms. To make people aware of the danger of unprotected sexual encounters, a drop-in center program has commenced. The program provides information about HIV/AIDS, which is also included in the school curriculum Other sites used to provide information concerning the dangers of, and risk behavior associated with, HIV/AIDS take place in centers which large numbers of people congregate, such as department stores.

Table 1 Cumulative AIDS Cases in Indonesia by Sex in September 2003

No.	GENDER	TOTAL
1	Male	954
2	Female	270
3	Don't Know	15
	TOTAL	**1,239**

Table 2 Cumulative AIDS Cases in Indonesia by Risk Factor in September 2003

	RISK FACTOR	AIDS
1	Heterosexual	646
2	Homosexual	118
3	IDU	303
4	Blood Transfusion	4
5	Hemophilia	2
6	Prenatal Transmission	20
7	Don't know	146

Table 3 Cumulative AIDS Cases in Indonesia by Age Group in September 2003

No.	AGE	AIDS
1	<1 Year	3
2	1-4 Years	15
3	5-14 Years	
4	15-19 Years	72
5	20-29 Years	524
6	30-39 Years	380
7	40-49 Years	140
8	50-59 Years	37
9	>60 Years	10
10	Don't know	54

Table 4 Cumulative AIDS Cases in Indonesia of IDUs by Age in September 2003

No.	AGE	TOTAL	PERSENTAGE
1	15-19 Years	30	9.9
2	20-29 Years	190	62.7
3	30-39 Years	51	16.83
4	40-49 Years	11	3.63
5	50-59 Years	4	1.32
6	Don't know	16	5.28

Table 5 Cumulative AIDS Cases In Indonesia of IDUs by Sex in September 2003

No.	GENDER	TOTAL	PERSENTAGE
1	Male	280	92.4
2	Female	19	6.27
3	Don't know	4	1.32

2.3 HIV Transmission and Prevention

There are four routes of HIV/AIDS transmission. This includes sexual intercourse, contaminated instruments, blood transfusions, and prenatal transmission from mother to fetus or newborn infant.

2.3.1 Sexual Transmission

HIV can be transmitted from an infected person to his/her partner. Sexual transmission may occur from man to woman, from woman to man, and from man to man.

2.3.2 High at-risk behavior associated with sexual transmission of HIV/AIDS:

Having many sex partners

Having sex with people who have many sex-partners

2.3.3 Ways to prevent HIV sexual transmission:

By having no sexual relations with others (abstinence)

By only having sex with a monogamous, uninfected partner (being faithful).

2.3.4 Ways to reduce risk of HIV infection via sexual transmission:

By using condoms correctly throughout sexual penetration (i.e. vaginal, oral, and anal). “Throughout” mean from start to finish.

By reducing the number of sex partners, and by using and/ or insisting that the sexual partner uses condom.

By not having sex with people who have many sex partners.

2.3.5 Transmission through contaminated instrument

HIV contaminated instruments are, usually, needles, syringes or other skin piercing instruments (e.g. sharp pointed objects for tattooing). Transmission through HIV contaminated needles and syringes can occur when these utensils are not properly sterilized before re-use. This is a common situation among injectable drug users (IDUs) in developing countries, where needles, syringes, as well as instruments for dental procedures and minor surgery are widely used in many places (from the local market to poorly funded government clinics) and not properly sterilized or decontaminated/disinfected before re-use.

2.3.6 Transmission through blood

HIV/AIDS transmission through infected blood and blood products (e.g. factor VIII for Hemophiliacs) has almost disappeared in industrialized countries following the introduction of screening methods in 1985, and with the implementation of self exclusion of at-risk people from donating blood. Still, some small risk exists due to “false negative” HIV tests among blood donors during the “window period” of initial infection.

2.3.7 Prenatal Transmission

Transmission of HIV infection from a woman to her child may occur before, during, or shortly after delivery. The risk that an infant will be infected by an HIV infected-mother is reported to be 14-32 % in developed countries and 25-48 % in developing countries. Transmission shortly after delivery can also take place via breast-milk.

2.4 Young People and HIV

Today's generation of young people is the largest age-cohort in history; nearly half of the global population is less than 25 years old (UNFPA, 2003). They have not known a world without AIDS. Young people between the age of 15 and 24 years are both the most threatened globally, accounting for half of all new cases of HIV, as well as the greatest hope for turning the tide against AIDS. The future of the epidemic will be shaped by their actions. Experience proves this. The few countries that have successfully decreased national HIV prevalence have achieved these gains mostly by encouraging safe behavior choices among young people.

Young people are exposed to HIV in different ways. In high prevalence Sub-Saharan Africa the main mode of transmission is heterosexual intercourse. This region contains almost two-thirds of all young people living with HIV-approximately 6.3 million people, of whom 75 % are female (UNAIDS, 2003). In eastern Europe and Central Asia HIV prevalence among young people is rising rapidly due to drug injecting use with contaminated equipment and, to a lesser extent, unsafe sex (see Figure 3)

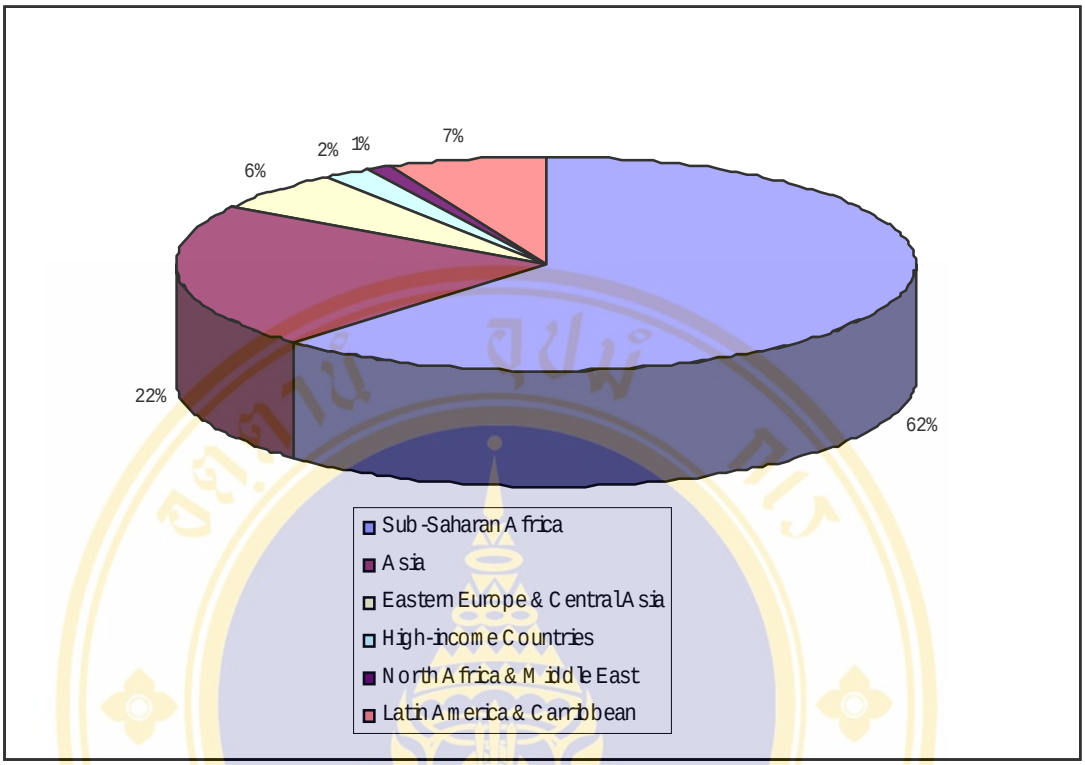


Figure 3 HIV prevalence among young people is rising rapidly due to drug injecting with contaminated equipment and, to a lesser extent, unsafe sex.

2.4.1 High risk, high vulnerability

A variety of factors place young people at the center of HIV vulnerability. These include lack of HIV information, education, and services; the gambles many of them must take in order to survive; and the risks that accompany adolescent experimentation and curiosity.

2.4.2 Early sexual debut

Most young people become sexually active in their teens, and many before their 15th birthday. Factors such as increasing urbanization, poverty, exposure to conflicting ideas about sexual values and behavior, and the breakdown of traditional channels are encouraging premarital sexual activity among adolescents.

Studies show that adolescents who began sexual activity early are likely to have sex with more partners and with partners who have been at risk to HIV exposure. They are not likely to use condoms (WHO, 2000). In Kisumu Kenya 25% of sexually active young boys and 33% of young girls said they had not used a condom during their first and subsequent sexual encounters (Glynn et al, 2001). Erratic condom use with regular and non regular sexual partners was also reported in studies in Argentina, Korea and Peru (WHO, 2000).

2.4.3 Gender disparities

When the primary mode of HIV transmission is heterosexual intercouse, young women are the worst affected. The proportion of women living with HIV, who are over 15 years of age, is 1.7 times higher in Sub-Saharan Africa than in other regions (Population Reference Bureau, 2003). In Trinidad and Tobago the number of women between 15 and 19 years of age with HIV is five times higher than among adolescent males (Pisani, 2003).

The higher biological vulnerability of girls and women to HIV infection is one explanation for the growing numbers of young women infected with HIV. However gender power imbalances, patterns of sexual networking, and age mixing are important factors that tip the balance further against them. In Sub-Saharan Africa girls are engaging in sex at an earlier age than boys, and their sexual partners tend to be older.

2.4.4 Injecting drug use: Emerging threat

In Central Asia and Eastern Europe there is evidence that the age of initiation of injecting drug use is falling (Rhodes et. al.2002). Furthermore overall drug use appears to be increasing, due to rapid social and political change, sharp declines in living standards, and an increase in regional heroin availability (UNDP, 2003), Young injecting drug users are particularly at risk, since they may not have the knowledge or skills to protect themselves from infection via contaminated injecting equipment (UNAIDS, 2003)

2.5 Knowledge about HIV/AIDS

According to David Ostrow, et al, knowledge about HIV/AIDS has been seen to play a role in motivating initial behavioral change, particularly in persons who see themselves as being at relatively low risk and are initially less informed about the disease and result of HIV transmission.

Knowledge alone, however, does not ensure long term sexual behavior change. A study of the self-reported behaviors of Chicago gay men, who were thought to be relatively well informed about HIV/AIDS showed that level of knowledge was related to several behavioral outcomes when analyzed cross-sectionally. However a later longitudinal analysis of the same cohort failed to show any such significant relationships. This study suggests that education that aims solely to increase knowledge would appear to be limited in its ability to induce and maintain modifications in sexual behavior.

In the HIV/AIDS Risk Reduction Model, knowledge of HIV transmission behavior was thought that it might primarily influence the first stage of the change process (Problem Perception). It suggests the possibility that some people may have extensive knowledge, perceive their sexual behavior to be problematic, and are moving towards, but have not attained behavioral change.

2.6 Perception to contracting HIV/AIDS

Perception is the expression of knowledge and understanding which may be the specific thought, concept, or impression. It is the expression that the ability of the brain can interpret the meaning or understanding about various objects. Perception is also a fundamental of learning. (Mosby's Dictionary, 1994; 1188) It is the process of thought and human mentality that expresses the knowledge, understanding, and awareness of various topics across the neuro-sensory pathways. Perception will have the meaning toward experience. It is the substitute of truth and has influence on that person's behavior (King, 1981). It is the interpretation of the sensation and becomes

something which has meaning. The interpretation depends on experience and learning. Without learning or experience there will be no perception, it is only sensory. Perception is the selection in a specific time. We do not perceive everything, but we choose to perceive only some stimuli. Trapmee, W.(1990) and Chanaem, S. (1997) have stated that perception was the process which encompasses the simple to complex level that is difficult to understand. Perception is the interpretation from sensation. In that perception, we not only see, hear, or smell, but we also perceive "what is the object?", what is it character?", "in which direction?', or "how far from us?' etc. We give meaning into objects that come across our sensation that lie between stimuli and response. Perception is the process that happens in between stimuli and response as illustrated. Perception is the process that happens in between stimulus and response as illustrated in figure:

From the meaning of perception, it can be concluded that perception is the process of thought and human mentality that shows one's thinking, understanding, awareness of stimulus that come across any representation or all which the brain interprets using memory, past experience, emotion, own feeling as its interpreting tools.

2.6.1 Perception Process

There are 3 stages of perception process which include:

1.Selection is the process of choosing in order to perceive some stimulus among various stimuli.

2.Organized people will organize stimuli into 2 types:

a)-Figure and ground are the process that people divide stimulus by concentrate to that part specially. We call figure and other part that we are not interesting as ground.

b)-Simplification is the organization of the data from stimuli as the trend of the normal people which arrange that stimulus into a more simple thing and remove the complex and confusing part.

3.Interpretation or making sense of and understanding experience is the last process of perception process. It is the process that a person makes in their understanding or interpretation of that stimulus. Therefore interpretation depends on the subjective nature of the person who has that stimulus, and different people may make different interpretations toward same stimulus.

2.7 Prevention Behavior

We do not know enough to accomplish a great deal if we put to practice, provided the concerned person can be persuaded voluntary, or if necessary by concern, to modify their behavior. Some of the measures that I can recommended must be based on the fact, this is venereal disease and sexual practices, whether by male homosexual or heterosexual need to be reduced in amount and to some extant degree. Monogamy is clearly the best policy. There is great deal of talk about the need for safe sexual practices. As for I know, the only safe sexual practices is to achieved through the use of condom, and we all know that this is not successful as we would like it to be.

What is apparent from recent studies is that promiscuity has led to a rapid spread of the disease, the lengthy period of incubation; people who have already contracted AIDS are unaware that they have it, and so do not realize that they are passing it to on to others. A radical change in outlook towards sexual behavior is necessary, if the progression of the AIDS Epidemic is to be halted, and given the present climate this will not be easy. Moral agents and the fact that society expects us to take responsibility for our own personal conduct.

Health behavior including condom and other contraceptive use, vaginal douching, male circumcision, effect a person’s risk for STDs, while consistent and proper condom use and male circumcision decrease STDs risk.

AIDS prevention among young people is a public health priority. However the impact of AIDS goes beyond the need for individuals to recognize and implement

strategies to protect themselves. Even though condom use is the most effective strategy available for preventing HIV among sexually active youth, it depends on male consent. Female adolescents traditionally follow a different role than their male partner, which decreases the likelihood that they have power to ensure consistent condom use during sexual intercourse.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Study design

The study design is a cross sectional descriptive study, which aims to discover the intention of high school student in Jakarta, Indonesia, towards practicing safe sex, as well as to determine this cohort's socio-demographic characteristics, psychosocial related factors, and their knowledge and perception on HIV/AIDS in the prevention of HIV/AIDS.

3.2 Study population

The target population for this study was students in one high school in Jakarta, Indonesia.

3.3 Sample size calculation and Sampling technique

(a) Sample size $n = \frac{Z^2_{\alpha/2} P(1-P)}{d^2}$

n = the desirable calculated sample

α = the level of statistical significance is set at 0.05

$Z_{\alpha/2}$ = 1.96 (95% confidence interval for two – sided test)

P = The prevalence among adolescents in Indonesia engaging in sexual activity but whom did not use contraception was estimated as 55.4%(source from group of indicator, Center for research and Development of Health Ministry of Indonesia, 2000)

d = Precision of degree of accuracy required is set 0.05

$$n = \frac{(1.96)^2 x 0,554 \; x(1 - 0.554)}{0.05^2} = 397$$

(b) Sampling technique

The Head of the school was selected as the area of study since the population of interest is available at large number in this school.

