FACTORS ASSOCIATED WITH HIV/AIDS AMONG WOMEN IN SAMBAS, WEST KALIMANTAN, INDONESIA : A CASE CONTROL STUDY

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CHAPTER 1

INTRODUCTION

1.1   BACKGROUND

Gottlieb and his colleagues in Los Angeles was reported the first case of *Acquired Immunodeficiency Syndrome* (AIDS), in June 1981 (Centers of Disease Control and Prevention 1999). The infection *of Human Immunodeficiency Virus* (HIV) is the cause of AIDS, and has become a global pandemic (Klatt 2007).

The number of women living with HIV (Human Immunodeficiency Virus) infection and AIDS (Acquired Immunodeficiency Syndrome) is increasing worldwide. According to the World Health Organization (WHO), in late 2005, has been found 17.5 million women worldwide are infected with HIV. Today, the account after more than twenty years into the pandemic, nearly half of the 40 million people living with HIV worldwide are women. Since 1985, the proportion of HIV cases in women reached three times that of about 8% to 27% (Meera & Phill 2006).

The cumulative number of reported AIDS cases in Indonesia up to March 2010 was 20,564. In addition to that, there were 40,321 cases of HIV infection reported through 226 Voluntary Counseling and Testing (VCT) clinics nationwide. The AIDS male and female ratio was 3:1, differing from 4:1 ratio of previous years, offering a glimpse of the progress of the pandemic in Indonesia (Kementerian Kesehatan, Ditjen Pengendalian Penyakit dan Penyehatan Lingkungan 2010).

In West Kalimantan until December 2010 based on data recorded in the Provincial Health Office 2,869 cases of HIV, 1,440 cases of AIDS and 347 of them

had died. According to national data, West Kalimantan is ranked seventh (Provincial Health Office 2011).

Geographical conditions Sambas district makes its own situation and the effect on any discussion of development programs including HIV and AIDS. Influx of migrants by sea, air and land very open when and by anyone, besides bringing a positive impact as the potential changes in development also brings other negative implications. The high level of community mobilization Sambas district and geographic location also influence the socio-economic life, including the dangers of HIV and AIDS. In addition, many people that work inter-island as laborers engaged in the timber, the transit of foreign fishermen, the localization / prostitution, nightclubs, Indonesia Labor / Employment Women and high cases of abuse of narcotics and other substances will have an impact negative phenomenon became popular social ills and demanding immediate intensive treatment (KPAD 2010).

Progression of HIV and AIDS in Sambas district since 2000 until the end of December 2010 growing very fast. Sambas district Health Office reported until the end of December 2010, that there were 70 cases of AIDS and 108 cases with HIV, by way of cumulative reported cases of transmission through IDUs 2.8%, 21% infected from her husband, MTCT 6.7%, Heterosexual 50%, 6.1% Homosexual (MSM) and others 12.4% . Also reported the percentage of AIDS cases by gender is 60.1% or 107 cases were male, 39.9% or 71 cases were women while the highest proportion of cumulative AIDS cases reported in the age group 25-34 years at 47.7%, age group 34 - 44 years 24.1%, age group 15-24 years 14.6%, age group >44 years 6.7% and age group <15 years 6.7%. This amount is only a fraction of HIV and AIDS cases are found in Sambas district, because the number of recorded only an iceberg phenomenon (KPAD 2011).

1.1.1   Research question

Do the Socio-Cultural factors (sexual behavior) associate with HIV/AIDS among women in Sambas District? Do the Economic factors such as migration, Income/Salary, occupation and level of education associate with HIV/AIDS among women in Sambas District? Do the Socio-demographic factors such as age and marriage status associate with HIV/AIDS among women in Sambas District? Do the knowledge about HIV/AIDS associate with HIV/AIDS among women in Sambas District? Do the program and services access factors such as VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV

prevention and tools and HIV treatment associate with HIV/AIDS among women in Sambas District?

1.1.2   Justification of study

The number of adult population infected with HIV in Indonesia in 2006 was 2,873 people, and 21% of them were women. In 2008 the number of new HIV cases has reached 4,969 in which the proportion of women has increased to 25%. These conditions indicate the feminization of the HIV epidemic is happening in Indonesia. The same condition also occurs in Sambas district, where the prevalence of HIV among women continues to increase each year based on data obtained from Sambas District Health Office. In 2008 the proportion of HIV cases among women in Sambas District was 37% and in 2010 the proportion of cases among women increased to 45%. Based on these data inspired me to do this study. In this study tried to re-locate and determine any factors that influence the increasing cases of HIV / AIDS among women in Sambas District and determine the most popular issues related to HIV / AIDS. It is hoped that this study will be able to make recommendation to improve the control measures to prevent and control the HIV infection among women in Sambas District.

1.2   CONCLUSION

The cumulative number of reported AIDS cases in Indonesia up to March 2010 was 20,564. In addition to that, there were 40,321 cases of HIV infection reported through 226 Voluntary Counseling and Testing (VCT) clinics nationwide. The AIDS male and female ratio was 3:1, differing from 4:1 ratio of previous years, offering a glimpse of the progress of the pandemic in Indonesia.

These conditions indicate the feminization of the HIV epidemic is happening in Indonesia. The same condition also occurs in Sambas district, where the prevalence of HIV among women continues to increase each year based on data obtained from Sambas District Health Office.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

HIV and AIDS continue to be one of the most challenging issues of development in human history. Since the beginning of the epidemic, HIV is considered a dread disease, especially in males. Currently, almost half of the 39.5 million people living with HIV worldwide are women. Fifty percent of the 3.8 million new HIV infections occur among adults worldwide in 2006 was women (UNAIDS 2006).

2.2   LITERATURE REVIEW

2.2.1   HIV/AIDS prevalence among women

Among women the prevalence of HIV / AIDS continues to rise. Around the world, women constitute more than half of all people living with HIV / AIDS. This also happens in Indonesia where the number of AIDS cases among women in Indonesia has increased substantially since 1995 (Amfar 2011).

HIV Epidemic in Sub-Saharan Africa continues to occupy the highest position, with more than 60% of 40 million people infected are still alive in the world (UNAIDS 2005). Tanzania, which is a country with a population of 34.5 million is one of the most affecting high rate, that is has 7% of adults infected with HIV (TACAIDS 2005). In all regions, the prevalence of HIV-infected women continues to rise and is higher than men (Mwaluko et al 2003; Msuya et al 2006) This means that 58% of

HIV-infected individuals across the country were women (Ministry of Health Tanzania 2004).

If we look at the modes of transmission, heterosexual transmission is the dominant one in which the proportion is as high as 60%, while through injecting drug use is 30% too few cases were infected through mother and child (pregnancy) (ICAP 2009).

2.2.2 Factors Associated with HIV/AIDS

2.2.2.1 Socio-demographic factors

a. Age

Groups that most vulnerable to contracting HIV are women and girls. From the results of several studies found that the tendency for women and girls infected with HIV was 2.5 times compared with boys and young men. UNAIDS has reported data on new cases of HIV and AIDS in developing countries are at a young age (15-24 years) which is 67%. Of these 64% are women and girls aged 15-24 years (UNAIDS 2004).

In Indonesia, according to health ministry report, more than 50% of AIDS cases were reported at age 15-29 years (KPA 2009).

b. Marriage status

Some opinions state that marriage is always protecting a woman from becoming infected with HIV. It turned out that this opinion is not true. Many new infections in women occur in marriage or long-term relationships as a result of a loyal partner aged 15-24 years (Avert 2011).

Gender inequality in the marriage relationship, especially in decision-making process that relation with sex, leading to high vulnerability to HIV transmission. If we look at a current data around the world show that the incidence of new HIV infections is rising among married women and girls. The most important factor in HIV transmission among women is through heterosexual contact unsafe and unprotected. (Change 2007).

Factors that greatly contribute to increasing female sexual exposure are marriage. In many countries, marriage itself has become a risk factor for women and girls. The increased frequency of unprotected sex after marriage is dramatically boosted by the implications of infidelity or distrust associated with a certain opinion of contraception such as condoms, a strong will to get the offspring (babies), and gender power relations are not balanced. This led to the increasing inability of women to negotiate safe sex (Population Council 2004). Because of the imbalance of power in the relationship created by the economic and emotional dependence, women are often unable to protect themselves, although the women themselves are knowledgeable about their extra-marital sexual interaction partners (ICASO 2007).

2.2.2.2 Socio-Cultural Factors

a.   Sexual behavior

Some theory and evidence presented that educated people should be easier to adopt the practice of safe sexual practices in response to health promotion (Fylkesnes et al. 1997) or from other sources of information about HIV / AIDS. Some of the major factors determine sexual behavior demonstrated by the social cognitive model. All the theories suggest, a necessary condition is the knowledge and understanding of the behavior and its consequences but not enough to make the behavior and perceptions as a basic (Rosentock 1990) and attitude toward the behavior (Ajzen 1985).

There is a relationship between the increased prevalence of HIV / AIDS among women with certain patterns of sexual behavior. In women with frequently changing sexual partners reported an increased prevalence of HIV / AIDS (Chen et al. 2007).

2.2.2.3 Economic factors

a.   Migration

The relationship between HIV / AIDS and migration are close and complex. Generally, the highest incidence of HIV / AIDS exist in countries with good transport infrastructure, economic development level is relatively high, and internal migration as well as cross-border are pretty good, not the poor countries. Key ways in which migration associated with the rapid spread and high prevalence of HIV / AIDS consists of four ways:

- Social networks of multi-local migrants create opportunities for sexual networking via mobile phones;
- Migration is something that can encourage or make people vulnerable to high-risk sexual behavior;
- Migration also makes people more difficult to achieve through intervention, whether for prevention education, condom provision, HIV testing, infection or post-treatment and treatment;
- In the 'migrant community', which is often socially, economically and politically marginalized groups have found higher rates of infection (Crush et al. 2006).

The relationship between HIV / AIDS and migration has a good empirical evidence. Near the road, and among the people who either have experience of migration or migrants have sexual partners found the incidence of HIV / AIDS is higher. Migrant workers (and their sexual partners) have a higher infection rate than the general population in the South and West Africa (Crush et al. 2006).

b.   Income/salary

Some studies suggest a significant relationship between income and HIV / AIDS. A woman who has no income or low income, even though she has a big responsibility towards the family, can do the job that high risk of contracting HIV / AIDS, such as

having sex with non-regular partners in order to earn additional income. (Forna et al. 2006).

One study conducted in America by large national population of HIV research has found that HIV infection rates among low-income communities in 24 U.S. cities with high AIDS prevalence is 10 to 20 times greater than in the general U.S. population. The result of the study was 2.3% among those with annual household incomes at or below the poverty level compared with 1% among those with incomes above the poverty level (Kraft 2011).

c.   Occupation

The relationship between occupation with HIV/AIDS are inextricably linked, directly or indirectly. As sex workers are directly related to HIV / AIDS. On the other hand, partner's occupation also increases the risk of HIV among women. In a study showed a strong relationship between partner's occupation status and HIV among women. The first consideration is that the men in this work are more likely to travel (such as truck drivers compared to the farmers, for example), putting them at greater risk of infection, will be infected for wife (Fawzi et al. 2010).

One research done in America, HIV prevalence was higher among those with lower socioeconomic status. The results shows that HIV prevalence 2.6% among participants who were without occupation compared with 1.0% among those who were with occupation (Kraft 2011).

d.   Level of Education

Blanc said that sexual behavior among educated people was at high risk (Blanc 2000). Woman who are educated, have sex more frequently and delaying marriage. This causes them to become more independent and sexually active for a longer period and thus they have a large number of sexual partners (Blanc & Way 1998).

