



Risk Factors for HIV and AIDS at the Harapan Health Center, East Sentani District, Jayapura Regency in 2023-2024

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ABSTRACT

This study aims to determine the risk factors for HIV and AIDS incidence at the Harapan Health Center. Observational analytical research with a case control approach. The sampling technique uses purposive sampling. The population, namely all those who are tested for HIV and AIDS at the 2023-2024 Harapan Health Center, is 965 people with a sample size of 64 additional control cases. The results of bivariate analysis showed a significant relationship between the number of sexual partners ($p-v=0.001$, $OR=21,211$, $2,565-175,404$) and STI history ($p-v=0.000$, $OR=8,273$, $2,622-26,100$) with the incidence of HIV and AIDS. Meanwhile, it did not show a significant relationship between age variables ($p-v=0.708$, $OR=1.970$, $0.390 - 8.220$), gender ($p-v=0.439$, $OR=1.711$, $0.616 - 4.769$), educational history ($p-v=1.000$, $OR=0.802$, $0.218-2.954$), marital status ($p-v=0.799$, $OR=1.296$, $0.477-3.524$), employment status ($p-v=0.075$, $OR=0.345$, $0.122-0.974$), and the incidence of HIV and AIDS at the Harapan Health Center.

INTRODUCTION

Human Immunodeficiency Virus (HIV) is a virus that attacks the human immune system which causes the emergence of various diseases called AIDS. Acquired Immuno Deficiency Syndrome (AIDS) is a set of symptoms and signs of infection due to a decrease in the immune system (Setyaningsih & Abror, 2024).

Based on global reports, in 2022 there are around 39 million people worldwide living with HIV, as many as 37.5 million adults and 1.5 million children under the age of 15. The proportion of HIV incidence is highest among women at 53% and males at 47% and so far as 40.4 million people have died from AIDS. New HIV infections have decreased by 23% largely thanks to a substantial decline of 38% in East and South Africa, but have increased by 72% in Eastern Europe and Central Asia, by 22% in the Middle East, North Africa, by 21% in Latin America (WHO, 2023).

Based on the report of the Indonesian HIV and AIDS Information System (SIHA) in the first quarter of January-March 2023, there were 13,279 HIV cases, out of 1,230,023 people who were tested and as many as 10,924 people received ARV treatment. The distribution by province with the highest number of HIV cases in 2023 is West Java with 48% (2417 cases), East Java by 38% (1579 cases), Central Java by 36% (1370 cases), Papua by 17% (784 cases), and DKI Jakarta by 13% (1422) cases. It is reported that the distribution with the highest contributor of HIV cases is in the productive age group (25-49 years) at 65.5%, the proportion based on male sex is 71% and female gender is 29%, based on the mode of HIV transmission with heterosexuality at 29% (Ministry of Health of the Republic of Indonesia, 2023).

Papua Province has so far recorded 51,408 cumulative cases, the highest distribution by district/city in Nabire with 9,412 cases, and followed by Jayapura city with 7,953 cases, Mimika with 7,130 cases, Jayawijaya with 6,883 cases and Jayapura regency with 4,533 cases (Papua Health Office, 2023). The cumulative distribution of HIV and AIDS cases in Jayapura Regency from 1992-2024 was 4,874 cases, in recent years it has increased with the following frequencies in 2021 as many as 163 cases, 2022 as many as 450 cases, 2023 as many as 445 cases, and in January-March 2024 as many as 99 cases. The proportion based on gender is 58% for women and 42% for men, based on the most age in the age group of 20-29 years, which is 48.7% while the lowest <1 year, based on the most sub-districts in Sentani City, which is 55.9% and East Sentani is 9%, and the lowest in Airu sub-district is 0.1%, distribution based on the most HIV transmission methods from heterosexuals which is 95.7% and the lowest in blood transfusions is 0.1% (Jayapura Regency Health Office, 2024). However, the data obtained during the research at the Harapan Health Center was 32 positive cases, the distribution based on gender was 68.8% female and 31.3% male, based on the highest age in the 16-49 year group which was 96.1%. Efforts to prevent and control HIV at the Harapan Health Center are by serving Voluntary Counseling and Testing (VCT) and taking Antiretroviral Drugs (ARVs) (Harapan Health Center, 2024).