3.4 Instruments

The instrument in this study for collection of data was through self administrated structured questionnaire. The questionnaire was prepared in five parts:

Part 1 Socio demographic characteristics

This part of questionnaire consisted of questions dealing with age, sex, religion, education, education of father, education of mother, occupation of father, occupation of mother, hometown, and present residence.

Part 2 Knowledge on HIV/AIDS

This part included 8 questions, was divided into levels of knowledge.

High knowledge = if more than value of mean

Low Knowledge = if less than value of mean

Part 3 Perception towards HIV/AIDS

Perception in this study divided in Perception of severity, susceptibility, benefit and barrier towards HIV/AIDS prevention behavior includes question with maximum score of 33. Students were asked to agree, not sure and disagree with the perception of severity, susceptibility, benefit and barrier. Expressed in the question by using Likert scale ranging from:

3 score = agree

2 score = not sure

1 score = disagree

With negative questions scores were opposite

Perception of severity, susceptibility, benefit and barrier were divided in three levels: high, moderate, and low groups based on best group rating criteria from total of perception.

Part 4 Preventive behavior on HIV/AIDS

This part including 11 questions, dividing in to three category levels: to measure abstinent, be faithful, and condom use.

Part 5 Cues to action

This part including, media information, personal influence and reminders to prevention behavior of HIV/AIDS.

3.5 Data collection

Data were collected by means of conducting self-administrated structured questionnaire on the sample population being under supervised The Head of this School. The questionnaire was at first prepared in English and later on it was translated into Indonesia language.

3.6 Data Analysis

After examination and correction of each returned questionnaire, data collected was processed by statistical program. The results were presented in two parts:

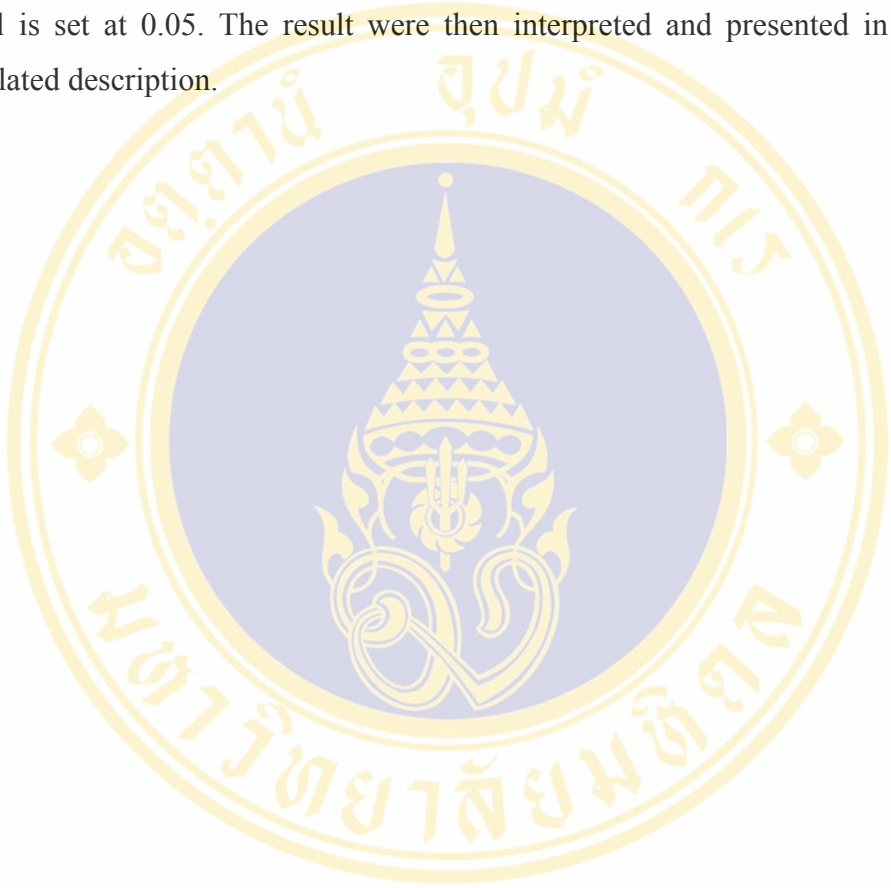
Part I Descriptive Statistics

Descriptive statistics was used for frequency and percentage distribution of socio-demogragraphic, including age, sex, religion, and education, occupation of mother and mother, hometown, present residence. In this part also include level of knowledge and perception.

Part II Inferential Statistics

Chi-square was used to describe the association between socio demographic characteristics, knowledge, perception and preventive behavior according to conceptual framework and objective of this study.

Chi-square test was used for testing the research hypothesis. The critical significant level is set at 0.05. The result were then interpreted and presented in the form of tabulated description.



CHAPTER 4
RESULTS

This research was geared to describe HIV/AIDS prevention behavior among adolescents in a high school in Jakarta, Indonesia. Data was collected from 400 students through self-administered structured questionnaire on 7 January 2005.

All distributed questionnaire were fully completed. The results of the study were described according to socio-demographic factors, knowledge, perception, clues to action, and prevention behavior of HIV/AIDS (i.e. abstinence, being faithful, and condom use).

The results are presented in the form of tables using frequency and percentage distribution for description of the students' characteristics, their clues to action, knowledge and perception, prevention behavior of HIV/AIDS of being abstinent, being faithful and using condoms. The latter are shown using chi square as statistic tools.

4.1 Frequency and percentage distribution of independent and dependent variables:

4.1.1 Socio demographic factors

According to gender, slightly more than half of the respondents (51.8 %) were female while the remaining 48.3% were male. Regarding religion the vast majority (86.8 %) were Muslim, while 11.3% were Christian, and a very small percentage of respondents were either Buddhist (1.0%), Hindu (0.8 %) or Pangestu (0.3 %).

Regarding monthly income, over one-third (36.8 %) of respondents received money from ranging from 100,000 to 200,000 Rupiah. Slightly over one-fourth (28.5 %) received from 200,001 to 300.000 Rupiah, 19.5 % received from 300,001 to

500,000 Rupiah, while the remainder received smaller amounts such as from 50,001 to 100,000 (5.8%) Rupiah or only 10,000 to 50,000 Rupiah (5.0%). A very small percentage of respondents received larger amounts of money from their parents. This included those respondents who either received from 500,001 to 1,000,000 (3.3%) or > 1,000,000 (1.3%) Rupiah per month.

It was found that overwhelming majority of the respondents (96.5%) get allowance from parents, a small percentage (1.3 %) receive their allowance from relatives, 1 % get allowance from parents and relatives, 0.3 % get allowance from loan for study, 0.3 % get allowance from parents and loan for study, and only 0.5 % get allowance from a part-time job.

Regarding the education level of the respondents' fathers it can be seen that more than one-third (38.5 %) were university graduates, nearly one-fourth (23.8 %) were post graduates, 20.5 % high school graduates, 13.8% graduated from a vocational institute, while only 3% finished primary school, and 0.5 % had no formal schooling.

Regarding the education level of the respondents' more than one-third (36.3 %) completed high school, nearly one-third (32.5 %) graduated from university, 13.8 % finished vocational institute, while 9.8 % completed post graduate studies, 6% finished primary school, and 1.8 % had no formal schooling.

With respect to the occupation of the respondents' fathers nearly one-half (47.3%) were engaged in business, more than one-third (39.5%) were government employees, while 11.3%) were professionals, 1.5 % were laborers, and 0.5 % were involved in agricultural activities.

With respect to the occupation of respondents' mothers, slightly over one–half (51%) were housewives, slightly over one-fourth (25.3 %) were government employees, nearly one–fourth (23.5 %) were engaged in business, and small percentage (0.3%) were laborers.

Regarding place of birth, the majority (78.8 %) of respondents were born in town, 20.3% were born at the province level, while a tiny percentage (1 %) were born at the district level.

According to present residence, a large majority (83.3 %) respondents were living in town, 10.8 % were at the province level, while 6.0 % were at the district level.

With regard to number of years living at their present residence, more than one-third (34.3 %) were living at their present residence from 16 to 20 years, 30.8 % were living there from 11 to 15 years, 19.5 % were living there from 6 to 10 years, and 15.5 % respondent were living at their present residence from 1 to 5 years.

It was found that overwhelmingly majority of respondents (98.5 %) live with parents, 2.5% live with relatives, 1.3 % live in rented accommodations (a room), and 0.5% live in their own apartment.

Table 6 Number and percentage of respondents by socio-demographic characteristic

Socio-demographic characteristic	Number (n=400)	Percent (%)
Gender		
Male	193	48.3
Female	207	51.8
Religion		
Buddhist	4	1
Muslim	347	86.8
Christian	45	11.3
Hindu	3	0.8
Pangestu	1	0.3
Age		
15 years old	81	20.3
16 years old	107	26.8

Table 6 Number and percentage of respondents by socio-demographic characteristic (Cont.)

Socio-demographic characteristic	Number (n=400)	Percent (%)
17 years old	170	42.5
18 years old	42	10.5
Mean (years)=16.43, SD = 0.929 Year		
Monthly Income (Rupiah per month)		
10.000 - 50.000	20	5
51.000 - 100.000	23	5.8
101.000 - 200.000	147	36.8
201.000 - 300.000	114	28.5
300.000 - 500.000	78	19.5
501.000 - 1.000.000	13	3.3
> 1.000.000	5	1.3
Mean : 274.000 Rupiah, SD =133.580 Rupiah		
Source of allowance		
Parents	386	96.5
Relatives	5	1.3
Parents and relatives	4	1
Loan for study	1	0.3
Parents and loan for study	1	0.3
Parents, relatives and loan for study	1	0.3
Job	2	0.5
Education level of Father		
No Schooling	2	0.5
Primary	12	3.0
High School	82	20.5
Vocational institute	55	13.8
Graduate	154	38.5
Post Graduate	95	23.8
Education level of Mother		
No Schooling	7	1.8
Primary	24	6.0
High School	145	36.3
Vocational institute	55	13.8
Graduate	130	32.5
Post Graduate	39	9.8

Table 6 Number and percentage of respondents by socio-demographic characteristic (Cont.)

Socio-demographic characteristic	Number (n=400)	Percent (%)
Occupation of Father		
Business	189	47.3
Laborer	6	1.5
Government employee	158	39.5
Agriculture	2	0.5
Professional	45	11.3
Occupation of Mother		
Business	94	23.5
Laborer	1	0.3
Government employee	101	25.3
House wife	204	51.0
Place of birth		
Town	315	78.8
District	4	1.0
Province	81	20.3
Present Residence		
Town	333	83.3
District	24	6.0
Province	43	10.8
Number of years living at present residence		
1 - 5 years	62	15.5
6 - 10 years	78	19.5
11- 15 years	123	30.8
16- 20 years	137	34.3
Side of present residence		
Parent house	383	95.8
Apartment	2	0.5
Rental accommodation (room)	5	1.3
Relatives	10	2.5

4.1.2 Level of knowledge on HIV/AIDS

Table 7 shows that the vast majority (94.8 %) of respondents answered correctly about the causative agent of HIV/AIDS. A majority (69.5 %) answered that HIV/AIDS can be transmitted by engaging in unprotected sexual intercourse with a person who has many sexual partners. A large majority (79.3 %) correctly answered that one can determine whether or not a person has been infected with HIV/AIDS by taking specific HIV blood test. Only 29.8 % of respondents answered correctly about the length of time it takes from the point a person is infected with the HIV virus until he/she develops full-blown AIDS.

A small percentage (12.5%) of respondents knew that adolescents and young adults who do not use condoms with their regular partners and/or casual sexual contacts are at high risk for contracting HIV/AIDS. Two-third (66 %) of respondents correctly answered that a HIV positive pregnant woman can infect her fetus or new born infant, with HIV virus from maternal to fetal blood supply.

27.8 % of respondents answered that HIV/AIDS be cured by a vaccine while another 8.3% answered that HIV/AIDS be treated by treatment of the immunological system.

Table 7 Distribution percentage of correct answer to indicate knowledge about HIV/AIDS

Knowledge statement	Correct Answer	
	Number	Percent
1. Do you know the causative agent of HIV/AIDS	379	94.8
2. How HIV/AIDS be transmitted in the following way	278	69.5
3. How to determine whether or not a person has been infected with HIV/AIDS	317	79.3
4. How long takes for a person to develop full-blown AIDS from the time that he/she infected with the HIV virus	119	29.8

Table 7 Distribution percentage of correct answer to indicate knowledge about HIV/AIDS (Cont.)

Knowledge statement	Correct Answer	
	Number	Percent
5. Which group, if any, is at high risk for contracting HIV/AIDS?	50	12.5
6. How HIV positive pregnant woman infect her fetus, or newborn infant, with the HIV virus	264	5.0
7. How HIV/AIDS be cured	111	27.8
8. How HIV/AIDS be treated	33	8.3

Table 8 shows the level of knowledge according to "mean score". A mean score of 4 to 7 indicated a "high score", while a mean score of 0 to 3 indicated a "low score" or low level of knowledge. In this study two-thirds (66.7%) of the students had high level of knowledge, and 33.3% had low level of knowledge.

Table 8 Number and percentage distribution of respondents with regard to level of knowledge about HIV/AIDS

Level of knowledge (Score)	**Number** (n=400)	**Percent** (%)
High Level (> 4 score)	267	66.8
Low Level (< 4 Score)	133	33.3
Mean = 3.88		

4.1.3 Level of perception on prevention HIV/AIDS

Table 9 shows frequency and percentage distribution of respondents' perception in regard to the prevention of HIV/AIDS.

In this table the frequency and percentage of each question, enumerated in the questionnaire, is given. Regarding perception of severity, 52.3% of the students are not sure whether or not HIV/AIDS is a curable disease. Almost all respondents (97%) agree that HIV/AIDS is a serious problem, 72.8% agree that people with HIV/AIDS will die from opportunistic infections, 77% agree AIDS makes every infected person suffer, 69.8% agree that HIV/AIDS causes large financial expenditures to provide care for the AIDS patient, 73.5% agree that AIDS can be responsible for people dying at a much younger age than necessary, and 36% of the students are not sure whether somebody infected with HIV virus can live like a normal person.

Regarding perception of susceptibility almost two-thirds (64.5%) of respondents are not sure using condom during sexual intercourse can reduce sexual gratification, although a large majority (93.5%) agreed that having multiple sexual partners can increase the risk of acquiring an HIV infection.

Regarding perception of benefit, 61.3% of respondents agree that using condoms during sexual intercourse will greatly reduce sexual gratification for them and their partner; 86.5% agree that members in families can discuss with one another ways to prevent HIV/AIDS; 82.5% agree that they can discuss with a sexual partner how to prevent HIV/AIDS; while 69.3% of respondents disagreed that one can save money by not using condoms.

Regarding perception of barriers to preventing HIV/AIDS, 61.8% felt that a great deal of financial expenditures are needed to care for an AIDS patient; two-third (66.8%)of respondents were not sure whether their sexual partner fell unhappy and uncomfortable when using a condom; 67.5% were not sure whether using condoms makes one lose their sexual potency or masculinity; while 64.5% disagree with the statement that making love with only one partner is boring.