As the picture at the national level, individual level of analysis suggests that people should be educated at a greater risk of infection in the early stages of the HIV

epidemic but should be better prepared to change their sexual behavior when confronted with the facts of HIV transmission (Global HIV Prevention Working Group 2008).

Contraceptive choice can also be influenced by education. Although educated people may be more likely to use contraception as a whole, they are also more likely to choose methods, such as the contraceptive pill, which does not protect against sexually transmitted diseases like HIV. Taken together, and in the absence of response to the epidemic, these factors increase the vulnerability of individuals who are more educated for HIV infection at an early stage of the epidemic (ICASO 2007).

2.2.2.4 Knowledge about HIV

Vulnerability of women and girls to contracting generally due to lack of knowledge and their information about HIV-AIDS or the lack of access to HIV prevention services (Kementerian Negara Pemberdayaan Perempuan RI 2008).

The factors contributing to the vulnerability is the lack of knowledge about sex and HIV and AIDS. Gender norms often restrict their access to preventive care even when the service is available. This requires passivity of women in sexual terms (ICASO 2007).

Women in sub-Saharan countries are considered one of the most vulnerable populations in the world for HIV. Three-quarters (76% or 13.2 million) of all HIV-positive women living in the world (UNAIDS 2006; Burgoyne & Drummond 2008). There is a striking lack of knowledge about HIV / AIDS in sub-Saharan countries such as Somalia, Gambela and Benishangul-Gumus regions of Ethiopia. Lack of knowledge is clear in all HIV / AIDS knowledge domains (CSA 2006; Burgoyne & Drummond 2008). Basic knowledge about HIV / AIDS apprears pretty limited in some African societies (Yahaya 2002; Burgoyne & Drummond 2008).

Several countries have noted a reduction in new infection rates among sex workers in recent years. This decrease is associated with better knowledge about HIV / AIDS. For example in Haiti, an increase of HIV prevalence among female sex workers who perform voluntary HIV counseling and perform laboratory tests for HIV (Gaillard et al. 2006).

2.2.2.5 Program and services access factors

a.   VCT (Voluntary Counseling and Testing)

VCT is an important component for the prevention of HIV, is also the gateway to treatment, care and support for people living with HIV. Limited access to VCT centers in several large cities only, although VCT is available in most countries now. Because the distance to VCT services so far and also the transportation as an obstacle, making it hard for women to achieve access these services (WHO 2002). The attitude of the officers who provide services to women who checked herself into VCT sometimes cause discomfort (ICASO 2007).

The most common reasons to refuse testing were need to discuss with partner, fear of HIV positive status, and fear of loss marital security, domestic violence and confidentiality. The study has also reported that better-educated women refuse to test more often than others (Worku 2005).

b.   Prevention Mother To Child Transmission

Transmission of HIV through mother to child tends to increase with increasing number of women with HIV from an infected partner or due to risky behavior. Although prevalence data of HIV transmission from mother to child is still limited, but the number of pregnant women who are positive tend to increase. Based on projections, the number of positive mothers who need PMTCT services in Indonesia will increase from 5.730 people in 2010 to 8.170 people in 2014 (Kementerian Koordinator Bidang Kesejahteraan Rakyat RI 2010).

The aims of the PMTCT program are provides medicines, counseling and psychological support to help mothers safeguard their infants against the virus, ensuring PMTCT given to all women that need it is our most effective way to end mother-to-child HIV transmission by 2015, and achieve the UN's Millennium

Development Goal 6 and ensuring that no baby is born with HIV is an important step towards achieving an AIDS-free generation. But far too few pregnant women and their infants have access to this preventive treatment (UNICEF 2012).

To reach the goals, pregnant women across the developing world must be tested for HIV. PMTCT programs must be improved to reach all mothers and babies who need them – no matter how poor and geographically isolated they may be. And where prevention of mother-to-child HIV transmission is accessible, it must be delivered consistently and with the most effective drugs available (UNICEF 2012).

In research programs of prevention of mother to child transmission (PMTCT) in six African countries, found several reasons for pregnant women refuse to perform an HIV test or not to return to take their test results. Important reason is the fear expressed exclusion and domestic violence (WHO 2002).

c.   HIV Prevention Services and Tools

Prevention tools can empower women to take control of their sexuality, for example, the female condom. Because of the high price of female condoms and a limited number and low awareness of women led to increasing their vulnerability to HIV (ICASO 2007).

The influence of cultural and religious morality which are equated condom use with promiscuity and restriction of the availability of free condoms, resulting in psycho-social barriers to using them. A lot of opinion in some countries, that the condom is strongly associated with marginalized groups such as sex workers. For example, until recently in Morocco, people who have asked for condoms is seen as evidence of sex (ALCS 2005). Married women are often unable to negotiate condom use for fear of being accused of adultery or resistance to bear children due to the influence of culture and religion (NAZ Foundation International 2005).

d.   HIV Treatment

Lack of mobility and domestic duties cause women often cannot access health centers and treatment (UNFPA 2007). Social and religious influence often requires women to put the needs of the partner families and their children as first priority, before their own. In the family, men and boys are preferred, and then the women and girls. Women are more likely to be at an advanced stage of HIV infection and opportunistic infections that complicated because women are more inclined to wait a long time before seeking care and treatment during illness, (UNAIDS 2006;ICASO 2007). Another cause is the Women tend to try to maintain and keep his HIV status, so that they are not likely to seek care, treatment and support (http://www.icw.org).

Several studies have shown that women with HIV / AIDS may face barriers to treatment and did not receive the optimal level of care. Because they do not have transportation or are too sick to go to the doctor, causing a woman with HIV has always put off to get treatment so that fared worse (Kaiser Foundation 2007).

2.3 CONCEPTUAL FRAMEWORK

Economic Factors

- Migration
- Income/Salary
- Occupation
- Level of education

Socio-Cultural Factors

- Sexual Behavior

Knowledge about HIV/AIDS

HIV / AIDS

Socio-Demographic Factors

- Age
- Marriage Status

Program and Services Access Factors

- Voluntary Counseling and Testing
- PMTCT
- HIV Prevention Services and Tools
- HIV Treatment
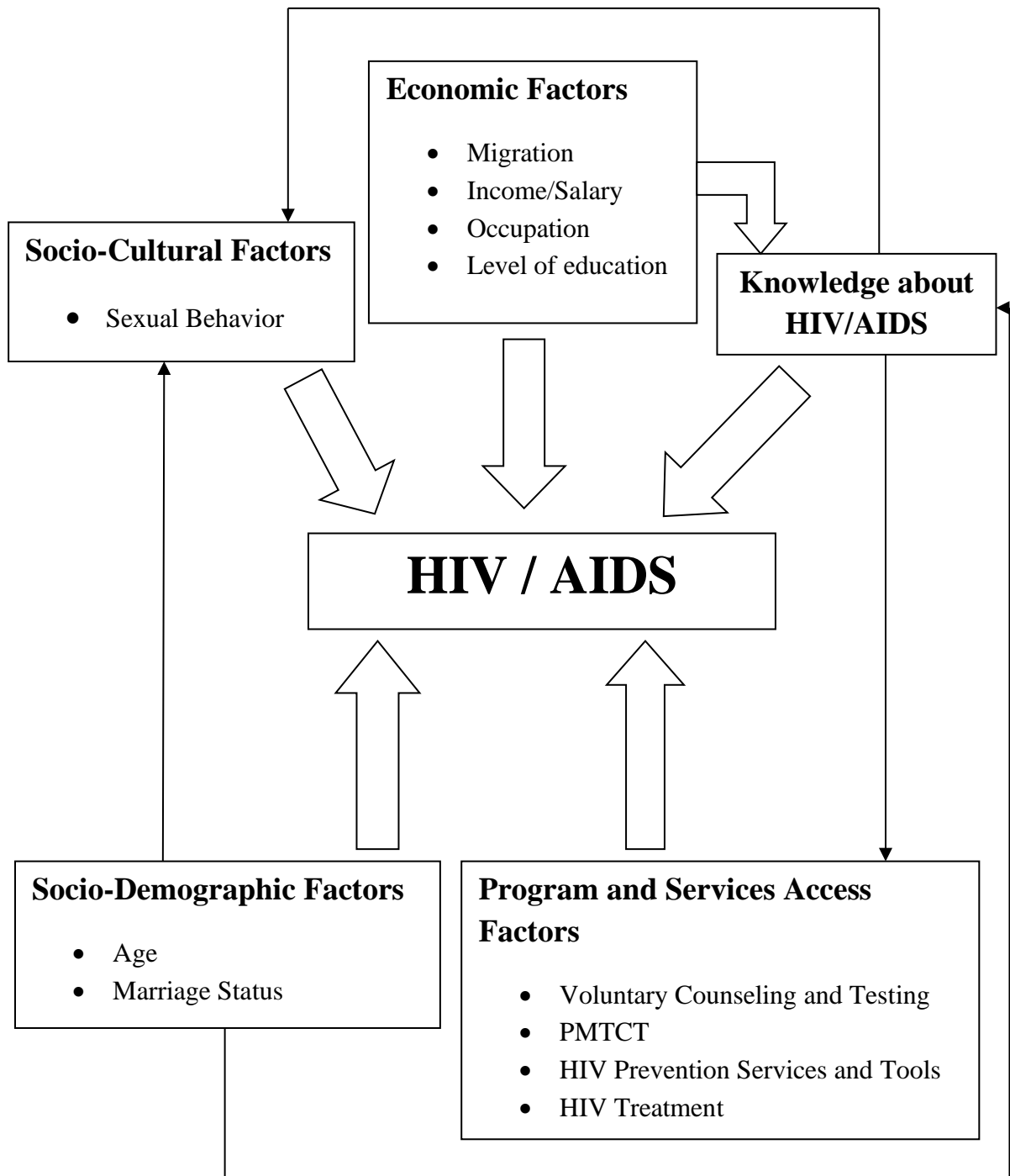
2.4   OBJECTIVES

2.4.1   General objectives

To determine the following factors such as socio-demographic, socio-cultural, economic, knowledge about HIV/AIDS, Program and Services Access factors such as VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV prevention and HIV treatment associated with HIV/AIDS among women in Sambas District.

2.4.2   Specific objectives

a. To determine the Socio-demographic factors (age and marriage status) that associated with HIV/AIDS among women in Sambas District.
b. To determine the Socio-cultural factors (sexual behavior) that associated with HIV/AIDS among women in Sambas District.
c. To determine the Economic factors (migration, low Income/Salary, occupation and level of education) that associated with HIV/AIDS among women in Sambas District.
d. To determine the association between knowledge about HIV/AIDS with HIV/AIDS among women in Sambas District.
e. To determine the Program and Services Access factors such as VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV prevention and HIV treatment that associated with HIV/AIDS among women in Sambas District.

2.5   HYPOTHESIS

2.5.1   There is a significant association between the socio-cultural factors (sexual behavior) with HIV / AIDS among women in Sambas District.

2.5.2   Lower monthly household income is associated with increased risk of getting HIV/AIDS among women in Sambas District.

2.5.3   There is a significant association between the occupation with HIV/AIDS among women in Sambas District.

2.5.4   There is a significant difference between level of education with HIV/AIDS among women in Sambas District.

2.5.5   There is a significant association between the socio-demographic factors (age and marriage status) with HIV/AIDS among women in Sambas District.