LITERATURE REVIEW

HIV stands for (Human Immunodeficiency Virus (Wisdayanti, 2021). AIDS is an abbreviation for (Acquired Immunodeficiency syndrome) AIDS is a retroviral disease that results in damage to the immune system and is characterized by severe immunosuppression that causes opportunistic infections, secondary neoplasms and neurological manifestations (Wisdayanti, 2021). HIV and AIDS are diseases that threaten people of all ages and walks of life, genders and economic classes (Anas, 2024).

According to the Indonesian Ministry of Health in Novita *et al.* (2020) stated that the age at risk of *HIV* and *AIDS* is 17-25 and 25-49. Meanwhile, at the age of 26-49 years, a person already has a job and has stable finances so that they can have a risky lifestyle (Novita *et al.*, 2020). From this reference, it can be concluded that people aged 17-49 years are at risk of *HIV* and *AIDS*. This is caused by several factors, including activities such as the use of social media, entertainment venues related to alcohol or drug use, and the influence of peer association (Ayu & Prameswari, 2024).

According to Susanto's theory (2013) in Novita *et al.*, (2020) sex is a biological difference between men and women. According to him, the female sex is more susceptible to contracting the HIV virus compared to men because from the biological side, the shape of the female reproductive organs houses more sperm fluid that may contain the HIV virus. Women's condoms are not yet sold over-the-counter and are much more expensive than men's condoms and are less in demand. Women with their various activities take care of the household so that women do not have time to take care of themselves and their health conditions (Novita *et al.*, 2020).

There is a correlation between race and disease due to customs and the development of culture and tradition. (Novita *et al.*, 2020).

According to Arikunto (2006) in Sarwan *et al.*, (2019) work is an activity that is carried out on a daily basis, the type of work can be categorized (civil servants, private workers, self-employed, and IRT) in his research reported that the incidence of HIV and AIDS is quite high in workers, especially private employees because of their high mobility, far from family, number of single workers, lack of awareness and lack of education (Sarwan *et al.*, 2019). Some of the activities that are at risk of HIV and AIDS are injecting drug users, sex workers, men who have sex with men, inmates, sailors, workers in the transportation sector and migrant workers, having risky sexual relations such as sexual violence, sexual relations with people infected with HIV without protection, visiting prostitution localizations/complexes and buying sex (Rahmatini, 2021). According to Susilowati (2018), those who do not work are more at risk of HIV and AIDS because they waste more time outside the environment and a free environment (Dewi *et al.*, 2022).

According to the Indonesian Ministry of Health through the Integrated Biological and Behavioral Surveillance (STBP) program in (Sarwan *et al.*, 2019) states that HIV and AIDS are more at risk in people with married status. This can be caused by HIV transmission through sexual contact from their partner

(husband/wife) and is more at risk of transmission from male partner to female partner than vice versa due to infidelity to one partner.

According to Yuditha 2015 in Rahmat Aziz et al., (2020) stated that the higher a person's education, the easier it is to receive information so that the more information they have. Ideally, a lack of education will hinder a person's development towards newly introduced values. Status education is also related to the occurrence of premarital sexual activity and pregnancy before marriage (Rahmat Aziz et al., 2020).

The more sexual partners there are, the more likely it is that random sex acts will increase and result in infection with diseases such as HIV and STIs. The large number of sexual partners is also influenced by the pattern of internet media access to find sexual partners. On average, a person has several sex partners and a dating period of relatively less than one year, even though because the relationship contains intimacy, the partner is called a girlfriend, (Sidjabat et al., 2017). According to Sumini (2017), in her study, it was also mentioned that respondents who had sexual partners ≥ 5 people 2.36 times to be exposed to HIV and AIDS compared to respondents who only had <5 partners (Fransiska & Gusmiati, 2019).