Table 9 Frequency and percentage distribution of respondents according to different items of perception about HIV/AIDS

No	Statement	Agree (%)	Not sure (%)	Disagree (%)
	Severity of HIV/AIDS			
1	HIV/AIDS is a curable disease	15.5	52.3	32.3
2	HIV/AIDS is a serious problem	97.0	2.5	0.5
3	People with HIV/AIDS will die due to opportunistic infections	72.8	22.3	5.0
4	AIDS makes every infected person suffer	77.0	20.0	3.0
5	It takes a great deal of expenditure to care for an AIDS patient	69.8	26.0	4.3
6	AIDS can make you die before a suitable age	73.5	21.0	5.5
7	Once infected with the HIV virus, one can not live like a normal person	30.0	36.0	34.0
	Susceptibility			
8	You have chance to get infected with HIV, if you have open wound and have direct contact with somebody's blood	41.5	48.0	10.5
9	Only one sexual intercourse contact, without using a condom, may cause you to become infected with the HIV virus	25.0	28.3	46.8
10	All children who are delivered from HIV infected mothers have a chance to contract this diseases from their mother	38.0	41.5	20.5

Table 9 Frequency and percentage distribution of respondents according to different items of perception about HIV/AIDS (cont.)

No	Statement	Agree (%)	Not sure (%)	Disagree (%)
11	It is not necessary to use condoms while having sex with somebody who we know well	4.8	21.3	74.0
12	Using condoms during sexual intercourse reduces sexual gratification	18.0	64.5	17.5
13	Having an AIDS patient in your house will create a stigma from relatives and neighbors	8.5	37.0	54.5
14	Multiple sexual partners increase the risk of being infected by the HIV virus	93.5	5.3	1.3
	Perception of Benefit prevention HIV/AIDS			
15	Using condoms during sexual intercourse will greatly reduce sexual gratification for you or your partner	61.3	32.3	6.5
16	Members of your families can discuss together about how to prevent HIV/AIDS	86.5	13.0	0.5
17	You and your sexual partner can discuss together how to prevent HIV/AIDS	82.5	15.8	1.8
18	Having a condom in your pocket is good practice for its ease and convenience	36.0	54.3	9.8
19	Using condoms makes one lose their sexual potency or masculinity	4.8	65.3	30.0
20	Using condoms can prevent unwanted pregnancies	43.0	51.0	6.0
21	Avoidance of pre-marital sex can reduce the risk of HIV infection	31.3	47.3	21.5

Table 9 Frequency and percentage distribution of respondents according to different items of perception about HIV/AIDS (cont.)

No	Statement	Agree (%)	Not sure (%)	Disagree (%)
22	Condom use during every act of sexual intercourse reduces anxiety about being infected by the HIV virus	36.0	53.5	10.5
23	Consistent condom usage is a good model for adolescents and young adults to follow	38.0	37.8	24.3
24	Family members [e.g. spouses and future children] can avoid being infected by HIV/AIDS if you use condoms consistently	33.5	49.8	16.8
25	Money can be saved by not using condoms	5.3	25.5	69.3
	Perception of Barrier to prevention HIV/AIDS			
26	Caring for an AIDS patient requires much expenditure	61.8	33.3	5.0
27	A sexual partner will feel unhappy and uncomfortable when using a condom	9.8	66.8	23.5
28	Using condoms makes one lose their sexual potency or masculinity	4.8	67.5	27.8
29	Making love with only one partner is boring	9.5	26.0	64.5
30	Consistently purchasing condoms, for use during sexual intercourse, will adversely affect family resources	12.3	48.3	39.5

Based on positive total score perception was divided into three groups by using ***Best Group Rating Criteria***. Regarding the total perception towards HIV/AIDS the data in Table 10 illustrates that more than one-half of students (55%) had total high score while 45% had total moderate scores.

Table 10 Number and percentage of respondents by level of perception on HIV/AIDS

Level of perception		Number	Percent
1. Severity			
High	(17 – 21 score)	330	82.5
Moderate	(8 – 16 score)	70	17.5
Low	(3 - 7 score)	-	-
2. Susceptibility			
High	(17 – 21 score)	111	27.8
Moderate	(8 – 16 score)	289	72.3
Low	(3 - 7 score)	-	-
3. Benefit			
High	(26– 33 score)	157	39.3
Moderate	(18-25 score)	243	60.8
Low	(11-17 score)	-	-
4. Barrier			
High	(12–15 score)	224	56.0
Moderate	(8-11 score)	174	43.5
Low	(5- 7 score)	2	0.5
5. Total Perception			
High	(70-90 score)	220	55.0
Moderate	(50-69 score)	180	45.0
Low	(30-49 score)	-	-

4.1.4 Cues to action

Regarding the cues to action Table 11 showed that almost all student received information from the media: 89.3% from cinema, 56.5% from printed material, while only 0.5 % stated they had received no information from the media.

Regarding the cues to action from personal influences, the respondents indicated that 52.8% came from parents, 37% from teachers, 34.0% from peers, and 21.3% from health personnel.

Regarding the cues to action from reminders, the respondents indicated that 53.5% were from parents, 31.0% were from teacher, 27.5% were from peers, and 17.3% were from health personnel.

Table 11 Number and percentage distribution of respondents by cues to action about HIV/AIDS

Cues to Action	Number	Percent
1. Media		
- No Information	2	0.5
- Radio	98	24.5
- Television	53	13.3
- Cinema	357	89.3
- Printed Material	226	56.5
- School Lecturers Presentation	147	36.8
- Other (Seminar, Internet)	9	2.3
2. Personal Influence		
- Parents	211	52.8
- Teachers	148	37.0
- Peers	136	34.0
- Health Personnel	85	21.3
3. Reminders		
- Parents	214	53.5
- Teacher	124	31.0
- Peers	110	27.5
- Health Personnel	69	17.3

4.1.5 Prevention behavior of HIV/AIDS

Among the 400 respondents, 33.8 % replied that they had a lover. Among 135 respondents who had a lover, 39.3% of respondents stated that they engaged in sexual intercourse or had not delayed their initiation with sex. Of this cohort 82.1% claimed to have only had one lover in their lifetime, while 11.3% stated that they had more than two in the lifetime. Of those respondents who claimed to have a lover, 8.2% mentioned that they engaged in sexual intercourse regularly; 23.9% engaged in sexual intercourse sometimes, while 67.9% mentioned that they never engaged in sexual intercourse. Of the 400 respondents only 4.3% stated that they had ever engaged in sexual intercourse with a sex worker, while the remaining 95.7% claimed never to have done so. 95.7% of them never made sexual intercourse with lover, and only few (8.2%) of them always made sexual intercourse with they lover and 67.9% some times they make sexual intercourse with they lover. (4.3%) of respondents made sexual activity with sexual worker, 46.2%of respondents made one time sexual intercourse with sexual worker, and 38.5% more than two times. When they made sexual intercourse 14.5% of them always use condom each time have sex, 29.1% some times and 56.4% did not use. Of the small cohort that had engaged in sexual intercourse with a sex worker, 46.2% stated that they had done so only once, 15.4% twice, and 38.5% more than twice.

Table 12 shows that 44.4% of respondents had discussed HIV/AIDS only with regular partner while 55.6% discussed this issue with their regular as well as other sexual partners. A total of 36% of respondents had explained the benefits a using condom to their regular partner, only 2.3% had explained condom usage benefits with other sexual partners, while 61.4% had discussed condom usage with both regular as well as other sexual partners. In the future 20.9% of respondents claim they don't intend to use condoms, while only 3.6 % of them will use condoms only with other sexual partners.

Table 12 Frequency and percentage distribution of respondents by items of prevention behavior about HIV/AIDS

Prevention Behavior	Number	Percent
1. Have lover		
- Yes	135	33.8
- No	265	66.3
2. Do not engage in sexual intercourse Or delaying sexual initiation		
- yes	82	60.7
- No	53	39.3
3. Number of lovers		
- One	110	82.1
- Two	8	6.0
- More than two	16	11.9
4. Engage in sexual intercourse with lover		
- Always	11	8.2
- Sometimes	32	23.9
- Never	91	67.9
5. Engaged in sexual activity with sex worker		
- Yes	17	4.3
- Never	381	95.7
6. Number of time engaging in sexual intercourse with sex worker		
- One time	6	46.2
- Two time	2	15.4
- More than two times	5	38.5
7. Number of times engaging in sexual intercourse during past three month period		
- One time	8	53.3
- More than one time	7	46.7

Table 12 Frequency and percentage distribution of respondents by items of prevention behavior about HIV/AIDS (Cont.)

Prevention Behavior	Number	Percent
8. Condom usage while engaging in sexual intercourse		
- Always	8	14.5
- some times	16	29.1
- Do not use	31	56.4
9. Ever discussed HIV/AIDS prevention with regular or other sexual partners		
- No	207	79.3
- Only with regular partner(s)	24	9.2
- Only with other sexual partners	-	-
- With both regular and sexual partners	30	11.5
10.Ever explained the benefits of using, or persuading, sexual partner to use a condom when engaging in sexual activities		
- No	203	82.2
- Only with regular partner(s)	16	6.5
- Only with other sexual partners	1	0.4
- With both regular and sexual partners	27	10.9
11. In the future do you intend to use or ask your sexual partner to use condom when engaging in sexual activities in order to prevent HIV/AIDS.		
- No	63	20.9
- Perhaps	182	60.3
- Only with regular partners	16	5.3
- Only with other sexual partners	11	3.6
- With both regular and sexual partners - With	30	9.9

Regarding the operational definition of abstinence, WHO defines being abstinent when somebody does not engage in sexual intercourse or delays their sexual

initiation. According to Table 13, 60.7% of respondents claimed to be abstinent while 39.3% stated they were not abstinent. Being safe implies being faithful to one's partner or reducing the number of sexual partners. Table 8 illustrates that 82.1% of the respondents were being faithful, while 17.9% were not being faithful. Among respondents who engaged in sexual intercourse 14.5% always used condom, 29.1% sometimes used a condom, and 56.4 % never used a condom.

Table 13 Frequency and percentage distribution of respondents by items of prevention about HIV/AIDS

Prevention behavior	Number	Percent
Abstinent		
Abstinent	82	60.7
Not Abstinent	53	39.3
Being safe		
Being faithful	110	82.1
Not being faithful	24	17.9
Condom use		
Always use condoms	8	14.5
Sometimes use condoms	16	29.1
Never use condoms	31	56.4

4.2 The Association between the independent factors and Abstinent

4.2.1 Association between socio-demographic characteristic and abstinent

Table 14 shows the results of the analysis between socio-demographic characteristics and preventive behavior dealing with the abstinence level of 400 adolescent respondents in a high school in Jakarta. The results shows an association between sexual activity and the preventive behavior of abstinence was statistically significant x^2 = 12.774, p-value = 0.000. The level of female students' preventive behavior of abstinence was higher (76.6%) than that of male students' preventive behavior (46.5%).

Analyzed data find a statistically significant association between religion and students preventive behavior of abstinence x^2= 9.304, p-value = 0.002. Preventive behavior of abstinence was more readily observed among Muslims (66.1%) and lowest in other religious groups (30%).

The results showed that students in group under 17 years of age had high prevention behavior levels of abstinence (70 %), while in the groups 17 years old and older abstinence levels dropped to 53.3%. Chi-square test showed that there was a statistically significant association between age and preventive behavior with x^2= 3.883, P-value = 0.049.

Concerning the association between monthly income per month, and respondent's preventive behavior it was observed that respondents who received more than 200,000 Rupiah, per month, had low abstinence levels (36.2%). The group receiving less than 200,000 Rupiah per month had high preventive behavior of abstinence (63.8%). Chi-square test showed that there was not statistically significant association between monthly income per month and preventive behavior of abstinence, x^2= 1.239, p-value = 0.338.

With respect to source of allowance, the respondents who received an allowance from others exercised a low preventive behavior of abstinence (40%), while the respondents who received funds from their parents had a higher prevention behavior of abstinence (61.2%). Chi-square test showed that there was no statistically significant association between source of allowance and the preventive behavior of abstinence. x^2= 0.908, p-value = 0.341.

Analyzed data demonstrated that education of respondents' fathers with respect to the preventive behavior of abstinence was low if fathers' formal education was below the high school level (54.8%), and higher when it involved fathers who studied at or above the high school level (62.5%). Chi- square test illustrated that there was no

statistically significant association between a respondent's father's education level and the preventive behavior of abstinence, with $x^2 = 0.588$, p-value = 0.443.

Regarding respondents' mothers education, those with lower than high school education had a preventive behavior of abstinence of 57.4%, while those with a higher education were more likely to be abstinent (63%). Chi- square test showed that there was no statistically significant association between the level education of a respondent's mother and preventive behavior of abstinence with $x^2 = 0.419$, p-value = 0.517.

Observed distribution of preventive behavior of respondents according to fathers and mothers occupation showed that, the respondent's father occupation and mother's occupation was non-government employee and worker there was a low preventive behavior of abstinence (60.5% and 49.3% respectively). Where respondents' fathers and mother were government employees and housewives abstinence levels rose (61.2% and 72.1% respectively). Chi square test showed there was no statistically significant association between occupation of father and mother and preventive behavior of abstinence, $x^2 = 0.008$, p-value = 0.931, and $x^2 = 7.360$, p-value = 0.007.

The analyzed data also did not find any statistically significant associations between place birth, present residence, and number of years living at present residence, with $x^2 = 1.866$, P-value = 0.172, $x^2 = 0.194$, p-value = 0.660, and $x^2 = 0.289$, p-value =0.591. The data illustrated that those students born in the provinces had a lower preventive behavior of abstinence (50%) compared to students who were born in Jakarta (63.8%). The analyzed data also indicates that respondents who presently resided in Jakarta had a lower prevention behavior of abstinence (60.2%) compared to those respondents whose presently resided in the province (66.7%). Regarding the numbers of years living at their present residence, those respondents who had live more at this site for more than 10 years had a lower preventive behavior of abstinence (59.1%) than those who lived at their present residence for less than 10 years (63.8%).

Those students who presently did not live with their parents had a low preventive behavior of abstinence (22.2%), compared to those who presently resided at their parents' house (63.5%). Chi square test showed there was a statistically significant association between present residence and preventive behavior of abstinence with $x^2 = 6.000$, p-value = 0.014.

Table 14 Association between the independent factors and abstinence

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Sex						
Male	33	46.5	38	53.5	**12.774**	**0.000**
Female	49	76.6	15	23.4		
Religion						
Muslim	76	66.1	39	33.9	**9.304**	**0.002**
Non Muslim	6	30.0	14	70.0		
Age						
Under 17 Years old	42	70	18	30	**3.883**	**0.049**
17 years old and above	40	53.3	35	46.7		
Monthly Income						
< 200.000 Rupiah	22	53.7	19	46.3	**1.239**	**0.338***
≥ 200.000 Rupiah	60	63.8	34	36.2		
Source of Allowance						
Parents	79	61.2	50	38.8	**0.908**	**0.341**
Other	2	40.0	3	60.0		

Table 14 Association between dependent factors and abstinence (Cont.)