2.5.6   Lack of knowledge about HIV/AIDS is a significant risk factor of getting HIV/AIDS among women in Sambas District.

2.5.7   There is a significant association between the program and services access factors (VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV prevention and HIV treatment) with HIV/AIDS among women in Sambas District.

2.6   CONCLUSION

HIV and AIDS continue to be one of the most challenging issues of development in human history. Since the beginning of the epidemic, HIV is considered a dread disease, especially in males. Currently, almost half of the 39.5 million people living with HIV worldwide are women. Fifty percent of the 3.8 million new HIV infections occur among adults worldwide in 2006 was women.

This study try to determine the following factors such as socio-demographic, socio-cultural, economic, knowledge about HIV/AIDS, Program and Services Access factors such as VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV prevention and HIV treatment associated with HIV/AIDS among women in Sambas District.

CHAPTER 3

METHODOLOGY

3.1   STUDY BACKGROUND

Sambas District is located in the northernmost part of West Kalimantan Province or between $2^0$08' North Latitude and $0^0$33' North Latitude and $108^0$39' East Longitude and $110^0$04' East Longitude.

Administratively, Sambas District boundaries are:

- North   : Sarawak (East Malaysia) and Natuna Sea
- South   : District Bengkayang and Singkawang
- West   : Natuna Sea
- East   : District Bengkayang and Sarawak

Figure 3.1: Map of West Kalimantan

Figure 3.1.1: Map of Sambas District

Area of Sambas District is 6,395,70 km^2 or about 4:36% of the area of West Kalimantan province. Sambas District Government area in 2008 is divided into 19 sub-district and 183 villages.

Based on projected figures, the population of Sambas District in 2009 amounted to approximately 496,464 people. 241,968 of men and 254,496 women's lives with a population density of about 78 inhabitants per square kilometer, or 2,699 inhabitants per village (the Central Bureau of Statistics Sambas District in 2010).

Sambas District has a harbor that faces the South China Sea. Many fish boats and traditional cargo boats from neighboring countries and provinces stop by at this harbor. According to several informants, the harbor in Pemangkat sub-district does not only bring economic benefits but also sometimes creates problems. One of the problems is transaction of sex. This situation is believed by several informants as the

fuel trigger the raise of HIV and AIDS cases in Sambas (World Vision Indonesia 2010).

3.2   STUDY DESIGN

This is unmatched case-control study. Ratio 1 : 1

3.3   STUDY POPULATION

Case

The study populations were women with HIV/AIDS in Sambas District.

Control

The controls were women without HIV/AIDS (HIV -) lives in Sambas District.

3.4   STUDY SAMPLE

3.4.1   Case

The sample selected for this study was women with HIV/AIDS in Sambas District, West Kalimantan, Indonesia. Testing protocols among cases were followed WHO's recommendation which were two positive from three types Rapid tests.

Inclusion and Exclusion Criteria for Cases

a.   Inclusion Criteria

    i.   All women with HIV/AIDS.
    ii.   Those who were 15 years old or above.
    iii.   Resident or non-resident of Sambas District and registered at VCT "CAHAYA" Clinic in Puskesmas Pemangkat.
    iv.   Co-operated

v.   Agreed to participate in this study.

b.   Exclusion Criteria

i.   Non West Kalimantan Residents.
ii.   Those who are sick during the data collection.

3.4.2 Control

The sample selected for control were women without HIV/AIDS who came to the three selected Community Health Centre in Sambas District within a week.

Inclusion and Exclusion Criteria for Controls

a.   Inclusion Criteria

i.   All women tested negative HIV with rapid test.
ii. All women that came to three selected Community Health Center in Sambas District within a week.
iii. Resident of Sambas District.
iv. Those who were 15 years old or above.
v. Those who agreed to participate in this study.
vi. Those who were cooperated.

b.   Exclusion Criteria

i.   Those who were tested positive HIV during the data collection.

3.5   SAMPLING METHOD

The sampling method for this study were:

Case

Purposive sampling women with HIV/AIDS in Sambas District.

Control

Purposive sampling (all women who came to the three selected Community Health Centre in Sambas District within a week).

3.6   SAMPLE SIZE

The sample size calculation for this study design was determined using the Pocok's formula as below.

$$\text{Sample size} = \frac{(p_0.q_0 + p_1q_1)(Z_{1-\alpha/2} + Z_{1-\beta})^2}{(p_1 - p_0)^2}$$

where, p_1 =   the proportion of exposure among cases

p_0 =   the proportion of exposure among controls

q_1 = $1 - p_1$

q_0 = $1 - p_0$

$Z_{1-\alpha/2}$ =   1.96 (value of the standard normal distribution corresponding to a significance level of alpha of 0.05 for a two-sided test)

$Z_{1-\beta}$ =   0.84 (value of the standard normal distribution corresponding to desired level of power of 80%)

From literature review, p_1 (the income proportion among cases) = 0.555 and

p_0 (the income proportion among controls) = 0.769 (Demissie et al. 2006).

Sample size $\quad = \quad \dfrac{[(0.769 \times 0.231) + (0.555 \times 0.445)] \times (1.96 + 0.84)^2}{(0.555 - 0.769)^2}$

$\qquad\qquad\qquad = \qquad$ 73 pairs of cases and controls.

An additional 20% was added to the calculated minimum sample size of 73, to allow for drop outs and rejected subjects due to exclusion criteria. Therefore the sample size needed for this study is 90 pairs of cases and controls, or 180 respondents.

3.7   DATA COLLECTION

The data was collected by trained counselor were socio-cultural data (sexual behavior), economic data (migration, income/salary, occupation and level of education), socio-demographic data (age and marriage status), knowledge about HIV/ AIDS, and program and services access data (VCT, PMTCT, HIV prevention and HIV treatment).

3.8   STUDY TOOLS

The study tools were a set of questionnaires, Rapid test tools and data sheet/medical record.

3.8.1   Data sheet/medical record

The data sheet/medical record of cases was the first protocol to be used during data collection.

3.8.2   Questionnaire

Interview base on standardized questionnaire had been used to collect socio-cultural data (sexual behavior), economic data (migration, income/salary, occupation and level

of education), socio-demographic data (age and marriage status), knowledge about HIV/AIDS, and program and services access data (VCT, PMTCT, HIV prevention and HIV treatment). The questionnaire was done in Bahasa Indonesia to ease its application with the local population (Appendix C). It was divided into two sections;

- Section A for socio-demographic information.
  Sources: HIV/AIDS Awareness Rating Of Questionnaires 2009 and NIAID AIDS Clinical Trials Group.
- Section B for knowledge about HIV/AIDS.
  Source: HIV Knowledge Questionnaire (HIV-KQ-18).

Some questions were changed based on the need and done through a trial (pre-test) validated before being used.

To assess the results of the Questionnaires had been used scoring system based on literature review, was categorized into 3 categorizes (Measured by total score):

- Poor/Lack, total score ≤5.
- Moderate, total score 6 - 7
- Good, Total score 8 - 10

3.8.3 Rapid Test

All controls were tested by Rapid test method as a screening tool to make sure that they are HIV negative. For these screening test, PITC (Provider Initiated Testing and Counseling) had been used. All controls were signature the informed consent as a deal that they were agreed with this screening test. The controls tested HIV positive by the rapid test were excluded from the rest of this study. Those who tested HIV negative were proceeding to interview by researcher. This procedure was continued throughout the period of data collection until the required sample size was obtained.
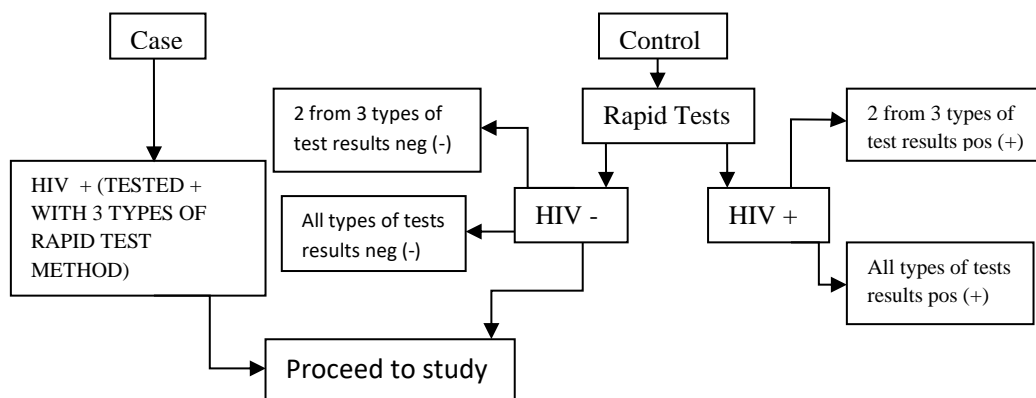

Figure 3.0 Schema of cases and controls selection.

3.9   DATA ANALYSIS

Data analysis was carried out using SPSS 19.0. Dichotomous variables were analyzed by using the chi-squared test (Descriptive was described with percentage, mean and standard deviation). Multivariable analysis was done with binary logistic regression.

3.10   RESEARCH ETIQUETTE

The respondents were informed that the participation in the study is voluntary and no action will be taken if they choose not to participate. They were informed of the objective of the study and the test that were involved (how the HIV rapid test was administrated and the need of vein puncture to take 2 ml of blood for the rapid test in-tube test).

Those who agree to participate were ensured that they were only identified by a peculiar serial number known only to researcher and the information that they disclose and result of the test for HIV are confidential and they had signed the informed consent. Before screening for HIV, all the respondents got counseling about HIV/AIDS and had signed the informed consent. After screening for HIV, all respondents were informed of their results and got counseling after test.

Before starting the research, the researcher was asked permission to do the study from the Head of Sambas District (Mrs. Regent) and also got ethical approval from UKMMC ethics committee.

3.11   VARIABLES

3.11.1 Dependent variable

HIV/AIDS.

3.11.2 Independent variables

Independent variables in this study are :

1. Age
2. Level of education
3. Marriage status
4. Sexual behavior
5. Migration
6. Income/salary
7. Occupation
8. Knowledge about HIV/AIDS
9. VCT (Voluntary Counseling and Testing)
10. PMTCT (Prevention Mother To Child Transmission)
11. HIV prevention services and tools
12. HIV treatment

3.12 VARIABLES DEFINITION

3.12.1 HIV / AIDS

Women tested HIV positive with follow WHO's recommendation which are two positive from three types Rapid tests.

3.12.2 AGE

Age of the cases and the controls respondent were defined as the age during the interview of study using the latest birthday.

3.12.3 LEVEL OF EDUCATION

Level of the highest education was categorized into 4 categories (based on Ministry of education of Indonesia):

- Primary school.
- Secondary school.
- High school.
- University or higher.

3.12.4 MARRIAGE STATUS

Marriage status was categorized into 3 categorizes:

- Single
- Married
- Single/divorced.

3.12.5 SEXUAL BEHAVIOUR

Sexual behavior was categorized by number of lifetime partners:

- $\leq$ one partner
- $\geq$ two partners.

3.12.6 MIGRATION

People who were migrate as workers or other reasons to other cities or countries. Migration was categorized into 2 categorized:

- Migrant
- Non migrant

3.12.7 INCOME/SALARY

Income/salary (total household income) was categorized base on the regional minimum wage (UMR) for Kalimantan Barat province. The regional minimum wage is Rp 1,024,500.00 :

- < Rp 1,024,500.00 per month
- ≥ Rp 1,024,500.00 per month

3.12.8 OCCUPATION

Occupation (current occupation) was categorized into 6 categorizes:

- No working
- Housewife
- Business women
- Government employee
- Farmer
- Others.