STIs are the entry point for HIV transmission due to the presence of body fluids or blood in wounds due to STIs. A person who has been infected with STIs and infected the urethra, rectum, or pharynx can increase the risk of HIV infection if they have not been infected with HIV, and in people who have been infected with HIV it will make it easier to transmit HIV to others. The spread of HIV based on STI history has soared because a person who has STIs will not tell their sexual partner directly and check with a health service after symptoms develop (Carolin et al., 2020).

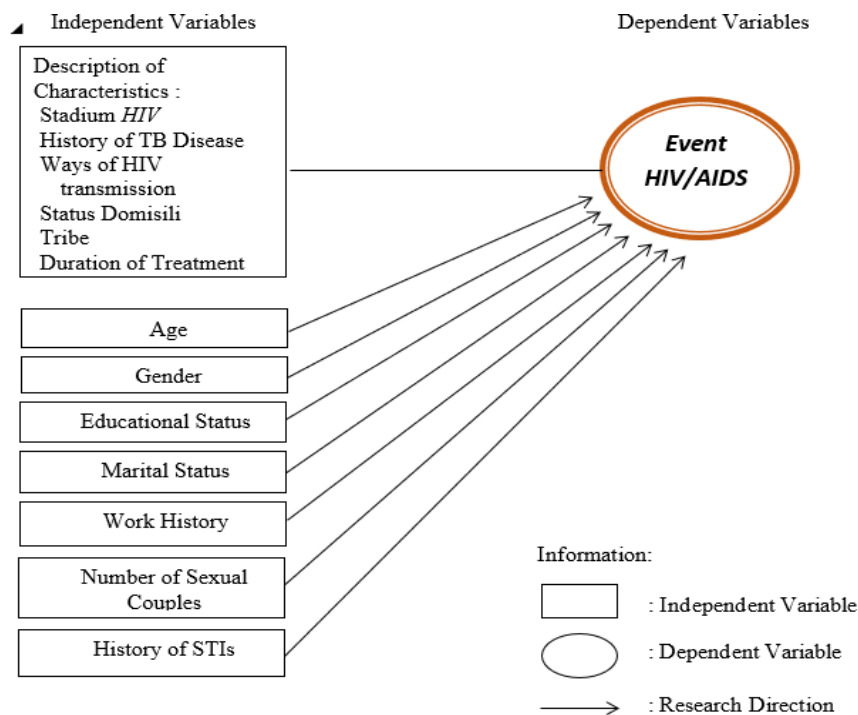


Figure 1. Conceptual Framework

METHODOLOGY

This study is observational analysis with a case control approach. At the Harapan Health Center in August 2024. The population, namely all people who have been tested for HIV and AIDS at the Harapan Health Center in 2023-2024, is 965 people. The sample size of the case plus control was 64 with a sampling technique using purposive sampling. Using univariate and bivariate analysis with chi-square test. The data are presented in the form of tables, graphs, images and narrated to describe the characteristics and state the risk factors for HIV and AIDS events. Using characteristic data forms, notebooks, stationery and mobile phones.

RESULTS

Table 1. Distribution of Frequency of Characteristics of People Tested for HIV and AIDS at the Harapan Health Center