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Education level of Father						
High School and below	17	54.8	14	45.2	**0.588**	**0.443**
Vocational institute and above	65	62.5	39	37.5		
Education level of Mother						
High School and below	31	57.4	23	42.6	**0.419**	**0.517**
Vocational institute and above	51	63.0	30	37.0		
Occupation of Father						
Government employee	30	61.2	19	38.8	**0.008**	**0.931**
Non Government employee	52	60.5	34	39.5		
Occupation of Mother						
Worker	33	49.3	34	50.7	**7.360**	**0.007**
House wife	49	72.1	19	27.9		
Place of birth						
Jakarta	67	63.8	38	36.2	**1.866**	**0.172**
Provinces	15	50.0	15	50.0		
Present residence						
Jakarta	74	60.2	49	39.8	**0.194**	**0.660**
Provinces	8	66.7	4	33.3		
Number of years Living at present residence						
10 years and below	30	63.8	17	36.2	**0.289**	**0.591**
More than 10 years	52	59.1	36	40.9		

Table 14 Association between the independent factors and abstinence (Cont.)

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Site of present residence						
Parent house	80	63.5	46	36.5	**6.000**	**0.014**
With out Parent	2	22.2	7	77.8		

4.2.2 Association between knowledge and preventive behavior (abstinence)

Table 15 indicates there was an association between knowledge and preventive behavior of abstinence. The Chi-Square found that there was statistically significant association between knowledge about HIV/AIDS and preventive behavior of Abstinence with $x^2 = 6.662$, p-value = 0.010. The students who had high level of knowledge had a high preventive behavior (68.5%) compare with those who had a low level of knowledge a low preventive behavior (45.7%).

Table 15 Association between knowledge and preventive behavior (abstinence)

Knowledge	Preventive behavior				x²	p-value
	Abstinent		Not Abstinent			
	n	%	n	%		
High Score	61	68.5	28	31.5	**6.662**	**0.010**
Low Score	21	45.7	25	54.3		

4.2.3 Association between perception and preventive behavior (abstinence)

Table 16 showed that there was an association between perception of severity and preventive behavior of abstinence. The Chi-square test found that there was statistically significant association between perception of severity and preventive

behavior of abstinence, $x^2 = 4.588$, p-value = 0.032. The students who perceived HIV/AIDS with a moderate level of severity demonstrated a low preventive behavior (42.3%) compare to those students with a higher level of severity of perception and a higher level of preventive behavior (65.1%).

Observed data of table 16 showed that respondents whose level of susceptibility of perception was high had low preventive behavior of Abstinent, (47.5%), as compare to those had moderate level of susceptibility of perception had high preventive behavior of Abstinent, (66.3%). Chi-square test showed was statistically significant association between perception of susceptibility and preventive behavior of Abstinent, $x^2 = 4.179$, p-value = 0.041.

Table 16 showed respondents whose were high level of perception of benefit had low preventive behavior of abstinent (55.4%), The students whose had moderate level of perception of benefit had high preventive behavior of abstinent (65.7%). Chi square test showed that there was no association between perception of benefit and preventive behavior, $x^2 = 1.508$, p-value = 0.219.

The analyzed data in table 16 find statistically association between level of perception of barrier with $x^2 = 2.982$, p-value = 0.084. Those respondents who had low level of perception of barrier had low preventive behavior of Abstinent (51.9%). Those who had high level of perception of barrier had high preventive behavior of Abstinent (66.7%).

Data from Table 16 showed no association between total perception and the preventive behavior of abstinence, with $x^2 = 0.185$, p-value = 0.667. The students who had a moderate level of total perception had a low preventive behavior of abstinence (58.5%), compared to those who had a higher level of total perception and a higher level of preventive behavior of abstinence (62.2%).

Table 16 Association between perception and preventive behavior (abstinence)

Perception	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Severity						
High Score	71	65.1	38	14.9	**4.588**	**0.032**
Moderate	11	42.3	15	57.7		
Susceptibility						
High Score	19	47.5	21	52.5	**4.179**	**0.041**
Moderate	63	66.3	32	33.7		
Benefit						
High Score	36	55.4	29	44.6	**1.508**	**0.219**
Moderate	46	65.7	24	34.3		
Barrier *						
High Score	54	66.7	27	33.3	**2.982**	**0.084**
Low	28	51.9	26	48.1		
Total Perception						
High Score	51	62.2	31	37.8	**0.185**	**0.667**
Moderate	31	58.5	22	41.5		

4.2.4 Association between cues to action and preventive behavior (abstinence)

Table 17 shows the results of the analysis between cues to action of media and the preventive behavior of abstinence of 400 adolescent respondents attending a high school in Jakarta. The data illustrates that respect to the association between radio messages and the preventive behavior of abstinence there is no statistical significance x^2 = 0.089, p-value = 0.766. The level of students who received their information about HIV/AIDS from radio concerning preventive behavior of abstinence was slightly higher (62.9%) than who did receive their information from radio (60.0%).

The analyzed data finds that there was no statistically significant association between students who get their information about HIV/AIDS from cinema and students who did not get such information from cinema with respect to the preventive behavior of abstinence $x^2 = 0.324$, p-value = 0.569. Preventive behavior of abstinence was slightly higher among those not receiving information from the cinema (61.7%) compared to students who did receive information from cinema (55.0%).

Concerning the association between media television, and preventive behavior, those respondents who did receive HIV/AIDS information from television had a low preventive behavior of abstinence (33.3%). The group who received information from television had a high preventive behavior of abstinence. Chi-square test showed that there was a statistically significant association between media information from television and the preventive behavior of abstinence. $x^2 = 4.4149$, p-value = 0.042.

Regarding HIV/AIDS information obtained from school, respondents who received information from school had a higher preventive behavior of abstinence (69.2%), compared to those students who did not receive information from school (55.4%). Chi-square tests illustrated that there was no statistically significant association between those who received, and those who did not receive, information from school with respect to the preventive behavior of abstinence, $x^2 = 2.557$, p-value = 0.110.

The analyzed data showed that students who obtained information from health personal and those who did not receive any HIV/AIDS information from health personal were the same (60.7%) in relation to their respective preventive behavior of abstinence. Chi- square test showed there was no statistically significant association between those who received or did not receive information from health personal, with $x^2 = 0.000$, p-value = 0.997.

Regarding HIV/AIDS information from the Internet, respondents who received information from this source had a lower level of preventive behavior of abstinence (50%) compared to those who did not receive information from the Internet (61.1 %).

Chi- square test showed that there was no statistically significant association between those who and did not receive information from Inter-net and the level of preventive behavior of abstinence, with $x^2 = 0.199$, p-value = 0.655.

The observed distribution of preventive behavior of respondents according to personal influence, illustrated that students who were influenced by their parents had a higher level of the preventive behavior of abstinence (68.3%) than those who were not influenced by their parents (48.1%). Chi- square test showed that there was a statistically association between the influence of parents and the preventive behavior of abstinence, $x^2 = 6.105$, p-value = 0.0.047

The analyzed data, however, did not find any statistically significant associations between the influence exerted by teachers and the preventive behavior of abstinence, $x^2 = 2.004$, P-value = 0.157. Those students who were influenced by their teachers had a higher level of preventive behavior of abstinence (68.8%), than those who were not influenced by their teachers (56.3%)

The analyzed data indicated respondents influenced by their peers had a higher level of preventive behavior of abstinence (64.2 %%) compared to those not influence by peers abstinence (58.5%) According to the analyzed data, however, there was not any statistically significant associations between the influence of peers and the preventive behavior of abstinence, $x^2 = 0.426$, P-value = 0.514

Regarding the influence of health personal, respondents who indicated that they were influenced by health personnel had a lower preventive behavior of abstinence (52.2%) than those who claimed that they were not influenced by health personnel (62.5%). Chi square test showed there was no statistically significant association between the influence of health personnel and the preventive behavior of abstinence , $x^2 = 0.853$, p-value = 0.356.

The observed distribution of preventive behavior of respondents according to reminders illustrated that respondents whose parents served as reminders had a much higher level of preventive behavior of abstinence (67.1%) than students who did not receive any reminders from parents (51.8%). Chi-square test showed, however, that there was no statistically significant association between parents who served as reminders and the preventive behavior of abstinence, $x^2 = 3.218$, p-value = 0.073.

The analyzed data found a statistically significant association between teachers serving as reminders and the preventive behavior of abstinence, $x^2 = 3.933$, P-value = 0.047. Those who received reminders from teacher had a much higher level of preventive behavior of abstinence (72.7%), than those students who did not receive reminders from teachers (54.9%)

The analyzed data indicated that respondents who received reminders from peers had a slightly higher level of preventive behavior of Abstinence (61.0 %%) than those who not receive reminders from their (60.6%) The analyzed data did not find any statistically significant associations between peer reminders and the preventive behavior of abstinence, $x^2 = 0.001$, P-value = 0.971.

Regarding the role of reminders from health personal, respondents who obtained reminders from health personnel had a lower level of preventive behavior of abstinence (57.9%) than those who received reminders from health personnel (61.2 %). Chi-square test showed there was no statistically significant association between health personnel reminders and the preventive behavior of abstinence, $x^2 = 0.075$, p-value = 0.784.

Table 17 Association between cues to action and preventive behavior (Abstinence)

Cues to action	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Media						
Radio	22	62.9	13	37.1	**0.089**	**0.766**
With out Radio	60	60.0	40	40.0		
Cinema	11	55.0	9	45.0	**0.324**	**0.569**
With out cinema	71	61.7	44	38.3		
Television	78	63.4	45	36.6	**4.149**	**0.042**
Without television	4	33.3	8	66.7		
Printed material	47	64.4	26	35.6	**0.885**	**0.347**
Without Printed material	35	56.5	27	43.5		
School presentation	36	69.2	16	30.8	**2.557**	**0.110**
Without School presentation	46	55.4	37	44.6		
Health personal	17	60.7	11	39.3	**0.000**	**0.997**
Without health personal	65	60.7	42	39.3		
Internet	2	50.0	2	50.0	**0.199**	**0.655**
Without Internet	80	61.1	51	38.9		
Personal influence						
Parents	57	68.7	26	31.3	**5.688**	**0.017**
With out parents	25	48.1	27	51.9		

Table 17 Association between cues to action and preventive behavior (Abstinence) (Cont.)

Cues to action	Preventive Behavior				x^2	P-Value
	Abstinent		Not abstinent			
	n	%	n	%		
Teachers	33	68.8	15	31.3	**2.004**	**0.157**
With out teachers	49	56.3	38	43.7		
Peers	34	64.2	19	35.8	**0.426**	**0.514**
With out peers	48	58.5	34	41.5		
Health Personnel	12	52.2	11	47.8	**0.853**	**0.356**
With out personnel	70	62.5	42	37.5		
Reminders						
Parents	53	67.1	26	32.9	**3.218**	**0.073**
With out parents	29	51.8	27	48.2		
Teachers	32	72.7	12	27.3	**3.933**	**0.047**
With out teachers	50	54.9	41	45.1		
Peers	25	61.0	16	39.0	**0.001**	**0.971**
With out peers	57	60.6	37	39.4		
Health Personnel	11	57.9	8	42.1	**0.075**	**0.784**
With out personnel	71	61.2	45	38.8		

4.3 Association between socio-demographic characteristics and preventive Behavior (Being faithful)

4.3.1 Association between socio-demographic characteristic and being faithful

Table 18 illustrated the results of the analysis between socio-demographic characteristics and the preventive behavior of being faithful of 400 adolescent respondents from a high school in Jakarta. The results showed that the association between gender and the preventive behavior of being faithful was not find a statistically significant, x^2 = 3.739, p-value = 0.053. The level of female student's preventive behavior of being faithful was higher (88.9%) than that of male students (76.1%).

The analyzed data found a statistically significant association between religion and the students' preventive behavior of being faithful x^2= 4.670, p-value = 0.031. Preventive behavior of being faithful was observed to be higher in Muslims (85.1%) thatn Non-Muslims (65%).

The data showed that students in the age-group less than 17 years had a lower level of preventive behavior of being faithful (75%) than for those 17 years and older (87.8%). Chi-square test showed, however, that there was no statistically significant association between age and preventive behavior of being faithful, with x^2= 3.714, p-value = 0.054.

Concerning the association between monthly income and preventive behavior, those who received more than 400,000 Rupiah per month had a low preventive behavior of being faithful (66.7%). While those receiving between 200,001 to 400,000 Rupiah per month had a higher preventive behavior of being faithful (85.9%). Chi-square test showed that there was no statistically significant association between monthly income and the level of preventive behavior of being faithful. x^2= 2.861, p-value = 0.239.

Regarding source of allowance, those students who received their allowance from others had a lower preventive behavior of being faithful (60%) than the respondents who received allowances from parents (82.8%). Chi-square test showed that there was no statistically significant association between source of monthly allowance and the preventive behavior of being faithful, $x^2 = 1.693$, p-value = 0.193.

The analyzed data illustrated that the preventive behavior of being faithful was low for students whose fathers did not complete formal education beyond the high school level (77.4%) and higher if their fathers' education background went beyond the upper high school level (83.5%). Chi- square test showed there was no statistically significant association between the formal education level of a respondent's father and the preventive behavior of being faithful, with $x^2 = 0.598$, p-value = 0.439.

Regarding the formal education level of a respondent's mother, it was observed that those with education below the high school level has a lower (79.6%) level of preventive behavior of being faithful than those whose mothers' studied in the upper high school or above (83.8%). Chi- square test showed that there was no statistically significant association between the education level of a respondent's mother and the preventive behavior of being faithful, with $x^2 = 0.372$, p-value = 0. 542.

Observed distribution of respondents' preventive behavior, according to fathers' and mothers' occupation, is illustrated on Table 13. In the event that a respondent's father and mother's occupation was non-government employee there was a low preventive behavior of being faithful (77.6% and 77.6%). In the case where fathers and mothers were either government employees or housewives, the respondents had a higher preventive behavior of being faithful (89.8% and 86.6%). Chi-square test, however, showed there was no statistically significant association between father's or mother's occupation and a respondent's preventive behavior of being faithful, $x^2 = 3.120$, p-value = 0.077 and $x^2 = 1.827$, p-value = 0.176.

The analyzed data also did not find any statistically significant associations between place birth, present residence, and the number of years living at present

residence, with x^2= 0.773, P-value = 0.379, x^2= 0.822, p-value = 0.365, and x^2= 0.039, p-value =0. 844. The data illustrated that those born in the provinces had a lower preventive behavior of being faithful (76.7%), that students born in Jakarta (83.7%). The analyzed data also indicated that respondents whose present residence was Jakarta had a lower prevention behavior of being faithful (81.1%) as compared those residing in the provinces (91.7%). Regarding the numbers of years presently residing at current residences, those respondents who had live more at their present site for more than 10 years had a lower preventive behavior of being faithful (81.6%) than those who lived at this site for 10 years or fewer years (83%).

Those students who presently were not living with their parents had a lower preventive behavior of being faithful (44.4%), than students who presently resided with their parents (84.8%). Chi-square test showed there was a statistically significant association between at present residence and the preventive behavior of being faithful, with x^2= 9.300, p-value =0. 002.

Table 18 Association between the independent factors and being faithful

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Be faithful		Not Be faithful			
	n	%	n	%		
Sex						
Male	54	76.1	17	23.9	**3.739**	**0.053**
Female	56	88.9	7	11.1		
Religion						
Muslim	97	85.1	17	14.9	**4.670**	**0.031**
Non Muslim	13	65.0	7	35.0		

Table 18 Association between the independent factors and being faithful (Cont.)