3.12.9 KNOWLEDGE ABOUT HIV/AIDS

Knowledge about HIV/AIDS was categorized into 3 categorizes (Measured by total score):

- Poor, total score ≤5.
- Moderate, total score 6 - 7
- Good, Total score 8 - 10

3.12.10 VCT (VOLUNTARY COUNSELING AND TESTING)

VCT service was categorized into 4 categorizes:

- Know about VCT service and want to go to do the test
- Know about VCT service but don't want to go for test

- Don't know about VCT service but want to do test
- Don't know about VCT service and don't want to go for test

Access to VCT service was categorized into 3 categorizes:

- Near to VCT service
- Far to VCT service
- No idea about access to VCT service

3.12.11   PMTCT (PREVENTION MOTHER TO CHILD TRANSMISSION)

PMTCT services was categorized into 2 categorizes:

- Know about PMTCT service
- Don't know about PMTCT service

Access to PMTCT service was categorized into 3 categorized:

- Near to PMTCT service
- Far to PMTCT service
- No idea about PMTCT service

3.12.12   HIV PREVENTION SERVICES AND TOOLS

It was categorized into 2 categorized:

- Using condom
- Not using condom

3.12.13   HIV TREATMENT

HIV treatment was categorized into 2 categorizes:

- Know about anti-retroviral therapy

- Don't know about anti-retroviral therapy

3.13   CONCLUSION

This research was used an unmatched case control design to determine the answer to the research question. Sample size was used in this study are 90 pairs of cases and controls or 180 respondents. The data collected was analyzed using the SPSS version 19.0 software to generate the descriptive and analytical statistics.

CHAPTER 4

RESULT

4.1   INTRODUCTION

In this chapter, details finding of factors associated with HIV/AIDS among women was presented through two category analysis which are descriptive analysis and analytical analysis. Socio-demographic, economic, socio-cultural, knowledge about HIV/AIDS, program and services access characteristics were presented by frequency (percentage). The data of age respondent was normally distributed and it was presented in mean and standard deviation (SD).

4.2   DESCRIPTIVE ANALYSIS

4.2.1   Socio-demographic, Economic, Socio-cultural Characteristics of Respondents

A total of 180 women respondents attended three community health services in three selected cities were included in this study. Among the studied women 90 were cases and 90 were controls.

According to age group, nearly half of the study respondents among cases were 25 - 34 years old (48.9%), followed by 35 – 44 years old (23.3%), 15 – 24 years old (18.9%) and above 44 years old were 8.9%. Apparently the mean age of cases was 32.22 years and standard deviation was 8.118. Majority of the case respondents were married (56.7%) and only 7.8% was single. About 54.5% of cases had school at primary level and only 2.2% had school at University level. In terms of sexual behavior 73.3% of cases had one partner and 26.7% had more than one partners. From

the table below shows 56.7% of cases had never lived in another district or country and the rest had lived in another district or country. Majority of cases had income/salary below the regional minimum wage (57.8%). Table 4.1 also shows that in terms of work 44.4% of respondents among cases was housewife.

Majority of the controls were between 25 and 34 years old (43.3%), followed by 35 – 44 years old (27.8%), above 44 years old (15.6%) and 15 – 24 years old were 13.3%. The mean age of controls respondents was 33.72 years and standard deviation was 9.376. Majority of the study respondents among controls was married (70.0%). In terms of education level about 47.8% of controls had school at primary level and 5.5% had school at university level. Table 4.1 shows that 74.4% of controls had one sexual partner and 25.6% had more than one sexual partner. The table below also shows that 60.0% of controls had lived in another district or country. Majority of controls had income/salary below the regional minimum wage (65.6%). Table 4.1 also shows that 57.8% of respondents among controls were housewife.

Table 4.1 Respondents socio-demographic, economic, socio-cultural characteristics among women in Sambas, West Kalimantan, Indonesia, 2012.

Variable	Cases		Controls	
	n	**%**	**n**	**%**
Number of respondents	90	100.0	90	100.0
Age				
15 – 24 years old	17	18.9	12	13.3
25 – 34 years old	44	48.9	39	43.3
35 – 44 years old	21	23.3	25	27.8
>44 years old	8	8.9	14	15.6
Mean (years)	32.22		33.72	
SD	8.118		9.376	
Marital status				
Single	7	7.8	15	16.7
Married	51	56.7	63	70.0
Divorced/widowed	32	35.5	12	13.3
Level of education				
Primary school	49	54.5	43	47.8
Secondary school	27	30.0	24	26.7
High school	12	13.3	18	20.0
University and higher	2	2.2	5	5.5
Sexual behavior				
≤ one partner	66	73.3	67	74.4
≥ two partner	24	26.7	23	25.6
Migrant	39	43.3	54	60.0
Non migrant	51	56.7	36	40.0
Income / salary				
< Rp 1, 024,500.00 per month	52	57.8	59	65.6
≥ Rp 1, 024,500.00 per month	38	42.2	31	34.4
Occupation				
Not working	1	1.1	4	4.4
Housewife	40	44.4	52	57.8
Business women	29	32.2	13	14.5
Government employee	0	0.0	3	3.3
Farmer	9	10.0	8	8.9
Others	11	12.3	10	11.1

4.2.2 Knowledge about HIV/AIDS, Program and Services Access Characteristics of Respondents

Table 4.2 shows the other characteristics such as knowledge about HIV/AIDS, program and services access of respondents between cases and controls.

From the table below we can see that majority of cases (85.6%) was not used condoms as HIV prevention or other reason and only 14.4% was used condoms. Almost all respondents among controls were not used condoms as HIV prevention or other reason (90.0%) and the rest 10% was used condoms.

Majority of cases about 80.0% had a good knowledge about HIV/AIDS, 18.9% had a moderate knowledge and 1.1% had a poor knowledge about HIV/AIDS. Among controls, there were 46.7% had moderate knowledge about HIV/AIDS, 36.6% had good knowledge and 16.7% had poor knowledge about HIV/AIDS.

Majority of cases did not know about antiretroviral therapy as HIV/AIDS treatment (68.9%) and 31.1% of cases knew about antiretroviral therapy as HIV/AIDS treatment. Almost all respondents among controls did not know about antiretroviral therapy (96.7%) that used for HIV/AIDS treatment and 3.3% of them knew about it.

There was 43.3% of cases knew about VCT service and they want to do the test in VCT clinic. About 5.6% of cases knew about VCT service but they did not want to do the blood test for HIV in VCT clinic. There was 33.3% of cases did not know about VCT service but actually they want to do the blood test for HIV and 17.8% of cases did not know about VCT service and did not want to do the blood test for HIV in VCT clinic.

We can see from the table below about 43.3% of controls did not know about VCT service and did not want to do the blood test for HIV. There was 31.1% of controls knew about VCT service and want to do the blood test for HIV in VCT clinic. About 17.8% of controls did not know about VCT service but want to do the blood

test and the rest 7.8% of controls knew about VCT service but did not want to do the blood test.

On the question about VCT access, 41.1% of cases answered that VCT service was not far from their house, 38.9% answered that VCT service was far from their house and the remaining percentage which 20.0% answered that they did not know or no idea about VCT service either far or not far from their house. Among controls, there was 41.1% of controls answered that VCT service not far from their house. About 40.0% of controls did not know about VCT service whether far or not far from their house and the rest 18.9% of controls answered that VCT service far was far from their house.

In term of PMTCT service, from table 4.2 below also shows that majority of cases about 82.2% did not know about Prevention Mother To Child Transmission (PMTCT) service and 17.8% was knew about PMTCT service. Majority of controls about 92.2% did not know about PMTCT service and only 7.8% knew about it.

On the question about PMTCT service access, there was 76.7% of cases answered that they did not know about PMTCT service clinic whether far or not far from their house. Only 8.9% of cases answered that PMTCT service clinic near to their house and 14.4% answered far from their house. Among controls, there was 78.9% of controls did not know whether PMTCT service clinic far or near from their house. About 15.5% of controls answered that PMTCT service clinic was far from their house and the rest 5.6% of controls answered that PMTCT service clinic was not far from their house.

Table 4.2. Knowledge about HIV/AIDS, program and services access characteristics among women in Sambas, West Kalimantan, Indonesia, 2012.

Variable	Cases		Controls	
	n	**%**	**n**	**%**
Number of respondents	90	100.0	90	100.0
HIV prevention and tools (condom use)				
Use condom	13	14.4	9	10.0
Not use condom	77	85.6	81	90.0
Knowledge about HIV/AIDS				
Poor	1	1.1	15	16.7
Moderate	17	18.9	42	46.7
Good	72	80.0	33	36.6
HIV treatment				
Know about ART	28	31.1	3	3.3
Don't know about ART	62	68.9	87	96.7
VCT Service				
Know about VCT service and want test	39	43.3	28	31.1
Know about VCT service but don't want test	5	5.6	7	7.8
Don't know VCT service but want test	30	33.3	16	17.8
Don't know VCT service and don't want test	16	17.8	39	43.3
VCT Access				
Far to VCT service	35	38.9	17	18.9
Not far to VCT service	37	41.1	37	41.1
No idea about VCT service	18	20.0	36	40.0
PMTCT Service				
Know about PMTCT	16	17.8	7	7.8
Don't know about PMTCT	74	82.2	83	92.2
PMTCT Access				
Far to PMTCT service	13	14.4	14	15.5
Not far to PMTCT service	8	8.9	5	5.6
No idea about PMTCT service	69	76.7	71	78.9

4.3   BIVARIATE ANALYSIS

A few variables were re-categorized to facilitate the statistics test such as age, level of education, occupation and VCT service.

4.3.1   Association between socio-demographic, economic, socio-cultural factors with HIV/AIDS

The result shown in age variable the Pearson Chi-Square value was 2.64 and the p-value was 0.267.   Since the p-value for age variable was > 0.05 so it was not significant. The crude odds ratio for age group 25 – 34 years compared to age group 15 -24 years was 0.79 (95% CI 0.34 -1.87) times more likely to get HIV/AIDS. Meanwhile the crude odds ratio for group age >34 years compared to age group 15-24 years was 0.53 (95% CI 0.22 – 1.27) times more likely to get HIV/AIDS.

In Marital status variable the Pearson Chi-Square value was 13.67 and the p-value was 0.001. Since the p-value was < 0.05, marital status had significant association with HIV/AIDS. The crude odds ratio for married group compared to single group was 1.74 (95% CI 0.66 - 4.58) times more likely to get HIV/AIDS. The crude odds ratio for divorced/widowed group compared to single group was 5.71 (95% CI 1.87 – 17.44) times more likely to get HIV/AIDS.

The result also shown in level of education the Pearson Chi-Square value was 1.38 and the p-value was 0.240. Since the p-value was > 0.05 so it was not significant. The crude odds ratio for no collage group compared to collage group was 2.59 (95% CI 0.49 – 13.70) times more likely to get HIV/AIDS.

In term of sexual behavior the Pearson Chi-Square value was 0.03 and the p-value was 0.865. It showed no significant association with HIV/AIDS. The crude odds ratio for one or less partner group compared to more than one partners group was 0.94 (95% CI 0.49 – 1.84) times more likely to get HIV/AIDS.