| Variable | Frekuensi (n) | Presentase (%) |
|-----------------------------|---------------|----------------|
| Age (year) | | |
| < 9 | 1 | 1,6 |
| 10-18 | 7 | 10,9 |
| 19-59 | 55 | 85,9 |
| > 60 | 1 | 1,6 |
| Gender | | |
| Female | 40 | 62,5 |
| Male | 24 | 37,5 |
| Education | | |
| No School | 1 | 1,6 |
| Primary school | 3 | 4,7 |
| Junior High School | 7 | 10,9 |
| High school | 45 | 70,3 |
| College | 8 | 12,5 |
| Marital Status | | |
| Marry | 26 | 40,6 |
| Widow/Widower | 7 | 10,9 |
| Unmarried | 31 | 48,4 |
| Employment Status | | |
| PNS/TNI-POLRI | 1 | 1,6 |
| Private | 4 | 6,3 |
| Self employed | 3 | 4,7 |
| Farmer | 2 | 3,1 |
| Fisherman | 7 | 10,9 |
| Housewife | 18 | 28,1 |
| Students/Students | 25 | 39,1 |
| Not Working | 1 | 1,6 |
| Other | 3 | 4,7 |
| Number of Sexual Couples | 50 | 78,1 |

| | | |
|--------------------------|----|------|
| > 5 person | 14 | 21,9 |
| ≤ 5 person | | |
| History of tuberculosis | | |
| Yes | 25 | 39,1 |
| No | 39 | 60,9 |
| History of STIs | | |
| Yes | 26 | 40,6 |
| No | 38 | 59,4 |
| Domicile Status | | |
| Working Area | | |
| Outside the Working Area | 59 | 92,2 |
| Area | 5 | 7,8 |
| Tribe | | |
| Papua | 58 | 90,6 |
| Non Papua | 6 | 9,4 |
| Years | | |
| Year 2023 | 37 | 57,8 |
| Year 2024 | 27 | 42,2 |
| Total | 64 | 100 |

Source: Primary Data, 2024

Based on table 1, it shows that the distribution of characteristic frequencies based on the age of the majority at the age of 19-59 years is 55 people (85.9%), the majority gender is 40 people (62.5%), the last education history is the majority at the high school/equivalent level as many as 45 people (70.3%), the majority of marital status is 31 people (48.4%), the majority of jobs are in students/students as many as 25 people (39.1%), the majority of sexual partners in >5 sexual partners were 50 people (78.1%), the majority of people with no history of tuberculosis were 39 people (60.9%), the majority of STI history was 38 people (39.4%), the majority of domicile status was 59 people (92.2%), the majority tribe was from the Papuan tribe as many as 58 people (92.2%), the majority year in 2023 is 37 people (57.8%).

Table 2. Frequency Distribution of Special Characteristics of HIV and AIDS Case Groups at the Harapan Health Center

| Variabel | Frekuensi (n) | Presentase (%) |
|--------------------------|---------------|----------------|
| Stadium <i>HIV</i> | | |
| Stadium 4 | 0 | 0,00 |
| Stadium 3 | 9 | 14,1 |
| Stadium 2 | 15 | 23,4 |
| Stadium 1 | 8 | 12,5 |
| Ways of HIV transmission | 31 | 48,4 |
| Heterosexual | 0 | 00,0 |
| Homosexual | 0 | 00,0 |
| Use of Syringes | 1 | 1,6 |

| Placenta | | |
|-----------------------|----|------|
| Duration of Treatment | | |
| > 6 Months | 21 | 32,8 |
| ≤ 6 Months | 11 | 17,2 |
| Total | 32 | 100 |

Source: Primary Data, 2024

Based on table 2, it shows that the frequency distribution of special characteristics of the case group based on the stage of HIV is more than 15 people (23.4%), the method of transmission through heterosexuality is 31 people (48.4%), the majority of treatment duration is >6 months, which is as many as 21 people (32.8%).

Table 3. Bivariate Analysis of Age Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Age | Incidence of HIV and AIDS | | | | | OR | CI 95% | P- value |
|----------|---------------------------|------|---------|------|-------|-------|-----------------|-------------|
| | Case | | control | | Total | | | |
| | n | % | N | % | N | | | |
| Risky | 29 | 90,6 | 27 | 84,4 | 56 | 1,970 | 0,390- 8.220 | 0,708 |
| No Risky | 3 | 9,4 | 5 | 15,6 | 8 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 3, it shows that of the 32 cases with a risk age (17-49 years), there are more people, namely 29 people (90.6%) than the non-risk age (<17 and ≥ 50 years), and from 32 controls, there are also more risk ages (17-49 years), namely 27 people (84.4%). The results of the chi-square test showed a p-value = 0.708, which means that there was no significant relationship between age and the incidence of HIV and AIDS at the Harapan Health Center. The OR value = 1.970 with 95% (CI) = 0.390-8.220 indicates that age is a risk factor for HIV and AIDS events but is not statistically significant.