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Be faithful		Not Be faithful			
	n	%	n	%		
Age						
Under 17 Years old	45	75.0	15	25.0	**3.714**	**0.054**
17 years old and above	65	87.8	9	12.2		
Monthly Income						
< 200.000 Rupiah	31	77.5	9	22.5	**0.817**	**0.460**
> 200.000 Rupiah	79	84.0	15.0	16.0		
Source of Allowance						
Parents	106	82.8	22	17.2	**1.693**	**0.193**
Other	3	60.0	2	40.0		
Education Level of Father						
High School and below	24	77.4	7	22.6	**0.598**	**0.439**
Vocational institute and above	86	83.5	17	16.5		
Education Level of Mother						
High School and below	67	83.8	13	16.3	**0.372**	**0.542**
Vocational institute and above	43	79.6	11	20.4		
Occupation of Father						
Government employee	44	89.8	5	10.2	**3.120**	**0.077**
Non Government employee	66	77.6	19	22.4		
Occupation of Mother						
Worker	52	77.6	15	22.4	**1.827**	**0.176**
House wife	58	86.6	9	13.4		
Place of birth						
Jakarta	87	83.7	17	16.3	**0.773**	**0.379**
Provinces	23	76.7	7	23.2		

Table 18 Association between the independent factors and being faithful (Cont.)

Socio-demographic Characteristic	Preventive Behavior				x^2	P-Value
	Being faithful		Not Being faithful			
	n	%	n	%		
Site of Present Residence						
Jakarta	99	81.1	23	18.9	**0.822**	**0.365**
Provinces	11	91.7	1	8.3		
Number of yours living at present residence						
10 years and below	39	83.0	8	17.0	**0.039**	**0.844**
More than 10 years	71	81.6	16	18.4		
Site of Present Residence						
Parents house	106	82.8	22	17.2	**1.693**	**0.193**
Not at parent's house	3	60.0	2	40.0		
Education Level of Father						
High School and below	24	77.4	7	22.6	**0.598**	**0.39**
Vocational institute and above	86	83.5	17	16.5		
Education Level of Mother						
High School and below	67	83.8	13	16.3	**0.372**	**0.542**
Vocational institute and above	43	79.6	11	20.4		
Occupation of Father						
Government employee	44	89.8	5	10.2	**3.120**	**0.077**
Non Government employee	66	77.6	19	22.4		

4.3.2 Association between knowledge and preventive behavior of be faithful

Table 19 indicates the association between knowledge and the preventive behavior of being faithful. The Chi-square found that there was no statistically significant association between knowledge about HIV/AIDS and the preventive behavior of being faithful, with $x^2 = 3.185$, p-value = 0.074. The students who had high level of knowledge about HIV/AIDS demonstrated a higher preventive behavior of being faithful (86.4%) compared to those with a lower level of knowledge about HIV/AIDS (73.9%).

Table 19 Association between knowledge and preventive behavior (being faithful)

Knowledge	Preventive behavior				x^2	p-value
	Being faithful		Not Being faithful			
	n	%	n	%		
High Score	76	86.4	12	13.6	**3.185**	**0.074**
Low Score	34	73.9	12	26.1		

4.3.3 Association between perception and preventive behavior (being faithful)

Table 20 showed that there was no association between perception of severity and the preventive behavior of being faithful. The Chi-square found that there was no statistically significant association between perception of severity and preventive behavior of be faithful, $x^2 = 1.782$, p-value = 0.182. The students who had whose perception of severity was moderate had a lower level of preventive behavior of being faithful (73.1%) than respondents whose perception of severity was high (84.3%).

The data, in Table 20 showed that respondents whose level of susceptibility of perception was high had a lower level of preventive behavior of being faithful (80%), compared to those who had a moderate level of susceptibility of perception (83.0%). Chi-square test showed there was no statistically significant association between

perception of susceptibility and the preventive behavior of being faithful, $x^2 = 0.169$, P-value = 0.681.

Table 20 illustrated that respondents whose had a high level of perception of benefit also had a higher preventive behavior of being faithful (86.2%), than students who had a moderate level of perception of benefit (78.3%). Chi-square test showed that there was no association between perception of benefit and the preventive behavior of being faithful, $x^2 = 1.418$, p-value = 0.234.

The analyzed data, from Table 20 found statistically significant association between level of perception of barrier and preventive behavior of being faithful, with $x^2 = 8.990$ p-value = 0.003. Those respondents who had a low level of perception of barrier had a lower preventive behavior of being faithful (69.8%) than those who had a high level of perception of barrier (90.1 %).

Data from Table 20 showed an association between total perception and preventive behavior of being faithful, with $x^2 = 4.695$, p-value = 0.030. The students who had a moderate level of total perception had a lower preventive behavior of being faithful (73.1%), compared those who had a high level of total perception (87.8%).

Table 20 Association between perception and preventive behavior (being faithful)

Perception	Preventive behavior				x^2	p-value
	Being faithful		Not being faithful			
	n	%	n	%		
Severity						
High	91	84.3	17	15.7	**1.782**	**0.182**
Moderate	19	73.1	7	26.9		
Susceptibility						
High	32	80.0	8	20.0	**0.169**	**0.681**
Moderate	78	83.0	16	17.0		
Benefit						
High	56	86.2	9	13.8	**1.418**	**0.234**
Moderate	54	78.3	15	21.7		
Barrier *						
High	73	90.1	8	9.9	**8.990**	**0.003**
Moderate	37	69.8	16	30.2		
Low						
Total Perception						
High	72	87.8	10	12.2	**4.695**	**0.030**
Moderate	38	73.1	14	26.9		

4.2.4 Association between cues to action and preventive behavior (being faithful)

Table 21 showed the result of analysis between cues to action of media and the preventive behavior of being faithful for 400 students attending a high school in Jakarta. The results showed that there was no statistically significant an association between radio and the preventive behavior of be faithful, x^2 = 3.662, p-value = 0.056. The percentage of students who received information from the radio was lower (71.4%) than those who did not obtain information from the radio (85.9%)

The data did not find a statistically significant association between students who received information from the cinema and those respondents who did not, with respect to the to preventive behavior of being faithful, x^2= 4.670, p-value = 0.031. The preventive behavior of being faithful was observed to be higher for those who did not obtain information from the cinema (85.1%) than those who did (65.0%).

Concerning the association between television and a respondent's preventive behavior, the respondents who did not received any information from television had a lower preventive behavior of being faithful (58.3%) than those who did (84.4%). Chi-square test showed that there was a statistically association between information obtained from television and the preventive behavior of being faithful, x^2= 5.059, p-value = 0.024.

Those students who received information from printed material had a lower preventive behavior of being faithful (80.6%) than those who did not receive any information from printed material (83.9%). Chi-square test showed there was not a statistically significant association between those receiving information from printed material and the preventive behavior of being faithful, with x^2= 0.249, p-value = 0.618.

Regarding information obtained from school, the respondents who received information from school had a lower preventive behavior of being faithful (80.8%) than those who were not receive information from school (82.9%). Chi-square test showed that there was not a statistically significant association those receiving

information from school and the preventive behavior of being faithful, $x^2 = 0.101$, p-value = 0.751.

The analyzed data showed that students who received information from health personal had a lower preventive behavior of being faithful (71.4%) than those who did not obtain information from health personal (84.9%). Chi- square test showed there was no statistically significant association between receiving information from health personal and the preventive behavior of being faithful, with $x^2 = 2.736$, p-value = 0.098.

Regarding information from the Internet, respondents who obtained such information had a lower preventive behavior of being faithful (75 %) than those who did not receive information from the Internet (82.3 %). Chi- square test showed there was no statistically significant association between receiving information from the Internet and the preventive behavior of being faithful, with $x^2 = 0.141$, p-value = 0.707.

The observed distribution of preventive behavior of respondents according to personal influence, illustrated that respondents whose parents talked to them about HIV/AIDS had a higher preventive behavior of being faithful (88%) than those who did not discuss this issue with their parents (72.5%). Chi-square test showed there was a statistically significant association between discussing HIV/AIDS with parents and the preventive behavior of being faithful, $x^2 = 5.097$, p-value = 0.024

The analyzed data also did not find any statistically significant associations between teachers influencing the preventive behavior of being faithful. $x^2 = 0.076$, P-value = 0.783. Those respondents being influenced by teachers had a slightly lower preventive behavior of being faithful (80.9%) than those who were not influenced by their teachers (82.8%)

The analyzed data indicated that respondents those who claimed to be influenced by their peers had a higher preventive behavior of being faithful (88.5 %) than those not influenced by peers (78%). The analyzed data, however, did not find any statistically significant associations between the influence of peers and the preventive behavior of being faithful, $x^2 = 2.347$, P-value = 0.126

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Regarding the influence of health personal, there did not seem to be any difference between those respondents who were influenced from health personnel and those who were not with respect to the preventive behavior of being faithful (82.6% and 82.0%). Chi-square test showed there was not a statistically significant association between the influence of health personnel and the preventive behavior of being faithful, $x^2 = 0.005$, p-value = 0.943.

With respect to reminders, Table 21 illustrated that respondents whose parents acted as reminders had a higher preventive behavior of being faithful (86.1%) than those whose parents did not serve in this capacity (76.4%). Chi-square test showed there was not any statistically significant association between respondents' parents acting as reminders and the preventive behavior of being faithful, $x^2 = 2.080$, p-value = 0.149.

The analyzed data did not find any statistically significant associations between teachers serving as reminders and the preventive behavior of being faithful, $x^2 = 0.003$, P-value = 0.954%. The data clearly illustrated that those respondents who claim teachers acted as reminder had very similar levels of preventive behavior of being faithful (81.8% and 82.2%).

The analyzed data indicated that respondents' whose peers served as reminders had a higher preventive behavior of being faithful (87.5%) those whose peers did not serve in this capacity (79.8%). The analyzed data, however, did not find any statistically significant associations between peers acting as reminders and the preventive behavior of being faithful, $x^2 = 1.135$, P-value = 0.287.

Regarding health personal acting as reminders, respondents who claimed to have health personnel serve in this capacity had a slightly higher preventive behavior of being faithful (84.2%) than those who were not reminded by health personnel (81.7 %). Chi-square test showed that there was not a statistically significant association between health personnel acting as reminders and the preventive behavior of being faithful, $x^2 = 0.068$, p-value = 0.795.

Table 21 Association between cues to action and preventive behavior (being faithful)

Cues to Action	Preventive behavior				x^2	p-value
	Being faithful		Not being faithful			
	n	%	n	%		
Media						
Radio	25	71.4	10	28.6	**3.662**	**0.056**
Without Radio	85	85.9	14	14.1		
Cinema	13	65.0	7	35.0	**4.670**	**0.031**
Without cinema	97	85.1	17	14.9		
Television	103	84.4	19	15.6	**5.059**	**0.024**
Without television	7	58.3	5	41.7		
Printed material	58	80.6	14	19.4	**0.249**	**0.618**
Without printed material	52	83.9	10	16.1		
School presentation	42	80.8	10	19.2	**0.101**	**0.751**
Without school presentation	68	82.9	14	17.1		

Table 21 Association between cues to action and preventive behavior (being faithful) (Cont.)

Cues to Action	Preventive behavior				x^2	p-value
	Being faithful		Not being faithful			
	n	%	n	%		
- Health personal	20	71.4	8	28.6	**2.736**	**0.098**
-Without health personal	90	84.9	16	15.1		
- Internet	3	75.0	1	25.0	**0.141**	**0.707**
-Without Internet	107	82.3	23	17.7		
Personal influence						
- Parents	73	88.0	10	12.0	**5.197**	**0.024**
- Without parents	37	72.5	14	27.5		
- Teachers	38	80.9	9	19.1	**0.076**	**0.783**
-Without teachers	72	82.8	15	17.2		
- Peers	46	88.5	6	11.5	**2.347**	**0.126**
-Without peers	64	78.0	18	22.0		
- Health Personnel	19	82.6	4	17.4	**0.005**	**0.943**
- Without health personnel	91	82.0	20	18.0		
Reminders						
- Parents	68	86.1	11	13.9	**2.080**	**0.149**
-Without parents	42	76.4	13	23.6		

Table 21 Association between cues to action and preventive behavior (being faithful) (Cont.)

Cues to Action	Preventive behavior				x^2	p-value
	Being faithful		Not being faithful			
	n	%	n	%		
- Teachers	36	81.8	8	18.2	**0.003**	**0.954**
-Without teachers	74	82.2	16	17.8		
- Peers	35	87.5	5	12.5	**1.135**	**0.287**
-Without peers	75	79.8	19	20.2		
- Health Personnel	16	84.2	3	15.8	**0.068**	**0.795**
-Without personnel	94	81.7	21	18.3		

4.4 Association between socio-demographic characteristics and preventive behavior (condom use)

4.4.1 Association between socio-demographic characteristic and condom use

Table 22 shows the results of the analysis between socio-demographic characteristics and the preventive behavior of condom use for 400 students attending a high school in Jakarta. The results showed with respect to the variables of gender and the preventive behavior of condom use, there was not any statistically significant association, x^2 = 2.012, p-value = 0.156. The level of female student's using condoms, however, was lower (5.3%) than the level of male students using condoms (19.4%).

The data did find a statistically significant association between religion and students using condoms, x^2= 0.010, p-value = 0.922. The preventive behavior of

condom use was observed to be slightly lower in Muslims (14.3%) than for other religious groups (15.4%).

The data illustrated that students in the cohort under 17 years of age used condoms more frequently and consistently (20%) than those in the cohort 17 years and above (11.4%). Chi-square test showed, however, that there was not a statistically significant association between age and condom use, with $x^2 = 0.752$, p-value = 0.386.

Concerning the association between monthly income and preventive behavior, it was observed that those respondents who received more than 200,000 Rupiah per month demonstrated a lower level of condom use (66.7%) than the group receiving less than 200,000 rupiah per month. Chi-square test showed that there was no statistically significant association between monthly income and the preventive behavior of condom use, $x^2 = 5.782$, p-value = 0.018.

With respect to source of allowance, those respondents who received their allowance from others had a higher level of condom use (25 %) than those who received their monthly income from parents (13.7%). Chi-square test showed that there was not any statistically significant association between source of monthly allowance and the preventive behavior of condom use, $x^2 = 0.379$, p-value = 0.538.

With respect to the education those respondents whose fathers did not study beyond high school had a lower level of condom use (0%), than those whose fathers' studied beyond the upper high school level (18.2%). Chi- square test showed there was not a statistically significant association between the respondents' fathers' level of education and the preventive behavior associated with condom use, with $x^2 = 2.340$, p-value = 0.126.

Regarding the education level of respondents mothers, it was observed that if a student's mother studied below the high school level, condom usage was lower (3.8%), than if the respondent's mother studied beyond the high school level (24.1%). Chi- square test showed there was a statistically significant association between the

education level of a respondent's mother and condom usage, with $x^2 = 4.541$, p-value = 0. 033.

Table 22 illustrates that those respondents whose fathers' occupation was non-government employee and whose mothers' occupation was worker, used condoms less (13.9% and 13.8%) than when the fathers were government employees and the mothers were housewives (15.8% and 15.4%). Chi-square test showed there was not any statistically significant association between a father's occupation and the respondent using condoms, but there was a statistically significant association between the occupation of a mother and a student using condoms, $x^2 = 0.036$ p-value = 0.849 and $x^2 = 0.028$, p-value = 0.867.