The migration variable showed the significant association with HIV/AIDS since the p value was 0.025 and the Pearson Chi-Square value was 5.03. Meanwhile the crude odds ratio for migrant group compared to non-migrant group was 0.51 (95% CI 0.28 – 0.92) times more likely to get HIV/AIDS.

Table 4.3 below shows there was no significant association between income/salary with HIV/AIDS (p value = 0.283). the Pearson Chi-Square value was 1.15. Meanwhile the crude odds ratio for income/salary less than minimum regional wage (< Rp 1,024,500.00) per month compared to income/salary Rp 1,024,500.00 and above per month was 0.72 (95% CI 0.39 – 1.31) times more likely to get HIV/AIDS.

In occupation variable the Pearson Chi-Square value was 8.02 and the p-value was 0.017. Since the p-value was < 0.05, occupation had significant association with HIV/AIDS. The crude odds ratio for housewife group compared to business women group was 0.35 (95% CI 0.16 – 0.75) times more likely to get HIV/AIDS. Meanwhile the crude odds ratio for others group compared to business women group was 0.38 (95% CI 0.16 – 0.90) times more likely to get HIV/AIDS.

Table 4.3 Association between socio-demographic, economic, socio-cultural factors with HIV/AIDS.

Variables	Cases n (%)	Controls n (%)	Crude OR	(95% CI)	χ^2	p value
Age					2.64	0.267[a]
15 – 24	17 (18.9)	12 (13.4)	1.00	-		
25 – 34	44 (48.9)	39 (43.3)	0.79	0.34, 1.87		
> 34	29 (32.2)	39 (43.3)	0.53	0.22, 1.27		
Marital status					13.67	**0.001[a]**
Single	7 (7.8)	15 (16.7)	1.00	-		
Married	51 (56.7)	63 (70.0)	1.74	0.66, 4.58		
Divorced/widowed	32 (35.5)	12 (13.3)	5.71	1.87, 17.44		
Level of education					1.38	0.240[a]
No Collage	88 (87.8)	85 (84.5)	2.59	0.49, 13.70		
Collage	2 (2.2)	5 (5.5)	1.00	-		
Sexual behavior					0.03	0.865[a]
≤ one partner	66 (73.3)	67 (74.4)	0.94	0.49, 1.84		
≥ two partner	24 (26.7)	23 (25.6)	1.00	-		
Migration					5.03	**0.025[a]**
Migrant	39 (43.3)	54 (60.0)	0.51	0.28, 0.92		
Non migrant	51 (56.7)	36 (40.0)	1.00	-		
Income / salary					1.15	0.283[a]
< Rp 1, 024,500.00/ month	52 (57.8)	59 (65.6)	0.72	0.39 - 1.31		
≥ Rp 1, 024,500.00/ month	38 (42.2)	31 (34.4)	1.00	-		
Occupation					8.02	**0.017[a]**
Business women	29 (32.2)	13 (14.4)	1.00	-		
Housewife	40 (44.5)	52 (57.8)	0.35	0.16, 0.75		
Others	21 (23.3)	25 (27.8)	0.38	0.16, 0.90		

a Pearson Chi-Square

4.3.2   Association between knowledge about   HIV/AIDS, program and services access factors with HIV/AIDS

By using chi square test, knowledge, program and services access factors among women were tested. The result shown there was significant association between knowledge and HIV/AIDS with the Pearson Chi square value 36.15 and p value less than 0.001. The crude odds ratio for good knowledge group compared to poor knowledge group was 6.91 (95% CI 3.53 – 13.52) times more likely to get HIV/AIDS.

Similarly, there was significant association between HIV treatment and HIV/AIDS with the Pearson Chi square value 27.48 and p value less than 0.001. The crude odds ratio for don't know about antiretroviral therapy group compared to know about antiretroviral therapy group was 0.08 (95% CI 0.02 – 0.26) times more likely to get HIV/AIDS.

Table 4.4 below showed there was significant association between VCT service program and HIV/AIDS with Pearson Chi square value 15.70 and p value less than 0.001. The crude odds ratio for respondents that knew about VCT service program and want to do blood test compared to did not know about VCT service program but want to do blood test was 0.74 (95% CI 0.34 – 1.62) times more likely to get HIV/AIDS. Meanwhile the crude odds ratio for respondents that either knew or didn't know about VCT service program and didn't want to do blood test compared to did not know about VCT service program but want to do blood test was 0.24 (95% CI 0.11 – 0.54) times more likely to get HIV/AIDS.

In terms of VCT access, there was significant association between VCT access and HIV/AIDS with Pearson Chi square value 12.48 and p value 0.002. The crude odds ratio for respondents that answer their house not far from VCT clinic compared to respondents that answer their house far to VCT clinic was 0.49 (95% CI 0.23 – 1.02) times more likely to get HIV/AIDS. Whereas the crude odds ratio for respondents that answer no idea about VCT clinic compared to respondents that answer their house far to VCT clinic was 0.24 (95% CI 0.11 – 0.55) times more likely to get HIV/AIDS.

There was also a significant association between PMTCT service program and HIV/AIDS with Pearson Chi square value 4.13 and p value 0.042. The crude odds ratio for respondents that didn't know about PMTCT service program compared to respondents that knew about PMTCT service program was 0.39 (95% CI 0.15 – 1.00) times more likely to get HIV/AIDS.

Meanwhile there was no significant association between HIV prevention and tools (p value = 0.362) and PMTCT service access (p value = 0.682) with HIV/AIDS.

Table 4.4 Association between knowledge about HIV/AIDS, program and services access with HIV/AIDS

Variables	Cases n (%)	Controls n (%)	Crude OR	95% CI	χ^2	p value
HIV prevention and tools (condom use)					0.83	0.362[a]
Use condom	13 (14.4)	9 (10.0)	1.00	-		
Not use condom	77 (85.6)	81 (90.0)	0.658	0.27, 1.63		
Knowledge about HIV/AIDS					36.15	**<0.001[a]**
Poor	18 (20.0)	57 (63.4)	1.00	-		
Good	72 (80.0)	33 (36.6)	6.91	3.53, 13.52		
HIV treatment					27.48	**<0.001[a]**
Know about ART	28 (31.1)	3 (3.3)	1.00	-		
Don't know about ART	62 (68.9)	87 (96.7)	0.08	0.02, 0.26		
VCT Service					15.70	**<0.001[a]**
Know about VCT service and want test	39 (43.4)	28 (31.1)	0.74	0.34, 1.62		
Don't know VCT service but want test	30 (33.3)	16 (17.8)	1.00	-		
Know, Don't know VCT service and don't want test	21 (23.3)	46 (51.1)	0.24	0.11, 0.54		
VCT Access					12.48	**0.002[a]**
Far to VCT service	35 (38.9)	17 (18.9)	1.00	-		
Not far to VCT service	37 (41.1)	37 (41.1)	0.49	0.23, 1.02		
No idea about VCT service	18 (20.0)	36 (40.0)	0.24	0.11, 0.55		
PMTCT Service					4.13	**0.042[a]**
Know about PMTCT	16 (17.8)	7 (7.8)	1.00	-		
Don't know about PMTCT	74 (82.2)	83 (92.2)	0.39	0.15, 1.00		
PMTCT Access					0.76	0.682[a]
Far to PMTCT service	13 (14.4)	14 (15.5)	1.00	-		
Not far to PMTCT service	8 (8.9)	5 (5.6)	1.72	0.45, 6.64		
No idea about PMTCT service	69 (76.7)	71 (78.9)	1.05	0.46, 2.39		

a Pearson Chi-square

4.4   MULTIVARIATE ANALYSIS (LOGISTIC REGRESSION)

Logistic regression with backward LR method had done in multivariate analysis to identify the predictor of factors associated with HIV/AIDS among women. Further analysis showed that variable of marital status, occupation, knowledge, HIV treatment and VCT service program still remain significant association with HIV/AIDS but the migration variable was non-significant. The marital status and knowledge are the risk factor contributed to get HIV/AIDS. For those who are divorced/widowed (adjusted odds ratio = 18.27, 95% CI 4.09 – 81.57), married (adjusted odds ratio = 5.15, 95% CI 1.22 – 21.65) and had a good knowledge (adjusted odds ratio = 5.96, 95% CI 2.52 – 14.07) are more likely to get HIV/AIDS.

Meanwhile, housewife (adjusted odds ratio = 0.14, 95% CI 0.04 – 0.47), others occupation (adjusted odds ratio = 0.24, 95% CI 0.07 – 0.78), respondents who are didn't know about antiretroviral therapy (adjusted odds ratio = 0.05, 95% CI 0.01 – 0.23), respondents who are knew about VCT service program and want to do blood test (adjusted odds ratio = 0.18, 95% CI 0.06 – 0.53) and respondents who either knew or did not know about VCT service program but do not want to do blood test (adjusted odds ratio = 0.24, 95% CI 0.08 – 0.67) were protective predictor meaning unlikely to get HIV/AIDS (table 4.5).

Table 4.5 Predictors of factors associated with HIV/AIDS among women

4.5   Conclusion

In this chapter has provided a detailed overview of the analysis and findings of this study. A total of 180 women respondents (90 were cases and 90 were controls) included in this study. The mean age of cases was 32.22 years and standard deviation was 8.118. The mean age of controls respondents was 33.72 years and standard deviation was 9.376. Majority of respondents were married (56.7% cases and 70.0% controls), had no collage education level (87.8% cases and 84.5% controls), had one or less partner (73.3% cases and 74.4% controls), income/salary less than regional minimum wage (57.8% cases and 65.6% controls), housewife (44.5% cases and 57.8% controls and migrant (43.3 cases and 60% controls). Among all factors studied being divorced/widowed (adjusted odds ratio = 18.27, 95% CI 4.09 – 81.57), married (adjusted odds ratio = 5.15, 95% CI 1.22 – 21.65) and had a good knowledge (adjusted odds ratio = 5.96, 95% CI 2.52 – 14.07) were positive predictor factors contribute to get HIV/AIDS. But for those housewife (adjusted odds ratio = 0.14, 95% CI 0.04 – 0.47), others occupation (adjusted odds ratio = 0.24, 95% CI 0.07 – 0.78), respondents who are didn't know about antiretroviral therapy (adjusted odds ratio = 0.05, 95% CI 0.01 – 0.23), respondents who are knew about VCT service program and want to do blood test (adjusted odds ratio = 0.18, 95% CI 0.06 – 0.53) and respondents who either knew or did not know about VCT service program but do not want to do blood test (adjusted odds ratio = 0.24, 95% CI 0.08 – 0.67) were found to be negative (protective) against HIV/AIDS. The findings will be discussed in detail in the next chapter.

CHAPTER 5

DISCUSSION

5.1   INTRODUCTION

This chapter will be discussing the detail findings of this study and related to the literature.

5.2   ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC FACTORS WITH HIV/AIDS

5.2.1   Association between Age with HIV/AIDS

According to Ghosh et al (2011) has shown that the significant risk factors for women to get HIV infection were aged 26-35 years. The result of this study found that there was no significant association between age and HIV/AIDS. Although we did not find any significant association between Age and HIV/AIDS but the higher number of cases among women in Sambas district were aged 25 – 34 years.

5.2.2   Association between Marital Status with HIV/AIDS

Some opinions state that marriage is always protecting a woman from becoming infected with HIV. It turned out that this opinion is not true. Many new infections in women occur in marriage or long term relationships as a result of a loyal partner (Avert 2011).