Table 4. Bivariate Analysis of Gender Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Gender | Incidence of HIV and AIDS | | | | | OR | CI 95% | P- value |
|--------|---------------------------|------|---------|------|-------|-------|-----------------|-------------|
| | case | | control | | Total | | | |
| | n | % | n | % | N | | | |
| Female | 22 | 68,8 | 18 | 56,2 | 40 | 1,711 | 0,616- 4,769 | 0,439 |
| Male | 10 | 31,2 | 14 | 43,8 | 24 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 4, it shows that of the 32 cases that are female, there are more females, namely 22 people (68.8%) than males, and from 32 controls, there are also more females, namely 18 people (56.2%). The results of the chi-square test showed a p-value = 0.439, which means that there was no significant relationship

between sex and the incidence of *HIV* and *AIDS* at the Harapan Health Center. The OR value = 1.711 with 95% CI = 0.616-4.769 indicates that gender is a risk factor for *HIV* and *AIDS* but is not statistically significant.

Table 5. Bivariate Analysis of Educational History Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Education | Incidence <i>HIV</i> Dan <i>AIDS</i> | | | | | OR | CI 95% | P- value |
|-----------|--------------------------------------|------|---------|------|-------|-------|-----------------|-------------|
| | cases | | control | | Total | | | |
| | n | % | n | % | N | | | |
| Low | 5 | 15,6 | 6 | 18,8 | 11 | 0,802 | 0,218- 2.954 | 1,000 |
| High | 27 | 84,4 | 26 | 81,3 | 53 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 5, it shows that of the 32 cases with a low education history, 5 people (15.6%) are less than those with higher education and from 32 controls, there are also more people with low education, namely 6 people (18.8%). The results of the *chi-square* test showed a *p-value* = 1,000, which means that there was no significant relationship between educational history and the incidence of *HIV* and *AIDS* at the Harapan Health Center. The OR value = 0.802 with 95% (CI) = 0.218-2.954 indicates that education history is not a risk factor for *HIV* and *AIDS*.

Table 6. Bivariate Analysis of Status Marriage Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Status Marriage | Incident <i>HIV</i> Dan <i>AIDS</i> | | | | | OR | CI 95% | P- value |
|--------------------|-------------------------------------|------|---------|------|-------|-------|-----------------|-------------|
| | Case | | Control | | Total | | | |
| | n | % | N | % | N | | | |
| Yes | 14 | 43,8 | 12 | 37,5 | 26 | 1,296 | 0,477- 3.524 | 0,799 |
| No | 18 | 56,3 | 20 | 62,5 | 38 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 6, it shows that of the 32 cases with married status, namely 14 people (43.8%) are less than those with no married status, and from 32 controls, there are also less married status, namely 12 people (37.5%). The results of the *chi-square* test showed a *p-value* = 0.799, which means that there was no significant relationship between marital status and the incidence of *HIV* and *AIDS* at the Harapan Health Center. The value of OR = 1.296 with 95% (CI) = 0.477-3.524 indicates that marital status is a risk factor for *HIV* and *AIDS* incidence but is not statistically significant.