The analyzed data did not find any statistically significant associations between place birth, present residence and the number of years living at the present residence, with $x^2 = 1.249$, P-value = 0.264, $x^2 = 0.024$, p-value = 0.876, and $x^2 = 0.752$, p-value =0. 386. The data illustrated that those students born in provinces used condoms less (6.3%) than those who were born in Jakarta (17.9%). The analyzed data indicates that respondents currently residing in Jakarta town used condoms less frequently and consistently (14.3%) than the cohort of respondents who presently lived in the provinces (16.7%). With regard to the numbers of years where the respondents are currently living, it was observed that those who lived in their current residence for more than 10 years used condoms less often (11.4%) than those who lived at their present residence for under 10 years (20%).

Those respondents who presently live with others used condoms more frequently and consistently (25%) than those who presently resided with their parents (12.8%). Chi- square test showed that there was not a statistically significant association between site or present residence and the preventive behavior of condom use, with $x^2 = 0.823$, p-value =0.364.

Table 22 Association between the independent factors and condom use

Socio-demographic Characteristic	Preventive Behavior Condom use				x^2	P-Value
	Always		Some times and never			
	n	%	n	%		
Sex						
Male	7	19.4	29	80.6	**2.012**	**0.156**
Female	1	5.3	18	94.7		
Religion						
Muslim	6	14.3	36	85.7	**0.010**	**0.922**
Non Muslim	2	15.4	11	84.6		
Age						
Under 17 Years old	3	10.0	27	90.0	**1.097**	**0.295**
17 years old and above	5	20.0	20	80.0		
Monthly Income						
< 200.000 Rupiah	0	0	21	100	**5.782**	**0.018***
≥ 200.000 Rupiah	8	23.5	26	76.5		
Source of Allowance						
Parents	7	13.7	44	86.3	**0.379**	**0.538**
Other	1	25.0	3	75.0		

Table 22 Association between the independent factors and condom use(Cont.)

Socio-demographic Characteristic	Preventive Behavior Condom use				x^2	P-Value
	Always		Some times and never			
	n	%	n	%		
Education Level of Father						
High School and below	0	0	11	100	**2.340**	**0.126**
Vocational institute and above	8	18.2	36	81.8		
Education Level of Mother	1	3.8	25	96.2	**4.541**	**0.033**
High School and below	7	24.1	22	75.9		
Vocational institute and above						
Occupation of Father						
Government employee	3	15.8	16	84.2	**0.036**	**0.849**
Non Government employee	5	13.9	31	86.1		
Occupation of Mother						
Worker	4	13.8	25	86.2	**0.028**	**0.867**
House wife	4	15.4	22	84.6		
Place of birth						
Jakarta town	7	17.9	32	82.1	**1.249**	**0.264**
Province	1	6.3	15	93.8		

Table 22 Association between the independent factors and condom use (Cont.)

Socio-demographic Characteristic	Preventive Behavior Condom use				x^2	P-Value
	Always		Some times and never			
	n	%	n	%		
Present Residence						
Jakarta town	7	14.3	42	85.7	**0.024**	**0.876**
Province	1	16.7	5	83.3		
Number of years living at present residence						
10 years and below	39	83.0	8	1.0	**0.039**	**0.844**
More than 10 years	71	81.6	16	18.4		
Present residence pattern						
Parent house	6	12.8	41	87.2	**0.823**	**0.364**
With out Parent	2	25.0	6	75.0		

4.4.2 Association between knowledge and preventive behavior (condom use)

Table 23 indicates the association between knowledge and the preventive behavior of condom use. Chi-square test illustrated that there was no statistically significant association between knowledge about HIV/AIDS and the preventive behavior of condom use, with $x^2 = 0.078$, p-value = 0.780. Students who had a high level of knowledge also demonstrated a higher preventive behavior of condom use (16%) than those with a lower level of knowledge about HIV/AIDS (13.3%).

Table 23 Association between knowledge and preventive behavior (condom use)

Knowledge	Preventive behavior				x^2	p-value
	Always Condom use		Some times and never			
	n	%	n	%		
High	4	16.0	21	84.0	**0.078**	**0.780**
Low	4	13.3	26	86.7		

4.4.3 Association between perception and preventive behavior (condom use)

Table 24 illustrates the association between perception of severity and the preventive behavior of condom use. The Chi-square test found that there was not any statistically significant association between perception of severity and the preventive behavior of condom use, $x^2 = 1.984$, p-value = 0.159. Students whose perception of severity was at a moderate level demonstrated more frequent and consistent condom use (25.0%) than those students whose perception of severity was at a higher level (10.3%).

Table 24 also showed that respondents whose perception of susceptibility was high had used condoms at a lower level (13.6%) than those whose perception of susceptibility was at a moderate level (15.2%). Chi-square test showed that there was not a statistically significant association between perception of susceptibility and the preventive behavior of condom use, $x^2 = 0.024$, P-value = 0.876.

Table 24 showed that those respondents whose perception of benefit was high used condoms more frequently and consistently (16.7%) than those students whose perception of benefit was a moderate level (12.0%). Chi square test showed that there was not a statistically significant association between perception of benefit and the preventive behavior of condom use, $x^2 = 0.239$, p-value = 0.625.

Table 24 found no statistically significant association between the perception of barriers and the preventive behavior of condom use, with x^2= 0.003, p-value = 0.956. Those respondents whose perception of barrier was at a moderate level were very similar to those whose perception of barrier was at a high level, with respect to frequent and consistent condom use (14.3% and 14.8%).

Data from Table 24 illustrated that there was not any statistically significant association between total perception and the preventive behavior of condom use, with x^2= 1.863, p-value = 0.172. The students whose total perception was at a moderate level used condoms less frequently and consistently (7.7%) than those whose total perception was at a higher level (20.7%).

Table 24 Association between perception and preventive behavior (condom use)

Perception	Preventive Behavior				x^2	P-Value
	Always condom use		Some times and never			
	n	%	n	%		
Severity						
High Score	4	10.3	35	89.7	**1.984**	**0.212***
Moderate	4	25.0	12	75.0		
Susceptibility						
High Score	3	13.6	19	86.4	**0.024**	**1.000***
Moderate	5	15.2	28	84.8		

Table 24 Association between perception and preventive behavior (condom use) (Cont.)

Perception	Preventive Behavior				x^2	P-Value
	Always condom use		Some times and never			
	n	%	n	%		
Benefit	5	16.7	25	83.3	**0.239**	**0.715***
High Score	3	12,0	22	88.0		
Moderate						
Barrier *	4	14.8	23	85.2	**0.003**	**1.000***
High Score	4	14.3	24	85.7		
Moderate						
Total Perception	6	20.7	23	79.3	**1.863**	**0.257***
High	2	7.7	24	92.3		
Moderate						

4.4.4 Association between cues to action and preventive behavior (condom use)

Table 25 shows the results of the analysis between cues to action of media and the preventive behavior of condom use for 400 adolescents attending a high school in Jakarta. The results indicate that there is not significant association between radio and preventive behavior of condom use, x^2 = 0.494, p-value = 0.482. Those students who received information about HIV/AIDS via the radio used condoms more frequently and consistently (20%) than those who did not obtain any information from the radio (12.5%)

The data also did not find any statistically significant association between students who received HIV/AIDS information from the cinema and their use of

condoms, x^2 = 1.269, p-value = 0.260. Those respondents who did not obtain any information from the cinema used condoms less frequently or consistently (12.5%) than those who received information from the cinema (28.6%).

Concerning the association between obtaining HIV/AIDS information via television and condom use, it was observed that there was very little difference between those receiving information via this media (14.6%) and those who did not (14.3%). Chi-square test showed that there was no statistically significant association between receiving information from television and condom use, x^2 = 0.000, p-value = 0.983.

Those students whose received information from printed material used condoms more frequently and consistently (18.5%) than those who did not receive any HIV/AIDS information from this media (10.7%). Chi square test showed that there was no statistically significant association between receiving information from printed material and condom use, with x^2=0.674, p-value = 0.412.

Those respondents who received information about HIV/AIDS from their school used condoms more consistently (17.4%) than those students who did not obtain any HIV/AIDS information from school (12.5%). Chi-square test showed that there was no statistically significant association between receiving information from school and condom use, x^2 = 0.258, p-value = 0.612.

The analyzed data illustrated that students who receive information about HIV/AIDS from health personal used condoms more consistently (18.2%) than those who did not receive information from this source (13.6%). Chi-square test showed that there was no statistically significant association between receiving HIV/AIDS information from health personal and condom use, with x^2 = 0.146, p-value = 0.702

Regarding HIV/AIDS information obtained from the Internet, it was observed that those respondents who received information from this source used condoms less

consistently (0%) than those who did not receive any HIV/AIDS information from the Internet (14.8 %). Chi- square test showed that there was no statistically significant association between receiving HIV/AIDS information from the Internet and condom use, with $x^2 = 0.173$, p-value = 0.677.

The observed distribution of personal influence on the preventive behavior of condom use is demonstrated in Table 25. Respondents who indicated that they were influenced by parents used condoms less consistently (13.8%) than those who stated that their parents did not influence them (15.4%). Chi-square test showed there was no statistically significant association between parents influence and condom use, $x^2 = 0.028$, p-value = 0.867

The data also did not find any statistically significant associations between the influence of teacher and condom use, $x^2 = 0.153$, P-value = 0.696. Those students who claimed to be influenced by teachers used condoms less consistently (11.8%) than those who stated that their teachers did not influence them (15.8%).

The indicated that respondents who stated that they were influenced from peers used condoms more consistently (16.7%) than those who claimed that they were not influenced by their peers (13.5%). Chi-square tests showed that there was no statistically significant associations between the influence of peers influenced and condom use, $x^2 = 0.097$, P-value = 0.756.

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Regarding the influence of health personal, respondents who stated that they were influenced by health personnel used condoms more consistently (21.4%) than those who claimed not to be influenced by health personnel (12.2%). Chi-square test showed that there was no statistically significant association between the influence of health personnel and condom use, $x^2 = 0.716$, p-value = 0.398.

The distribution of reminders on condom use is illustrated in Table 20. Respondents who claimed that their parents acted as reminders used condoms more

consistently (15.6%) than those who stated that their parents did not serve in this capacity (13.0%). Chi-square test showed that there was no statistically association between parents serving as reminders and condom use, $x^2 = 0.072$, p-value = 0.789.

The data also did not find any statistically significant associations between teachers serving as reminders and condom use, $x^2 = 0.024$, P-value = 0.876. Those students who stated that their teachers served as reminders used condoms less consistently (13.3%), than those students who claimed their teachers did not serve in this capacity (15%).

The data indicated that respondents who received from peers used condoms more consistently (18.8%) than those who did not receive reminders from peers (12.8%) Chi-square test did not find any statistically significant associations between peers serving as reminders and condom use, $x^2 = 0.321$, P-value = 0.571.

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Regarding health personal, respondents who claimed that they received reminders from health personnel used condoms more consistently (18.2%) than those who did not receive reminders from health personnel (13.6 %). Chi-square test showed that there was no statistically significant association between health personnel serving as reminders and condom use, $x^2 = 0.146$, p-value = 0.702.

Table 25 Association between cues to action and preventive behavior (condom use)

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Cues to action	Preventive Behavior				x^2	P-Value
	Always Condom use		Some times and never			
	n	%	n	%		
Media						
Radio	5	12.5	35	87.5	**0.494**	**0.482**
With out Radio	3	20.0	12	80.0		
Cinema	6	12.5	42	87.5	**1.269**	**0.260**
With out cinema	2	28.6	5	71.4		
Television	1	14.3	6	85.7	**0.000**	**0.983**
With out television	7	14.6	41	85.4		
Printed material	5	18.5	22	81.5	**0.674**	**0.412**
With out Printed material	3	10.7	25	89.3		
School presentation	4	27.4	29	82.6	**0.258**	**0.612**
With out School presentation	4	12.5	28	87.5		
Health personal	2	18.2	9	81.8	**0.146**	**0.702**
With out health personal	6	13.6	38	86.4		
Internet	0	0	1	100.0	**0.173**	**0.677**
With out Internet	8	14.8	46	85.2		
Personal influence						
Parents	4	13.8	25	86.2	**0.028**	**0.867**
With out parents	4	15.4	22	84.6		

Table 25 Association between cues to action and preventive behavior (condom use) (Cont.)

Cues to action	Preventive Behavior				χ^2	P-Value
	Always Condom use		Some times and never			
	n	%	n	%		
- Teachers	2	11.8	15	88.2	**0.153**	**0.696**
With out teachers	6	15.8	32	84.2		
- Peers	3	16.7	15	83.3	**0.097**	**0.756**
With out peers	5	13.5	32	86.5		
- Health Personnel	3	21.4	11	78.6	**0.716**	**0.398**
With out personnel	5	12.2	36	87.8		
Reminders						
- Parents	5	25.6	27	84.4	**0.072**	**0.789**
With out parents	3	13.0	20	87.0		
- Teachers	2	13.3	13	86.7	**0.024**	**0.876**
With out teachers	6	15.0	34	85.0		
- Peers	3	18.8	13	81.3	**0.321**	**0.571**
With out peers	5	12.8	34	87.2		
- Health Personnel	2	18.2	9	81.8	**0.146**	**0.702**
With out personnel	6	13.6	38	86.4		

CHAPTER 5
DISCUSSION

The results of study showed that two-thirds (66.8%) of students in high school of Jakarta, Indonesia had high level of knowledge on HIV/AIDS and more than one half (55%) had high in total level of perception HIV/AIDS, 60.7% of respondents were in abstinent and slightly majority (82.1%) in be faithful, but more than an-half (56.4%) of students never using condom when they have chance to contact with sexual intercourse. These findings were discussed as follow:

5.1 Association between socio-demographic characteristic, with Abstinent, Be faithful, and condom use to prevent HIV/AIDS

In this study, sex, religion, Age, occupation of mother and present reside with had association with abstinent. Sex , religion and occupation of father had association with be faithful. Also, Education of mother had association with condom use. With p-value <0.05.

From result showed the numbers of female who abstinent higher than male. In Indonesia, Boys in contrast were commonly given more sexual freedom than girls and were not burdened by any physical evidence of sexual experience. In many societies, a man is expected to know about sexual intercourse before marriage. Premarital sex among young men is encouraged and considered necessary for success in the male sex role (Kiem, 1993:150; Magnis-Suseno, 1997:175). Usually young men learn about sexual intercourse from prostitutes.

In Indonesia, The call to prayer rings out through the loud speakers as the faithful wind their way along the streets to the mosque, prayer mats slung over their shoulders. It is Friday, the Islamic day of religious observation where mosques throughout Indonesia often fill to capacity as millions of Islamic faithful observe their religious obligations. In the Indonesian province of South Sulawesi, however, the

faithful attending their Friday prayers may not always leave with just a deepened understanding of their faith, but many are also learning about AIDS prevention.

In what may be a world first, AusAID is piloting a unique AIDS prevention tool by mobilizing religious networks in several Indonesian provinces to educate the community about AIDS prevention.