Newmann and Sarin (2006) have shown that the only HIV risk factor for the majority of women was having sex exclusively with their spouse (one's husband). Similarly, the higher number of cases among women in Sambas district was married, followed divorced/widowed. The study also found that there was significant association between marital status with HIV/AIDS.

Gender inequality in the marriage relationship, especially in decision-making process that relation with sex, leading to high vulnerability to HIV transmission. We look at a current data around the world show that the incidence of new HIV infection is raising among married women and girls (Change 2007). The opinion that married women should be obey to her husband and did not have the right to provide the decision are some of the causes of women vulnerability in contracting HIV. Therefore married women could not decide on safe sex to their partner even though she knew that her husband had a risky sex behavior.

5.3 ASSOCIATION BETWEEN SOCIO-CULTURAL FACTORS WITH HIV/AIDS

5.3.1 Association between Sexual Behavior with HIV/AIDS

There is a relationship between the increased prevalence of HIV / AIDS among women with certain patterns of sexual behavior. In women with frequently changing sexual partners reported an increased prevalence of HIV / AIDS (Chen et al. 2007). The highly correlated with HIV infection is having multiple partners (Ghosh et all. 2011). Our findings was not corroborate this observation because we found that no significant association between sex behavior and HIV/AIDS. This was due to the majority of cases among women in Sambas district was a married woman that most of them got HIV from their husbands, so the majority of cases in this study had less than one sexual partner.

5.4 ASSOCIATION BETWEEN ECONOMIC FACTORS WITH HIV/AIDS

5.4.1 Association between Level of Education with HIV/AIDS

The point to an effective response to HIV/AIDS is education. Studies show that women had good education are more likely to know how to prevent HIV infection, to delay sexual activity and to take measures to protect themselves (UNAIDS 2004).

Study found that women in 32-country with post-primary education were five times more likely than illiterate women to know facts about HIV/AIDS. Illiterate women, on the other hand, were four times more likely to believe that there is no way to prevent HIV infection (UNAIDS 2004).

This study found that majority of respondents had school at primary level but there was no significant association between levels of education with HIV/AIDS in bivariate analysis. In William et al. (2000) study was found a significant association between levels of education with HIV in a bivariate analysis but no significant association in multivariate analysis. Ghosh et al. (2011) also found there was no significant association between level of education with HIV/AIDS. This further suggests that level of education is not a simple determinant of HIV risk.

5.4.2 Association between Migrations with HIV/AIDS

The relationship between HIV / AIDS and migration are close and complex. Generally, the highest incidence of HIV / AIDS exist in countries with good transport infrastructure, economic development level is relatively high, and internal migration as well as cross-border are pretty good (Crush et al. 2006). Our findings corroborate this observation. We found that there was a significant association between migration and HIV/AIDS.

The high level of community mobilization Sambas district and geographic location also influence the socio-economic life, including the dangers of HIV and AIDS. In addition, many people that work inter-island as laborers engaged in the

timber, the transit of foreign fishermen, the localization / prostitution, nightclubs and Indonesia Labor / Employment Women (KPAD 2010). This led to high rates of migration in the Sambas district. Although in this study numbers of cases among migrant was not as high as non-migrant but from the interviews found that the majority of their husbands were migrant.

5.4.3   Association between Income/Salary with HIV/AIDS

It is highly complex one about relationship between income and risk of HIV infection. Many arguments explained why higher rates of infection were found among the poor (Johnson & Budlender 2004). One study conducted in America by large national population of HIV research has found that HIV infection rates among low-income communities in 24 U.S. cities with high AIDS prevalence is 10 to 20 times greater than in the general U.S. population (Kraft 2011).

While the result shown there was no significant association between income/salary with HIV/AIDS. Meanwhile, we found that majority of the respondents had low household income/salary less than regional minimum wage of Indonesia.

5.4.4   Association between Occupations with HIV/AIDS

The finding showed there is significant association between occupation and HIV/AIDS. The result supported the study of Fawzi et al. (2010) and Kraft (2011) which found the strong relationship between occupation with HIV / AIDS directly or indirectly.

In this study result also shown the majority of the respondent were housewives. This finding supported the previous study by Fawzi et al.(2010) that showed a strong relationship between partner's occupation status and HIV among women. The first consideration is that the men in this work are more likely to travel (such as truck drivers compared to the farmers, for example), putting them at greater risk of infection, will be infected for wife.

5.5   ASSOCIATION BETWEEN KNOWLEDGE ABOUT HIV/AIDS WITH HIV/AIDS

Some previous study found the higher HIV prevalence is associated with poor knowledge of HIV (Johnson & Budlender 2004). Vulnerability of women and girls to contracting generally due to lack of knowledge and their information about HIV-AIDS or the lack of access to HIV prevention services (Kementerian Negara Pemberdayaan Perempuan RI 2008).

This study found there was a strong significant association between knowledge of HIV/AIDS with HIV/AIDS. The majority of respondent had a good knowledge of HIV. We suggests that had a good knowledge and also high levels of awareness are not necessarily indicate of a low risk to get infection. Some individuals may have actively sought knowledge because of their high-risk status (exp. sex workers), and others may not act on the knowledge they have.

5.6   ASSOCIATION BETWEEN PROGRAM AND SERVICES ACCESS FACTORS WITH HIV/AIDS

5.6.1   Association between Voluntary Counseling and Testing Program and Access with HIV/AIDS

VCT is an important component for the prevention of HIV, is also the gateway to treatment, care and support for people living with HIV. Limited access to VCT centers in several large cities only, although VCT is available in most countries now. Because the distance to VCT services so far and also the transportation as an obstacle, making it hard for women to achieve access these services (WHO 2002).

In terms of VCT access, this study found there was a significant association between VCT access with HIV/AIDS. Majority of the respondent declared that VCT clinic not far from their house but there was some reasons that made them refuse to do the blood test. The reasons similar with the previous study done by Worku (2005) that found the most common reasons to refuse testing were need to discuss with partner, fear of HIV positive status, and fear of loss marital security, domestic violence and

confidentiality. The study has also reported that better-educated women refuse to test more often than others (Worku 2005).

5.6.2 Association between Prevention Mother To Child Transmission Program and Access with HIV/AIDS

The aims of the PMTCT program are provides medicines, counseling and psychological support to help mothers safeguard their infants against the virus, ensuring PMTCT given to all women that need it is our most effective way to end mother-to-child HIV transmission by 2015, and achieve the UN's Millennium Development Goal 6 and ensuring that no baby is born with HIV is an important step towards achieving an AIDS-free generation (UNICEF 2012).

The result of this study found majority of respondent did not know about PMTCT service programs and most of them did not know where they can get PMTCT service also what kind of services that PMTCT offer. Lack of promotion of the PMTCT program causes the program was not widely known by the public.

In PMTCT service variable, this study found there was a significant association between PMTCT service programs with HIV/AIDS. Meanwhile in PMTCT access, there was no significant association between PMTCT access with HIV/AIDS

5.6.3 Association between HIV Prevention and Tools (Condoms use) with HIV/AIDS

Even though a number of the study shown there is significant association between HIV prevention and Tools (condoms use) with HIV/AIDS (Jain et al. 2011) but it is not in this study, since the majority of the respondent did not use condom as HIV prevention or other reasons. This study also found there was no significant association between HIV prevention and Tools (condoms use) with HIV/AIDS.

There was some reason why the bargaining power of condom use is very low. The most common reason was discomfort when used, made many of them refused to

use condom. The increased frequency of unprotected sex after marriage is dramatically boosted by the implications of infidelity or distrust associated with a certain opinion of contraception such as condoms, a strong will to get the offspring (babies), and gender power relations are not balanced. This led to the increasing inability of women to negotiate safe sex (Population Council 2004). Because of the imbalance of power in the relationship created by the economic and emotional dependence, women are often unable to protect themselves, although the women themselves are knowledgeable about their extra-marital sexual interaction partners (ICASO 2007).

The influence of cultural and religious morality which are equated condom use with promiscuity and restriction of the availability of free condoms, resulting in psycho-social barriers to using them. A lot of opinion in some countries, that the condom is strongly associated with marginalized groups such as sex workers. For example, until recently in Morocco, people who have asked for condoms is seen as evidence of sex (ALCS 2005). Married women are often unable to negotiate condom use for fear of being accused of adultery or resistance to bear children due to the influence of culture and religion (NAZ Foundation International 2005).

5.6.4 Association between HIV Treatments with HIV/AIDS

This study found there was a significant association between HIV treatments with HIV whereas majority of respondent did not know about antiretroviral therapy as HIV treatment. Study was done by Ebrahim et al. (2007) that found there was a significant association between HIV treatments (antiretroviral therapy) with HIV/AIDS.

Lack of information on HIV treatment, made the women still thought that HIV is a disease that is very frightening and even deadly because they thought has not yet be cured.

5.7   MULTIVARIATE ANALYSIS (LOGISTIC REGRESSION)

By using logistic regression test, marital status, migration, occupation, knowledge about HIV/AIDS, HIV treatment, VCT service program, VCT access and PMTCT service program were tested.

The result showed that the variables of marital status, occupation, knowledge about HIV/AIDS, HIV treatment and VCT service program were still significant association but the migration variable was non-significant. Regression analysis revealed marital status and knowledge are the risk factor contributed to get HIV/AIDS. For those who are divorced/widowed, married and had a good knowledge are more likely to get HIV/AIDS. These findings are similar to those of previous study in South Africa (Johnson & Budlender 2002). They identified the most significant determinant factors of HIV risk in South Africa. The study found there were some factors such as knowledge, migration, occupation and marital status as significant determinant factors of HIV risk.

This study also showed occupation, HIV treatment and VCT service program being protective predictors of getting HIV/AIDS. This result is consistent with the previous study (Fawzi et al. 2010). Housewife, others occupation, respondents who are didn't know about antiretroviral therapy, respondents who are knew about VCT service program and want to do blood test and respondents who either knew or did not know about VCT service program but do not want to do blood test were unlikely to get HIV/AIDS.

5.8   STRENGTH AND LIMITATION OF THE STUDY

Strength

There was no previous study conducted using case control study design at this institution or others in Malaysia and Indonesia, and this study will provide the information to a similar study to be conducted in the future.

Limitation

There were a few limitation of this study. Small sample size of the study participant, because of the study was conducted in Sambas districts which not many cases of HIV/AIDS were found.

Although data were collected thru self-administered questionnaires for the sensitivity question on sexual behavior may have suffered from reporting bias. the respondent might be afraid to answer the truth because they feel ashamed and afraid their sexual behaviors known by others.

5.9   CONCLUSION

This study's findings have shown there was a significant association between marital status, migration, occupation, knowledge about HIV/AIDS, HIV treatment, VCT service program, VCT access and PMTCT service program with HIV/AIDS. Regression analysis revealed marital status and knowledge are the risk factor contributed to get HIV/AIDS. Meanwhile, occupation, HIV treatment and VCT service program being protective predictors of getting HIV/AIDS.

CHAPTER 6

CONCLUTION AND RECOMMENDATION

6.1   INTRODUCTION

The finding of this study showed that the higher number of HIV cases among women in Sambas district was housewives which is most of them had a good knowledge about HIV/AIDS. Majority of respondent had school at primary level and their household income still below than minimum regional wage of Indonesia.

This study also found there was a lack of HIV treatment knowledge, many respondents did not know about VCT and PMTCT services is already 6 years exist in Sambas district and the bargaining power of condoms is still low.