Table 7. Bivariate Analysis of Employment Status Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Employment Status | Incident <i>HIV</i> Dan <i>AIDS</i> | | | | | OR | CI 95% | P- value |
|----------------------|-------------------------------------|------|---------|------|-------|-------|-----------------|-------------|
| | case | | control | | Total | | | |
| | n | % | N | % | N | | | |
| No | 9 | 28,1 | 17 | 53,1 | 26 | 0,345 | 0,122- 0.974 | 0,075 |
| Yes | 23 | 71,9 | 15 | 46,9 | 38 | | | |

| | | | | | |
|-------|----|-----|----|-----|----|
| Total | 32 | 100 | 32 | 100 | 64 |
|-------|----|-----|----|-----|----|

Source: Primary Data, 2024

Based on table 7, it shows that 32 cases with less non-working status, namely 9 people (28.1%) compared to those with working status, and from 32 controls, there are also less non-working status, namely 17 people (53.1%). The results of the chi-square test showed a p-value = 0.075, which means that there was no significant relationship between employment status and the incidence of HIV and AIDS at the Harapan Health Center. The OR value = 0.345 with 95% (CI) = 0.122-0.974 indicates that employment status is not a risk factor for HIV and AIDS incidence.

Table 8. Bivariate Analysis of Number of sexual couples Variables with People Tested for HIV and AIDS at the Harapan Health Center

| Number of Sexual Couples | Incident HIV and AIDS | | | | | OR | CI 95% | P-value |
|--------------------------|-----------------------|------|---------|------|-------|--------|---------------|---------|
| | case | | control | | Total | | | |
| | n | % | n | % | N | | | |
| > 5 person | 31 | 96,9 | 19 | 59,4 | 50 | 21,211 | 2,565-175,404 | 0,001 |
| ≤ 5 person | 1 | 3,1 | 13 | 40,6 | 14 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 8, it shows that 32 cases have more >5 sexual partners, namely 31 people (96.9%) compared to the number of ≤ 5 sexual couples and from 32 controls, the number of >5 couples is also more, namely 19 people (59.4%). The results of the chi-square test showed a p-value = 0.001, which means that there was a significant relationship between the number of sexual partners and the incidence of HIV and AIDS at the Harapan Health Center. The OR value = 21,211 with 95% (CI) = 2,565-175,404 indicates that the number of sexual partners is a risk factor for HIV and AIDS events, meaning that people with >5 sexual partners are 2.565 times more likely to transmit HIV and AIDS compared to people with ≤ 5 sexual partners.

Table 9. Bivariate Analysis of History of STIs Variables with People Tested for HIV and AIDS at the Harapan Health Center

| History of STIs | Incident HIV Dan AIDS | | | | | OR | CI 95% | P-value |
|-----------------|-----------------------|------|---------|------|-------|--------|--------------|---------|
| | case | | control | | Total | | | |
| | n | % | n | % | N | | | |
| Yes | 21 | 65,6 | 5 | 15,6 | 26 | 10,309 | 3,102-34,266 | 0,000 |
| No | 11 | 34,4 | 27 | 84,4 | 38 | | | |
| Total | 32 | 100 | 32 | 100 | 64 | | | |

Source: Primary Data, 2024

Based on table 9, it shows that 32 cases with a history of STIs are more, namely 21 people (65.6%) compared to people who do not have a history of STIs and from 32 controls with a history of STIs, there are also more people, namely 5

people (15.6%). The results of the *chi-square* test showed a *p-value* = 0.000, which means that there was a significant relationship between the history of STIs and the incidence of *HIV* and *AIDS* at the Harapan Health Center. The OR value = 10.309 with 95% (CI) = 3.102-34.266 indicates that a history of STIs is a risk factor for *HIV* and *AIDS events*, meaning that people with a history of STIs are 3.102 times more likely to transmit *HIV* and *AIDS* than people without a history of STIs.

DISCUSSION

Age

The results of the bivariate analysis showed that of the 32 cases with a risk age (17-49 years), there were more people, namely 29 people (90.6%) than the non-risk age (<17 and ≥ 50 years) and from 32 controls, there were more people at risk age (17-49 years), namely 27 people (84.4%). This shows that the *p-value* = 0.708 > α 0.05 which means that age is not significant with the incidence of *HIV* and *AIDS*, and the OR value = 1.970, 95% CI = 0.390-8.220. The results of this study are in line with the theory in the research of Berek & Bubu, (2019) which concluded that the results of the statistical test obtained *p-value* = 0.433 failed to be rejected, meaning that there was no significant relationship between age groups and the incidence of H_0 *HIV* and *AIDS*, (Berek & Bubu, 2019). This is because their young age causes them not to think about the effects of *HIV* disease which causes the immune system to decrease due to the period of transmission and transmission of the virus in a period of 5-10 years so that they have not thought about other conditions after they are tested positive for *HIV*, so they are increasingly rethinking to do each examination.