Mr Ridwan, whose agency IMMIM (an Islamic preachers' coordinating agency based in the provincial capital Makassar) was tasked with training Islamic preachers in South Sulawesi. “After the Muballig (Islamic preachers) completed their five-day training course, however, there were only two preachers out of the 312 that we trained who refused to change their views.” The results show that with effective training Islam, as with other religions, can compromise in the interest of community welfare. “The condom still remains controversial, however, while the Muballig continue to preach that sex outside marriage is a sin, they also emphasize that sex outside marriage without a condom is a bigger sin.” The condom controversy has in effect been neutralized, as have other controversial subjects such as mass blood testing, and labeling all HIV/AIDS positive people as sinners, thereby also reducing the stigma and discrimination associated with this still controversial illness.

Similar activities are being conducted in East Nusa Tenggara where both the Catholic and leading Protestant church - the Timor Evangelical Church - have also trained preachers to provide outreach to congregations both during church services as well as in other forums such as Bible discussion groups, marriage counseling, and youth groups. The Catholic Church has even produced a special Catechism for AIDS prevention, which is much in demand in Catholic diocese throughout the country.

As youth are the most vulnerable to AIDS infection, district youth leaders are also trained and tasked with conducting peer education both within their own religious youth groups as well as in more informal settings such as gatherings of school friends, or families and neighbors.

The provincial IEC (religious) models, implemented by the AusAID funded Indonesia HIV/AIDS Prevention and Care Project, aim not only to reduce the spread of AIDS by conveying basic AIDS facts to the general community, but they also recognize the influence that religion and religious groups still have in developing countries, not only for the community but also key government decision-makers. In addition they provide a comprehensive network down to the neighborhood level, of trusted, educated personnel and volunteers who are familiar with local culture and languages, often one of the main obstacles to AIDS prevention education in multicultural and multilingual countries such as Indonesia.

Regarding to monthly income those who had more than 200.00 to 400.000 Rupiah slightly majority abstinent, and those who had monthly income more than 400.000 Rupiah, larger majority (88.9%) they were not abstinent.

Larger majority (89.8%) of students who were Occupation of father Government employee they were be faithful, and those who occupation of father non government employee 22.4% of them not being faithful.

Majority (72.1%) of respondents those who Occupation of mother were house wife they were abstinent, and who occupation of mother were worker 36.2% of them not abstinent. Those who's education of mother high school and bellow, quiet majority (96.2%) of respondents some times and never use condom and 24.1% if they mother vocational institute and above they were be faithful.

In Indonesia majority of occupation of mother were house wife and level of education of them, in average lower than education of father. Mother in house was the first people that can talk with the children, and majority of adolescent in Indonesia trust their mother.

5.2 Association between knowledge with Abstinent, Be faithful, and condom use to prevent HIV/AIDS

In this study, was an association between knowledge and preventive behavior of abstinent, but there were not association between knowledge and preventive behavior of be faithful, and condom use.

In Indonesia, Young people, especially those unmarried, seldom use contraception. Sexually active single young people who have sex with a steady partner often claim that intercourse is not the result of premeditated or conscious decisions but just “happens”, so they are unlikely to be prepared with contraception (Khisbiyah *et al*., 1997). In addition, many young people have limited knowledge of contraception (LD-FEUI, 1999). Ability to name one or more contraceptive methods does not necessarily mean knowledge about use or source of supply.

Micro studies and sporadic reports in local medical journals indicate that many adolescents are infected with STDs (Wardhana *et al*, 1998; Situmorang, 2001). Adolescents have limited knowledge of these contagious diseases (Pangkahila *et al*, 1998). Although they are aware of the possibility of getting STDs from having sex with prostitutes, some young men, especially those who work on the street, do not feel a need to use a condom. They believe that STDs and AIDS can be prevented by maintaining their physical stamina (eating nutritious food) or taking antibiotics before having sex with a prostitute. When they have contracted an STD, they prefer to buy medicine in drugstores without consulting a doctor. Some do not feel the need to go to a medical doctor because they believe they can cure the disease themselves. Others said they felt uncomfortable to go to a doctor and it cost a lot of money (Situmorang, 2001:147).

5.3 Association between perception with Abstinent, Be faithful, and condom use to prevent HIV/AIDS

This study showed had association between perception severity, and susceptibility with abstinent.

This study also from the total perception students had association with be faithful, but there were not association between perception and prevention behavior with condom use.

Many young men believe that the use of condom violates their beliefs, causes "weakness" or hampers sexual pleasure. Considering that the Government policy restricts single people's access to family planning information and services, these misconceptions can be understood.

In Indonesia, non students are more likely to engage in premarital sexual activities than students (YKB, 1993; Situmorang, 2001). Studies in Medan and Kalimantan revealed that many young men who are sexually active visit prostitutes regularly (Hidayana *et al*., 1997; Saifuddin *et al*., 1999; Situmorang, 2001:144). Most of them do not feel a need to use condoms even though they are aware of the possibility of getting STDs;and HIV/AIDS, they believe condoms hamper their sexual activities. Indepth interviews and focus group discussions with young men in Medan showed that many of them, especially those who work on the streets, believe that STD's can be prevented by maintaining physical stamina, only having sex with "a clean and healthy" person and taking some 'medicine' before sex (Situmorang, 2001:136).

5.4 Association between cues to action with Abstinent, Be faithful, and condom use to prevent HIV/AIDS

Although cinema is the highest media to preventive behavior on HIV/AIDS for the students, but from statistic result, television was an association with abstinent, and parents was personal who influence the students to preventive behavior HIV/AIDS, from result showed that, association with abstinent, the other Cues to action teacher was reminders that had association with abstinent.

It was found cinema and television were media those had association with preventive behavior of be faithful. For personal influence parents was association with preventive behavior of being faithful. In this study did not find association between reminders and preventive behavior of be faithful.

The result of this study also did not find association between media information, Personal influence, and reminders and preventive behavior of condom use.

Young people appear to prefer to obtain information on different aspects of sexuality and sexual behavior from different sources. In some settings, the media are the predominant source of information on HIV/AIDS, though this is not necessarily the case for other aspects of sexual health. Among young females in several sites in Chile and Guatemala, and among adolescent factory workers in Thailand, over 70% obtained HIV/AIDS information from television and radio.

In Indonesia, Information on sexuality, conception, pregnancy, contraception, and disease is rarely imparted by teachers, health professionals or parents. The main sources of information are friends and the media. A study of first-time mothers in Manila, Philippines, reports that 28% learned about sex from the man who made them pregnant.

Friends are important sources of information about sex. Over 90% of college students in Viet Nam report being most comfortable discussing sexual and reproductive health with peers of their own sex; while far fewer report discussion with parents. In Indonesia, peers outrank parents as the main sources of information on

sexual matters for both sexes. Only in Peru (both in-school and out-of-school adolescents, and also night school students) are both peers and parents cited as main sources of information on sexuality. However, young women are more likely to ask their parents, usually mothers, about sexual matters than young men are.

For adolescent females in secondary schools in Buenos Aires, Argentina, mothers are the main sources of information concerning menstruation (84%) and the risk of pregnancy (65%), but adolescent females are more likely to consult peers on topics such as sexual relations, contraception and ejaculation.

Health care providers are rarely cited as a major source of information. The one exception was a study of secondary school students in Kampala, Uganda, in which about 50% reported that their sources of information were teachers (50%) or health providers (49%).

Case studies in Argentina, Kenya, Peru and the Philippines explored young people's impressions of sex education in schools. Most respondents (over 50% in most cases) rated the information as inadequate. Several said that teachers focused on discouraging students from sexual activity without pointing out dangers or explaining and teaching safe sex behavior. Generally, adolescents in these studies argued for a much more explicit focus on sexuality in the school curriculum. Most said they preferred health providers, rather than teachers or parents, as information sources.

In Indonesia, Even among adolescent, there is a basic conservatism about discussing sex. Information regarding sexual matters is usually given by the mother to her daughter when the girl reaches menarche, but after that there is no discussion in the family regarding sex. For boys, knowledge about sex is mostly gained from informal sources such as peers, pornography and the press. There is almost no communication between father and son or mother and son on these matters.

Given these facts, it is a little surprise to find that both parents and young people today are uncomfortable talking about sexual issues. Apart from the sensitivity

of the issues, studies in Jakarta found that most parents felt inadequate to talk to their children about issues related to reproductive health (Iskandar, 1995; Utomo, 1997). Parents do not know how to deal with their children's sexuality any better than young people know how to deal with it themselves.

CHAPTER 6
CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study was carried out to determine the factors of which associated with HIV/AIDS prevention behavior Adolescents in High School of Jakarta, Indonesia. This study aimed to investigate HIV/AIDS prevention behavior, including abstinence, being faithful, and condom use. The research design of this study was descriptive, cross-sectional study. This target population was high school in Jakarta. Sample sizes of four hundred students were studying in high school. The research instrument was a self-administrative questionnaire and data was analyzed by using statistical method of chi-square and descriptive statistic.

The results in this study showed that more than an half of students were female, quiet majority of them live with parents and get allowance from them. 15 t0 18 years of age and majority were Muslim. One half of Their mother were house wife and their father almost an half business. Larger majority of the students were borne in Jakarta, and present residence also in Jakarta city. The study revealed that sex, religion, monthly income, occupation of mother, occupation of father, and education of mother and present residence had significant association with HIV/AIDS prevention behavior of abstinent, be faithful, and condom use. Other socio-demographic characteristics of the students did not have statistically significant association with their preventive behavior.

The study shows that the students posses a high level of knowledge about HIV/AIDS. This indicates there was statistically significant association between knowledge and HIV/AIDS prevention behavior of abstinent but did not have association with be faithful, and condom use.

The perception of the students were larger majority high on severity, majority moderate on susceptibility, more than an half moderate in benefit and barrier, and on total of perception. Perception of severity and susceptibility were had significant association with HIV/AIDS prevention behavior of abstinent. There was an significant association between Total perception and HIV/AIDS prevention behavior of be faithful, and there was not association between all perception with HIV/AIDS prevention behavior of condom use.

Almost one hundred percent of students were exposed to a wide rang of information about HIV/AIDS. Larger majority of the students were considered the media especially cinema as the main of media information, the second was printed material, and the third was school lecturers presentation.

Quiet majority of students get information from cinema, there was find significant association between television and HIV/AIDS prevention behavior of abstinent, and also there were significant association between cinema and television with HIV/AIDS prevention behavior of be faithful. In this study did not find association between media information and HIV/AIDS prevention behavior of condom use.

Parents were Personal influence and reminders of the students for an half of them to prevention behavior of HIV/AIDS, follow by teacher, peers and health personnel.

There was significant association between parents influence and HIV/AIDS prevention behavior of abstinent and be faithful. For reminders there was significant association between Teachers and HIV/AIDS prevention behavior of be faithful.

In this study, one third of the students were had lover, and those who had lover more than one third did not delay sexual initiation. Larger majority the students had one lover, and 8.2 percent of them always made sexual intercourse.

In this study also find nearly one half of students made sexual intercourse with sexual workers more than two times. And only 14.5 percent of them always used condom.

The students in this study larger majority never discuss with their regular or other sexual partner about HIV/AIDS prevention behavior, and also larger majority of them

never explained the benefits to use condom in sexual activities. In the future more than one half of the students perhaps to intend to use condom, but 20.9 percent of them did not want to intend to use condom. Only few of the students would use condom with regular and other sexual partner.

6.2 Recommendation

Based on the findings of this research the following recommendations are suggested:

1- Since this study were presented that more than one half of the students got high level of knowledge. And who got low knowledge they low to preventive behavior to solve this problem; the school should provide HIV/AIDS prevention behavior to the students with the effective training and sex education in school curricula.

2- According to the founding of this study, they revealed that the students larger majority of them did not used condom when they made sexual intercourse with their partner and with sexual workers. From this condition need teacher to give sex education program to give knowledge and skill for students to know what are the function, how to use, when they can bring and use. The program should encourage the use participatory approach, such as role plays, group discussion, and case studies to use condom. And also need parent's approach and religion leaders to counseling their children and discuss about benefit of condom use.

3- This study showed the level of female student's preventive behavior of abstinence was higher than of male student's preventive behavior. female can protect them self better than male. In this case need for the teacher and parents to give more detail explain to male students what is dangerous and how to preventive behavior about HIV/AIDS.

4- Cinema is the most important media information to get information for prevention behavior of HIV/AIDS. from this results, need some reality drama to show

the students what will be happened if we cannot preventive their behavior about HIV/AIS.

6.3 Recommendation for future research

1- In this study used only quantitative technique, so could not get depth interview to access and support more and real information about HIV/AIDS preventive behavior among students in high school. In the future research qualitative technique is need to get the real information.

2- In order this study beside, in this study, data only was collected in one high school of Jakarta, in the future research should in bigger population, to give the picture about HIV/AIDS preventive behavior among adolescent in high school in Indonesia.

REFERENCE

1. UNAIDS Report on the global AIDS epidemic, Geneva: The Organization: 2004.
2. World Health Organization. The world Health Report 2004 Changing History. Geneva:The Organization:2004.
3. UNAIDS.AIDS epidemic update December 2004.Under Embargo until 1200 GMT, 23 November 2004. The Organization: 2004.
4. University of London, UK, AIDS and Adolescence, 1997
5. Ministry of Health Indonesia Report on The STI, HIV, and AIDS Epidemiology and Concencus on HIV-Cases Estimation of the year 2003 Jakarta;2004
6. Ministry of Public Health, Thailand:Report on HIV/AIDS and STI in Indonesia; 2003
7. UNAIDS get a picture Asia Pacific, UN Building, Bangkok; 10200, Thailand; Jan 2000; 1-8.
8. UNAIDS/WHO report on global HIV/AIDS epidemic;1998
9. Ralph J.DiClemente, Ph.D and John L Peterson, Ph.D. Preventing AIDS Theories and Methods of Behavioral Interventions.New York. Plenum Press; 1994.
10. T. Hubley, Prevention of AIDS;The AIDS Hand Book; A guide to The Understanding of AIDS and HIV. Second Edition Mc Millan Education, 1995.
11. Elsevier ltd right reserved, Perception of Risk and Strategies for Prevention ; Responses to HIV/AIDS in Rural Malawi, 2004.
12. Johannes P. Van Vugh, AIDS,Prevention and Services Community Based Research, Bergin & Garvey, Westport, Connection.
13. GTZ,Gmbh; Preventing of Sexual Transmission of HIV/STD in Developing Countries, 1996, Germany.
14. Bryn; HIV/AIDS and Health Promotion/ Education, 1995.
15. Earmpon Thongkrajai, Women and AIDS Research Program; AIDS Prevention Among Adolescence; An Intervention Study in Northeast Thailand,

May 1994.