6.2   CONCLUSION

This study which was conducted among women attended three public health service clinic in Sambas district to determine factors associated with HIV/AIDS has reached the following conclusions.

- There was a significant association between marital status, migration, occupation, knowledge about HIV/AIDS, HIV treatment, VCT service program, VCT access and PMTCT service program with HIV/AIDS.
- Adjusted for marital status, married and divorced/widowed women were more likely to get HIV/AIDS compared to those who are single.
- Adjusted for knowledge about HIV/AIDS, women who had good knowledge were more likely to get HIV/AIDS compared to those who had poor knowledge.

- Occupation, HIV treatment and VCT service program being protective predictors of getting HIV/AIDS.

6.3   RECOMMENDATION

Adequate programs, including media campaigns, and quality sex education for both in-school and out-of-school youth, would provide important information that would likely enhance young people's ability to correctly assess their risk of HIV infection.

Cross-sectoral cooperation in order to promote the prevention of HIV/AIDS and the promotion of VCT and PMTCT services is needed.

HIV/AIDS intervention programming should increasingly be expanded beyond education and information to include skill building programs for young people. Such programs should focus on building individual empowerment and interpersonal skills that are necessary for negotiating safer sexual behaviors.

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APPENDIX A

INFORMATION TO THE RESPONDENTS

RESEARCH TITLE

FACTORS ASSOCIATED WITH HIV/AIDS AMONG WOMEN IN SAMBAS, WEST KALIMANTAN, INDONESIA: A CASE CONTROL STUDY

Research Background

This research was inspired by the researcher's interest with the increasing number of HIV/AIDS cases among women in worldwide. The same condition also occurs in Sambas district, where the prevalence of HIV among women continues to increase each year based on data obtained from Sambas District Health Office. . In this study tried to re-locate and determine any factors that influence the increasing cases of HIV / AIDS among women in Sambas District and determine the most popular issues related to HIV / AIDS. It is hoped that this study will be able to make recommendation to improve the control measures to prevent and control the HIV infection among women in Sambas District.

Purpose of Study

The purpose of this study is to determine the following factors such as socio-demographic, socio-cultural, economic, knowledge about HIV/AIDS, Program and Services Access factors such as VCT (Voluntary Counseling and Testing), PMTCT (Prevention Mother to Child Transmission), HIV prevention and HIV treatment associated with HIV/AIDS among women in Sambas District.

Study Instruments

1. Questionnaires

   All respondents will be given questionnaires form and requested to answer the questions to the best of their ability.

2. Case Note Review

   The researcher would like to gather relevant data of interest in this study from the respondent's health record at the clinic VCT.

3. <u>Rapid test for HIV</u>

The researcher will do HIV Rapid test to all control respondents.

Confidentiality

All individual information given in the questionnaires and case note review will be treated as confidential. Any results to be used will be summarized as collective results, not as individuals.

Respondents rights

This research requires voluntary participations from all respondents. Any respondents has the right to withdraw their consent at any time should they feel uncomfortable at any stage of the research. No penalties will be given to those who withdrawn.

Benefits

All of the information given and obtained in this research will benefit thw women where better preventative measure could be understood and applied to halt the progression of HIV/AIDS in Indonesia and worldwide.

Your action as respondent

You just need to sign in the Written Permission Form to indicate your interest and willingness to cooperate in this research activity. This Written Permission Form must be returned to the researcher during the study. Please do not hesitate to ask questions to the researcher should you need further clarification.

Thank you for your cooperation.

Dr. Nany Hairunisa   Supervisor
Postgraduate Candidate of Community Health science
(Epidemiology and Medical Statistics)
Community Health Department   (Dr. Norfazilah Ahmad)
Faculty of Medicine
Universiti Kebangsaan Malaysia
Telp No. : 60-17-6055809

INFORMASI KEPADA RESPONDEN

JUDUL PENELITIAN

FAKTOR-FAKTOR YANG TERKAIT DENGAN HIV / AIDS DI KALANGAN PEREMPUAN DI SAMBAS, KALIMANTAN BARAT, INDONESIA: STUDI KASUS KONTROL

LATAR BELAKANG PENELITIAN

Penelitian ini terinspirasi oleh meningkatnya jumlah kasus HIV / AIDS di kalangan perempuan di seluruh dunia. Kondisi yang sama juga terjadi di kabupaten Sambas, di mana prevalensi HIV di antara perempuan terus meningkat setiap tahunnya berdasarkan data yang diperoleh dari Dinas Kesehatan Kabupaten Sambas. . Dalam studi ini peneliti mencoba untuk merelokasi dan menentukan faktor-faktor yang mempengaruhi peningkatan kasus HIV / AIDS di kalangan perempuan di Kabupaten Sambas dan menentukan isu-isu yang paling populer yang berkaitan dengan HIV / AIDS. Diharapkan bahwa penelitian ini akan dapat membuat rekomendasi untuk meningkatkan tindakan pengendalian untuk mencegah dan mengendalikan infeksi HIV di kalangan perempuan di Kabupaten Sambas.

TUJUAN PENELITIAN

Tujuan dari penelitian ini adalah untuk menentukan faktor-faktor berikut seperti sosio-demografi, sosial-budaya, ekonomi, pengetahuan tentang HIV / AIDS, Program dan faktor Akses Layanan seperti VCT (Voluntary Counseling and Testing), PMTCT (Pencegahan penularan dari Ibu ke Anak), pencegahan HIV dan pengobatan HIV terkait dengan HIV / AIDS di kalangan perempuan di Kabupaten Sambas.

INSTRUMENT PENELITIAN

1. Kuesioner
   Semua responden akan diberikan kuesioner dan diminta untuk menjawab pertanyaan-pertanyaan yang terbaik dari kemampuan mereka.

2. Catatan tinjauan kasus

Peneliti ingin mengumpulkan data yang relevan untuk kepentingan dalam penelitian ini dari catatan kesehatan responden di klinik VCT.

3. Uji cepat
   Peneliti akan melakukan tes HIV uji cepat untuk semua responden (kontrol).

KERAHASIAAN

Semua informasi pribadi yang diberikan dalam kuesioner dan catatan kajian kasus akan diperlakukan sebagai rahasia. Setiap hasil yang akan digunakan akan diringkas sebagai hasil kolektif, bukan sebagai individu.

HAK RESPONDEN

Penelitian ini membutuhkan partisipasi sukarela dari semua responden. Setiap responden memiliki hak untuk menarik persetujuan mereka pada waktu kapanpun jika mereka merasa tidak nyaman pada setiap tahap penelitian. Tidak ada hukuman akan diberikan kepada mereka yang menarik diri.

MANFAAT

Semua informasi yang diberikan dan diperoleh dalam penelitian ini akan bermanfaat bagi perempuan dimana pencegahan dapat dipahami lebih baik dan diterapkan untuk menghentikan perkembangan HIV/AIDS di Indonesia dan seluruh dunia.

TINDAKAN ANDA SEBAGAI RESPONDEN

Anda harus menandatangani formulir ijin tertulis untuk menunjukkan minat anda dan kesediaan untuk bekerja sama dalam kegiatan penelitian. Formulir ijin tertulis ini harus dikembalikan kepada peneliti selama penelitian. Dimohon agar jangan ragu untuk mengajukan pertanyaan kepada peneliti apabila anda memerlukan klarifikasi lebih lanjut.

TERIMA KASIH ATAS KERJASAMA ANDA

Dr. Nany Hairunisa   Supervisor
Mahasiswa Pasca Sarjana Kesehatan Masyarakat
(Epidemiologi dan Statistik Kedokteran)
Departmen Kesehatan Masyarakat   (Dr. Norfazilah Ahmad)

Fakultas Kedokteran
Universiti Kebangsaan Malaysia
Telp No. : 60-17-6055809

APPENDIX B

CONSENT FORM

I, _____   (IC Number:_____)

Agree / Do Not Agree to participate in this research titled:

**FACTORS ASSOCIATED WITH HIV/AIDS AMONG WOMEN IN SAMBAS,
WEST KALIMANTAN, INDONESIA: A CASE CONTROL STUDY**

1. I have read and understand the contents of the research contents based on "Information to the Respondents" attached.

2. I understand that this research involves my health record review and questionnaires.
3. I understand that all information given and all individual results are confidential and will be used for research purpose and for researcher's reference only.

4. I also understand that all information obtained may be used for publication but all personal details will not be disclosed.
5. I understand that this research is conducted to study the factors associated with HIV/AIDS among women.

6. I understand that I have the right to withdraw my participation and permission at any time needed, whenever I feel uncomfortable during any stage conducted by researcher and no penalties could be placed on me.

…………………………..   ……………………………..   …………………………
(Respondent signature)   (Witness signature)   (Researcher signature)
Name: Name: Name :
IC Number: IC Number: IC Number:
Date: Date: Date:

APPENDIX B

FORMULIR PERSETUJUAN

Saya, _____   (No Identitas:_____)

Setuju / Tidak Setuju untuk berpartisipasi dalam penelitian yang berjudul:

FAKTOR-FAKTOR YANG TERKAIT DENGAN HIV / AIDS DI KALANGAN PEREMPUAN DI SAMBAS, KALIMANTAN BARAT, INDONESIA: STUDI KASUS KONTROL

1. Saya telah membaca dan memahami isi dari penelitian berdasarkan pada "Informasi terlampir kepada responden".

2. Saya memahami bahwa penelitian ini melibatkan catatan kesehatan saya dan kuesioner.

3. Saya mengerti bahwa semua informasi yang diberikan dan semua hasil bersifat rahasia dan akan digunakan untuk tujuan penelitian dan untuk referensi peneliti saja.

4. Saya juga mengerti bahwa semua informasi yang diperoleh dapat digunakan untuk publikasi rincian pribadi tapi semua tidak akan diungkapkan.

5. Saya memahami bahwa penelitian ini dilakukan untuk mempelajari faktor-faktor yang terkait dengan HIV / AIDS di kalangan perempuan.

6. Saya memahami bahwa saya memiliki hak untuk menarik partisipasi saya sewaktu-waktu dibutuhkan, apabila saya merasa tidak nyaman selama

tahap yang dilakukan oleh peneliti dan tidak ada hukuman dapat ditempatkan pada saya.

………………………….   ………………………..   …………………………

(Tanda Tangan Responden)   (Tanda Tangan Saksi)   (Tanda Tangan Peneliti)

Nama: Nama: Nama:

No Identitas: No Identitas: No. Identitas:

Tanggal: Tanggal: Tanggal:

Appendix C

SURAT PERSETUJUAN TINDAK MEDIK PEMERIKSAAN
LABORATORIUM HIV/AIDS

Saya yang bertanda tangan dibawah ini bersedia untuk dilakukan pemeriksaan laboratorium HIV/AIDS setelah mendapatkan konseling sebelum pemeriksaan (pre-test).

Nama   : …………………………………………………………………….

Kode Klien   : …………………………………………………………………….

TTL   : …………………………………………………………………….

Alamat   : …………………………………………………………………….

Status   : Lajang / Menikah / Janda / Duda

Pekerjaan   : …………………………………………………………………….

Pendidikan   : SD / SMP / SMA / PERGURUAN TINGGI

       Saya juga menyatakan kesediaan untuk melakukan konseling sebelum pemeriksaan (pre-test) laboratorium HIV/AIDS untuk mengetahui hasil pemeriksaan dan hal-hal yang diperlukan sehubungan dengan hasil pemeriksaan tersebut.