16. Women and AIDS Research Program; by Mary Bassett,Md,MPH; Female Sexual Behavior and The a Risk of HIV Infection an Ethnographic Study in Harare Zimbabwe, 1994.
17. Women and AIDS Research Program; by Stephen L, Schensul; Young Women, work and AIDS, Related Risk Behavior in Mauritus; 1994
18. Women and AIDS Research Program; by Asha,A,Bhende,MA,MPH,PHD, Evolving a Model for AIDS Prevention Education among Under Privileged Adolescence girls in Urban India, 1995.
19. Ruth Bessinger, and all, Multi – Mdia Campaign Exposure Effection Knowledge and Use of Condoms for STI and HIV/AIDS Prevention in Uganda., Journal Evaluation and Program Planning 27 (2004) 397-407.
20. Wassana Im-em, and all, Knowledge and Attitudes of older people about HIV/AIDS in Thailand; Population Study Center the University of Michigan, USA ,2001.
21. Ada R.C. Nwokocha, FMCPaed and Bonny A.N.Nwakoby, FMCPH.Original
22. Studies. Knowledge, Attitudes, and Behavior of secondary (High) School students concerning HIV/AIDS in Enugu, Nigeria 2000. American. Elsevier; 2002.
23. Uzi Brook.AIDS Knowledge and attitudes of pupils attending urban high school in Israel.Elsevier;1999.
24. Lesley Cottrell, Ph.D and all. Perceptions regarding preventive sexual practices and communication with sexual partners among Chinese college students.Elsevier;2004.
25. Kirsten P.Smith, Susan Cotts Watkins.Perceptions of risk and strategies for prevention; responses to HIV/AIDS in rural Malawi.Elsevier; 2004.
26. Fethy Teboursky, Ph.D and Dorra Ben Alaya Ph.D.Knowledge and attitudes of high school students regarding HIV/AIDS in Tunisia; Does more knowledge to more positive attitudes?.Elsevier.2004.
27. Anju Sikand,MD.,Martin Fisher, MD, and Stanford B.Friedman,MD.AIDS knowledge, concerns, and behavioral changes among inner city high school students.Journal of Adolescent.Michigan;1995.

28. Deborah Helitzer-Allen, An Investigaton of Community; Based Communication Networks of Adolescent Girls in Rural Malawi for HIV/STD Prevention Messages, 1994.
29. Vilma Tapia-Aguirre, Edna Arillo Santilan.Association among condom use, sexual behavior, and knowledge about HIV/AIDS. A study of 13,293 public school students.Elsevier; 2004.
30. John Delamater, David A.Wagstaff, Kayt Klein Havens. The impact of cultural appropriate STD/AIDS Education Intervention on black male students sexual and condom use behavior. Elsevier; 2000.
31. John Sunwoo and Allan Brenman. School based AIDS Education for adolescents.Elsevier; 1995.
32. Bureau central Statistics (BPS). 1998. Demography and health in Indonesia, 1997
33. Health Survey Demographic Indonesia). Statistics central Bureau (BPS).and Macro International Inc.Jakarta. 2003.
34. Djaelani, Joyce S.H. 1996. Kebijakan pelayanan kesehatan reproduksi remaja (Adolescent reproductive health services policy). In Seksualitas, Kesehatan Reproduksi, dan Ketimpangan Gender (Sexuality, Reproductive Health and Gender Gaps), edited by A. Dwiyanto and M. Darwin. Jakarta: Pustaka Sinar Harapan, pp. 307-316.
35. Departemen Kesehatan Republik Indonesia (DEPKES-RI). 2002. Rencana Strategi Penanggulangan HIV/AIDS Indonesia (2003-2007). Jakarta: Departemen Kesehatan R.I Ditjen PPM & PL.
36. Hidayana, Irwan Martua, Amir S. Nadapdap, Surati Suwiryo, Irene Marpaung, and Agung Utama Lubis. 1997. Perilaku Seksual Remaja di Kota dan di Desa, Kasus Sumatera Utara (Adolescents' Sexual Behaviour in the Urban and Rural Area: A Case Study in North Sumatra). Jakarta: Laboratorium Antropologi, Universitas Indonesia.
37. Irdjiati, Ieke. 1997. Kebijaksanaan pemerintah di bidang kesehatan reproduksi remaja di Indonesia (Government policy on adolescent reproductive health in Indonesia). MajalahIlmiah Fakultas Kedokteran Universitas Trisakti: 18-32.
38. LD-FEUI. 1999. Baseline Survey of Young Adult Reproductive Welfare in Indonesia 1998/1999. Executive Summary and Recommendations Program.

Jakarta: Demographic Institute Faculty of Economics, University of Indonesia (LD-FEUI).

39. Martin, Karin A. 1996. Puberty, Sexuality, and the Self: Girls and Boys at Adolescence. New York: Routledge.
40. Sarwono, Sarlito Wirawan. 1981. Pergeseran Norma Perilaku Seksual Kaum Remaja: Sebuah Penelitian Terhadap Remaja Jakarta (Changing Sexual Behaviour Norms Among Adolescent:A Case Study Among Adolescents in Jakarta). Jakarta: C.V. Rajawali.
41. Situmorang, Augustina. 2001. Adolescent Reproductive Health And Premarital Sex in Medan. PhD thesis, The Australian National University, Canberra.
42. Utomo, Budi, Irwanto and Abdul Manaf. 1997. STD/HIV trends and behavior change in Indonesia. Paper presented to Workshop on Evidence of Behavioral Change in the Context of HIV Decline, Bangkok, 19-22 May.
43. Utomo, Iwu Dwisetyani. 1997. Sexual attitudes and behaviour of middle-class young people in Jakarta, PhD thesis, The Australian National University, Canberra.
44. Yayasan Kusuma Buana (YKB) and Kantor Mentri Negara Kependudukan, BKKBN/KLH. 1993. Hasil Need Assessment Reproduksi Sehat Remaja di 12 kota di Indonesia (Result of Assessment of Adolescents Reproductive Health Needs in 12 cities in Indonesia). Jakarta.

APPENDIX

APPENDIX A
QUESTIONNAIRES

HIV/AIDS PREVENTION BEHAVIOR
AMONG ADOLESCENTS IN HIGH SCHOOL OF JAKARTA,
INDONESIA

Please answer the following questions, or mark in the ☐ with an X.
Kindly complete all questions honestly as your answers will be confidential and anonymous.

Part 1: General Characteristic

1. What is your Gender?

☐ 1 = male ☐ 2 = female

2. What is your religion?

☐ 1 = Buddhist ☐ 2 =Muslim
☐ 3 =Christian ☐ 4 =Hindu
☐ Other (Specify)

3. **Age:** Kindly indicate your age at the time of your last birthday: ____ years

4. **Monthly Income:** Kindly indicate your average monthly income,
..... Rupiah/Month

5. From whom do you get allowance? : (Multiple answer)

☐1= Parents
☐2=Relatives
☐3=Loan for study
☐4=other specify ----------

6. What is the education of your father? :

☐1= No schooling ☐4= Vocational institute
☐2= Primary ☐5= Graduate
☐3= High School ☐6= Post Graduate
☐7= other specify ----------

7. What is the education of your mother? :

☐1= No schooling ☐4= Vocational institute
☐2= Primary ☐5= Graduate
☐3= High School ☐6= Post Graduate
☐7= Other specify ----------

8. What is the Occupation of your father? :

☐1= Business ☐4= Agriculture
☐2= Laborer
☐3= Government Employee ☐5= Other specify ----------

9. What is the Occupation of your Mother? :

☐1= Business ☐4= Agriculture
☐2= Laborer
☐3= Government Employee ☐5= other specify ----------

10. **Residence:** Kindly indicate where you were born, as well as your present residence.

Place of Birth (Town/Village, District, Province): _____
Present Residence (Town/District/Province): _____
Number of Years Living at Your Present Residence: _____ Years

11. At present do you reside with whom? :

☐1= Parent house ☐3=Rental accommodation (house, room)
☐2= Dormitory ☐4= other specify ----------

Part II: Knowledge about HIV/AIDS:

To answer the following questions select the most appropriate choice according to your knowledge/understanding of HIV/AIDS.

Please make the answer with only one check (X.) in the ☐ according to your understanding.

12. Do you know the causative agent of HIV/AIDS?

☐A virus

☐A Bacterium

☐A Parasite

☐Fungi

13. How HIV/AIDS be transmitted in the following way?

☐By hugging a person infected with HIV/AIDS.

☐ By having "unprotected" sexual intercourse with a person who has many sexual partners.

☐By using drinking glasses or other utensils commonly used by an HIV/AIDS infected individuals.

☐By being bitten by a mosquito after it has just bitten an HIV/AIDS infected person

14 How do you determine whether or not a person has been infected with HIV?

☐ By specific HIV blood tests

☐ By specific HIV urine tests

☐ By specific HIV X Ray tests

☐ By looking at his/her physical appearance

15 How long does it takes for a person to develop full-blown AIDS from the time that he/she is infected with the HIV virus?

☐Within 1 week

☐Within 1 month

☐Within 6 months

☐Within 1 year

16. Which groups, if any, are at high risk for contracting HIV/AIDS?

❒Homosexuals who consistently use condoms

❒Commercial sex workers who consistently use condoms

❒IDUs who do not share needles and syringes

❒Adolescents and young adults who do not use condoms with their regular partners and/or casual sexual contacts

17. How HIV positive pregnant woman infect her fetus, or newborn infant, with the HIV virus?

❒From maternal to fetal blood supply

❒During a Caesarian Delivery

❒By breast-feeding the infant after delivery

❒By cuddling and kissing the newborn baby

18. How HIV/AIDS transmit?

❒ By having no sexual

❒ By contaminated instruments like needles syringes or other skin piercing

❒By partner who uses condom

❒By not having sex with people who have many sex partners.

19. How HIV/AIDS be cured?

❒By a vaccine

❒By antibiotics

❒By an operation

❒By analgesic

20. How HIV/AIDS be treated?

❒By specific medication to prevent the HIV virus from further damaging a patient's

❒By treatment immunological system

❒By killing the HIV virus

❒By consuming high levels of vitamins and minerals

Part III : Perception about the Severity, Susceptibility, Benefits and Barriers to HIV/AIDS Interventions.

Please mark (√) under the number with your opinion on the following statements (3 = agree, 2 = not sure, 1 = disagree).

No	Statement	Agree	Not sure	Disagree
	Severity of HIV/AIDS			
21	HIV/AIDS is a curable disease			
22	HIV/AIDS is a serious problem			
23	People with HIV/AIDS will die due to opportunistic infection			
24	AIDS make every infected person suffer with it			
25	It causes much expenditure for caring AIDS patient			
26	AIDS can make you die before suitable age			
27	Infected with HIV virus, you can not living like normally people			
	Susceptibility			
28	You have chance to get HIV Virus, if you have wounded and contact directly to other's blood			
29	Only one sexual intercourse without condom, it may cause you to have HIV Virus			
30	All children who is delivered from HIV Virus infected mother has chance to get this diseases from mother			
31	Having sex with some one who we know well, It no need to use condom			
32	Using condom during sexual intercourse reduce sexual gratification			

No	Statement	Agree	Not sure	Disagree
33	Having one AIDS patient in your house it will be repulsiveness from relativities and neighborhoods			
34	Use of condom every time with sexual partner is untruthful to her/him			
35	Multiple sexual partners increase risk of HIV Virus infection			
	Perception of Benefit prevention HIV/AIDS			
36	Using condoms during sexual intercourse will greatly reduce sexual gratification for you or your partner			
37	Using condoms, during sexual intercourse, can prevent the transmission of HIV/AIDS and other Sexually Transmitted Diseases (STDs)			
38	Members in families can discuss together about how to prevent HIV/AIDS			
39	Sexual partner can discuss together to prevent getting HIV/AIDS			
40	Having condom in the pocket is good due to its easy pick and convenience			
41	Use of condom makes loose sexual potency or masculinity			
42	Use of condom can prevent the pregnancy			
43	Avoidance from pre marital sex can reduce the risk of HIV Virus infection			
44	Condom use during sexual intercourse every times, make us be not anxiety about HIV Virus infection			

No	Statement	Agree	Not sure	Disagree
45	Consistent condom usage is a good model for adolescents and young adults to follow			
46	You can save money for other expenditures by not using condoms			
47	Family members [e.g. spouses and future children] can avoid being infected by HIV/AIDS if you use condoms consistently			
48	Money can be saved by not using condom			
	Perception of Barrier to prevention HIV/AIDS			
49	It causes much expenditure for caring AIDS patient			
50	Using condom is time consuming			
51	Sexual partner fell unhappy and comfortable when using condom			
52	Use condom makes loose sexual potency or masculinity			
53	Making love with only one partner is boring			
54	Your regular sexual partner/spouse will feel unhappy or uncomfortable when using condoms			
55	Putting on condoms, during sexual intercourse, is time-consuming			
56	Consistently purchasing condoms, for use during sexual intercourse, will adversely affect family resources			

Part IV: Cues to Action about HIV/AIDS

Please make the answer with only one check (X.) in the ☐ according to your understanding.

51. From what media of information have you learned about HIV/AIDS?

(Multiple answer)

☐Have no information about HIV/AIDS

☐Radio

☐ Cinema

☐ Television

☐Printed Material

☐Family Members

☐Friends

☐School Lectures/Presentations

☐Health Professionals

☐Family Doctor

☐Other (Specify): _____

52. Who are the person that influence you to prevention HIV/AIDS?

☐Parents

☐Teachers

☐ Peers

☐ Health Personnel

☐ Other Individuals (Specify): _____

53. Who usually reminds you to prevention HIV/AIDS?

☐Parents

☐Teachers

☐ Peers

☐ Health Personnel

☐ Other Individuals (Specify): _____

Part V : Preventive Behavior

Please make the answer with only one check (√) in the ☐ according to your Understanding

54. Do you have lover? :

☐1= yes

☐2= No

55. If yes, do you not engaging in sexual intercourse or delaying sexual initiation?

☐1= yes

☐2= No

56. How many lovers do you have?

☐One

☐Two

☐More than two

57. Do you making sexual intercourse with them?

☐Always

☐Never

☐Some times

☐Often

58. Did you ever making sexual activity with sexual worker?

☐Yes

☐Never

59. How many times do you making sexual intercourse with sexual worker?

☐One time

☐Two times

☐More than two times

☐Other (Specify) ----------

60. Have you ever performed sexual intercourse with your sexual partner during three month ago?

- ☐1 = No
- ☐2 = One time
- ☐3 = More then one time

61. Did you use condom each time you have sex with your sexual partner?

- ☐1 = Always use
- ☐2 = some time
- ☐3 = Do not know
- ☐4 = Do not use
- ☐5 = Never have sex

62. Have you ever discussed HIV/AIDS prevention with your regular or other sexual partner(s)?

- ☐No
- ☐Only with regular partner
- ☐Only with other sexual partner(s)
- ☐With both regular and other sexual partner(s)

63 Have you ever explained the benefits of using, or persuaded your sexual partner to use, a condom whenever you engage in sexual activities?

- ☐No
- ☐Only with regular partner
- ☐Only with other sexual partner(s)
- ☐With both regular and other sexual partner(s)

64 In the future do you intend to use or ask your sexual partner to use condom when engaging in sexual activities in order to prevent HIV/AIDS?

- ☐No
- ☐Perhaps
- ☐Only with regular partner
- ☐Only with other sexual partner(s)
- ☐With both regular and other sexual partner(s)

BIOGRAPHY

NAME	Zolaiha, SKM
DATE OF BIRTH	February 4, 1974
PLACE OF BIRTH	Jakarta, Indonesia
INSTITUTE ATTENDED	Nursing Academy Ministry of Health Indonesia, Jakarta 1996 University of Indonesia Faculty of Public Health for Reproductive Health, 2001 ASEAN Institute for Health Development, Mahidol University 2005 Master of Primary Health Care Management
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