                               Sambas, …………………20…

(_____)   (_____)

          Konselor   Klien

<u>**LEMBAR PENILAIAN RESIKO INDIVIDUAL**</u>

Entry Point Klien
1. Lay support…………….
2. RS
3. Datang sendiri
4. Puskesmas
5. Hot line service

Kode konselor : ……………

Kode klien :…………….

Kelompok :…………….

1. Klien memiliki pasangan tetap….. YA / TIDAK
2. Status pasangan tetap : HIV (+) Tak diketahui / HIV (-)
3. Tanggal klien tes terakhir………………………………
4. Indikasi infeksi menular seksual
   Klien ……………………YA / TIDAK
   Pasangan ………………...YA / TIDAK
5. Melaporkan simtom TB
   Klien ……………………..YA / TIDAK
   Pasangan …………………YA / TIDAK
6. Pajanan okupasional…………YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
7. Tato / Torahan……………… YA / TIDAK:Tanggal ………Masa Jendela……YA / TIDAK
8. Produk darah…………………YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
9. Sanggama vaginal…………… YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
10. Seks oral ……………………. YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
11. Sanggama anal ……………... YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
12. Alat suntik bersama………… YA / TIDAK :Tanggal ………Masa Jendela……YA / TIDAK
13. Resiko klien pernah berhubungan dengan orang yang HIV (+)… YA / TIDAK
14. Kondisi hamil
    Klien …………..YA / TIDAK
    Pasangan………YA / TIDAK
15. Tahap kehamilan …………… trimester – 1 / trimester -2 / trimester-3
16. Penggunaan alat kontrasepsi secara regular
    Klien ………….YA / TIDAK
    Pasangan ……..YA / TIDAK

Klien membutuhkan tes ulang karena berada dalam masa jendela………YA / TIDAK
Tanggal tes ulang :

FORM OF MEDICAL EXAMINATION

LABORATORY APPROVAL OF ACTS HIV / AIDS

I, undersigned below is willing to do the laboratory examination of HIV / AIDS after receiving counseling before the test (pre-test).

Name: ... ...
Client Code: ... ...
TTL: ... ...
Address: ... ...
Status: Single / Married / Widow / Widower
Occupation: ... ...
Education: Elementary / junior high / high school / HIGHER EDUCATION

I also expressed a willingness to do counseling before the test (pre-test) laboratory HIV / AIDS to know the results of the examination and the things necessary in connection with the examination results.

Sambas, …………………20…

(_____)   (_____)

Counselor   Client

INDIVIDUAL RISK ASSESSMENT SHEET

Counselor Code   : ……………

Client Code   :…………….

Group   :…………….

Client Entry Point
6.   Lay support…………….
7.   Hospital
8.   Voluntary
9.   Health Center
10. Hot line service

1. The client had a partner ... .. YES / NO
2. Status of regular partners: HIV (+) Not known / HIV (-)
3. Date of last test client ... ...
4. Indications of sexually transmitted infections
    a. Clients ... ... YES / NO
    b. Partner ... ... YES / NO
5. Reported symptoms of TB
    a. Clients ... ... YES / NO
    b. Partner... ... ... YES / NO
6. Occupational exposure .. ... YES / NO: Date .. .. Window period YES / NO
7. Tattoos / Torahan ... . YES / NO: Date .... Window period ... ... YES / NO
8. Blood products ... . YES / NO: Date ... ... Window period YES / NO
9. Vaginal intercourse ... ... YES / NO: Date .... Window period YES / NO
10. Oral Sex ... ... YES / NO: Date ... ... Window period YES / NO
11. Anal copulation ... . YES / NO: Date ... ... Window period YES / NO
12. Sharing Needle ... ... YES / NO: Date ... ... Window period YES / NO
13. Risk of clients have come into contact with people who are HIV (+). YES / NO
14. Pregnant
    a. Clients ... ... YES / NO
    b. Partner ... ... YES / NO
15. Stages of pregnancy ... ... trimester - 1 / trimester -2 / trimesters-3
16. The use of regular contraception
    a. Clients ... ... YES / NO
    b. Partner… … … ….YES / NO

Clients need a re-test because it is in the window ... ... YES / NO Retest date:

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Pusat Perubatan UKM | UKM Medical Centre

Medical Research & Innovation Secretariat

UKM 1.5.3.5/244/SPP3
3 May 2012

Dr Norfazilah Ahmad
Department of Community Health
UKM Medical Centre
Cheras

Dear Dr.,

Approval to conduct research in UKM

Title : *'Factors Associated with HIV/AIDS among Women in Sambas, West Kalimantan, Indonesia. A Case Control Study'*

Project Code : **FF-184-2012**

With reference to the above, the Research Committee, Universiti Kebangsaan Malaysia Medical Centre (UKMMC) has approved the following research proposal:

Duration of Study : July 2012 until February 2013
Financial Support : RM 1,140.00 **(Category D)** from UKMMC Fundamental Research Fund and **compulsory** to publish at least one (1) non-indexed article or in Medicine & Health UKM **(condition attached)**

- *Deal with UKMMC Financial Department for claims*

Please submit any **Adverse Events Report, Progress Report every 6 months and Final Report** upon completion of the research to the Medical Research Secretariat. Please also complete the online registration on *'National Medical Research Register'* at www.nmrr.gov.my.

Thank you.

Yours truly,

Professor Dr. Musalmah Mazlan
Deputy Dean (Research & Innovation)
UKM Medical Centre
& Chairman
PPUKM Research Committee
Cheras

s.k.

→   Pusat Pengurusan Penyelidikan & Instrumentasi
Universiti Kebangsaan Malaysia
Bangi
(u.p : **Pn. Siti Noraida So'od**)

-    **Penolong Bendahari**
Unit Pengurusan Fakulti
Jabatan Kewangan PPUKM
Cheras
*tuntutan perbelanjaan boleh menghubungi talian 03-9145 5223**

-    **Ketua Jabatan Kesihatan Masyarakat**
Pusat Perubatan UKM
Cheras

-    **Dr Nany Hairunisa (Calon Sarjana)**
Jabatan Kesihatan Masyarakat
Pusat Perubatan UKM,
Cheras

→   Fail Bahan Bukti Data Audit

→   Fail FF-184-2012

MM/Asma'/FF-184-2012/Dana Fundamental PPUKM/RM1140.00

Pusat Perubatan UKM   *UKM Medical Centre*

Sekretariat Penyelidikan Perubatan & Inovasi   **UKM 1.5.3.5/244/SPP/FF-184-2012**

                                                                    3   Mei 2012

Dr Norfazilah Ahmad
Jabatan Kesihatan Masyarakat
Pusat Perubatan UKM,
Cheras

Puan,

Kelulusan Etika Menjalankan Penyelidikan di UKM

Dengan segala hormatnya, merujuk kepada perkara di atas.

Sukacita dimaklumkan permohonan untuk kelulusan etika bagi penyelidikan bertajuk **"Factors Associated with HIV/AIDS among Women in Sambas, West Kalimantan, Indonesia. A Case Control Study"** diluluskan dengan syarat **Surat Kebenaran** daripada pihak berkuasa berkaitan di Daerah Sambas diperolehi. Sila masukkan **pesakit dan kawalan** melebihi 18 tahun atau Borang Maklumat dan Borang Keizinan Ibubapa/Penjaga perlu dihantar. Sila ubah *Written Permission Form* kepada *Consent Form.* Sila tambah Risiko, Nama Penyelia dan Nombor Telefon dalam **Borang Maklumat.**

Sekian, terima kasih.

Yang benar,

Profesor Madya (K) Dato' Dr Fuad Ismail
Pengerusi
Jawatankuasa Etika Penyelidikan
Universiti Kebangsaan Malaysia

s.k.

-    **Dr Nany Hairunisa (Calon Sarjana)**
     Jabatan Kesihatan Masyarakat
     Pusat Perubatan UKM,
     Cheras

-    Fail FF-184-2012

FU/uana/FF-184-2012

Jabatan Kesihatan Masyarakat *Department of Community Health*

No   : -
Lampiran   : -
Perihal   : Permohonan izin untuk pengumpulan
              data penelitian.

Sambas, 3 Agustus 2012

Kepada
Yth. Bupati Sambas
di-
         Tempat

Assalamu'alaikum Wr. Wb.

Teriring salam dan do'a semoga kita semua senantiasa dalam keadaan sehat wal-afiat serta selalu dalam lindungan Allah SWT. Amin.

Dalam rangka penyelesaian Thesis saya yang berjudul " Factors Associated With HIV/AIDS Among Women in Kabupaten Sambas, West Kalimantan, Indonesia. Case – Control Study.", saya :

Nama   : Dr. Hj. Nany Hairunisa
Nomor Matrix : P 62397
Pendidikan   : Mahasiswa Pasca Sarjana Ilmu Kesehatan Masyarakat.
Spesialisasi   : Epidemiology dan Statistik Kedokteran.
Fakultas   : Kedokteran, University Kebangsaan Malaysia.

Memohon izin dari Ibu selaku kepala daerah untuk dapat melakukan pengumpulan data berupa penyebaran Kuesioner kepada 180 responden perempuan ((90 responden dengan HIV/AIDS dan 90 responden tanpa HIV/AIDS) di Kabupaten Sambas.

Demikian surat permohonan ini saya sampaikan dan besar harapan saya agar Ibu dapat memberikan izin. Atas perhatian dan kerjasamanya diucapkan terima kasih.

Wassalamu'alaikum Wr. Wb.

Hormat saya,

Dr. Hj. Nany Hairunisa

KOMISI
PENANGGULANGAN
AIDS
KABUPATEN SAMBAS

Sambas, 7 Agustus 2012

Nomor : 077 /KPA/UM/VIII/2012
Lamp : -
Perihal : **Izin untuk pengumpulan data penelitian.**

Kepada Yth.
Dr. Hj. Nany Hairunisa
di-
    Tempat

Dengan hormat,

Sehubungan dengan permohonan Saudari :

Nama   : Dr. Nany Hairunisa
Nomor Matrix : P 62397
Pendiddikan   : Mahasiswa Pasca Sarjana Ilmu Kesehatan Masyarakat
Spesialisasi   : Epidemology dan Statistik Kedokteran
Fakultas   : Kedokteran, University Kebangsaan Malaysia

Tentang permohonan izin untuk pengumpulan data penelitian, pada dasarnya kami tidak berkeberatan dilakukannya pengumpulan data berupa responden kepada 180 perempuan yang terdiri-dari (90 responden dengan HIV dan AIDS dan 90 responden tanpa HIV dan AIDS) di wilayah Kabupaten Sambas.
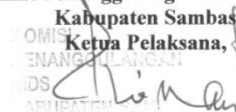
Kepada pihak-pihak yang terkait agar dapat memberikan bantuan dan dukungannya demi kelancaran penelitian tersebut.

Dari hasil penelitian tersebut mohon disampaikan kepada Bupati melalui Komisi penanggulangan AIDS Kabupaten sambas.

Demikian surat ini kami berikan untuk dapat dipergunakan sebagaimana mestinya.

Tembusan :
Fakultas Kedokteran, University Kebangsaan
Malaysia di Kuala Lumpur.

Komisi Penanggulangan AIDS (KPA)
Kabupaten Sambas
Ketua Pelaksana,

DR. Pabali Musa, M.Ag

Sekretariat KPA Kabupaten Sambas
Lantai II A43 Komplek Kantor Bupati Sambas
Jl. Pembangunan Sambas, Kalimantan Barat
Phone : 08115716524 Email : kpasambas@yahoo.co.id