Gender

The results of the bivariate analysis showed that of the 32 cases that were female, 22 people (68.8%) were more female than men, and from 32 controls, there were more females, namely 18 people (56.2%). This shows that *p-value* = 0.439 > α 0.05, which means that there is no significant relationship between sex and the incidence of *HIV* and *AIDS* in the Harapan Health Center and OR = 1.711, 95% CI = 0.616-4.769. The results of this study are in line with the research of Berek & Bubu, (2019) which stated that there was no significant relationship between sex and the incidence of *HIV*, the statistical results using Fisher's exact test were obtained *p-value* = 0.429 and failed to be rejected, H_0 (Berek & Bubu, 2019).

Education

The results of the bivariate analysis showed that of the 32 cases with low educational history, approximately 5 people (15.6%) compared to those with higher education and from 32 controls, also with low education, approximately 6 people (18.8%). This shows that *p-value* = 1,000 > α 0.05, which means that there is no significant relationship between educational history and the incidence of *HIV* and *AIDS* at the Harapan Health Center, and OR = 0.802, 95% CI = 0.218-2.954. One of the factors that affect a person's level of knowledge is the level of formal education, although knowledge is not obtained from formal education but also

from family and society. The higher a person's level of education, the higher the basis of knowledge possessed by a person (Haryadi et al., 2020).

Marital Status

The results of the bivariate analysis showed that of the 32 cases with less married status, namely 14 people (43.8%) compared to those who were not married and from 32 controls, there were also less married status, namely 12 people (37.5%). This shows that $p\text{-value} = 0.799 > \alpha 0.05$, which means that there is no significant relationship between marital status and the incidence of *HIV* and *AIDS* in the Harapan Health Center, and $OR = 1.296$, $95\% CI = 0.477\text{-}3.524$. In line with the research of Cahyati & Muna, (2019) stated that there was no relationship between marital status and the incidence of *HIV*, based on the results of the *chi-square* test ($95\% CI 0.474\text{-}3.602$), $p\text{-value} 0.796 (>\alpha 0.005)$ in this study marital status is not directly related because in the body of *HIV virus* which weakens the immune system which progressively damages white blood cells, thereby causing a reduced or failed immune system and making it easier for opportunistic infections to occur. When viewed from the condition of Indonesian society, the marital status of an unmarried person does not indicate that the individual will only live alone occupying a house (Cahyati & Muna, 2019).

Employment Status

The results of the bivariate analysis showed that 32 cases with non-working status were less numerous, namely 9 people (28.1%) compared to those with working status, and from 32 controls, more were non-working, namely 17 people (53.1%). This shows that $p\text{-value} = 0.075 > \alpha 0.05$, which means that there is no significant relationship between employment status and the incidence of *HIV* and *AIDS* at the Harapan Health Center, and $OR = 0.345$, $95\% CI = 0.122\text{-}0.974$. In line with the research of Berek & Bubu, (2019) which concluded that there is no significant relationship between work and *HIV* and *AIDS*. The results of further analysis also obtained a value of $0.007 H_0$ rejected, $OR=0.42$, which means that respondents who do not work have a 0.42 times chance of being at risk of contracting *HIV* and *AIDS* (Barek & Bubu, 2019).

Number of Sexual Couples

The results of the bivariate analysis showed that 32 cases were more than >5 sexual couples, namely 31 people (96.9%) compared to the number of ≤ 5 sexual couples and of the 32 controls, the number of >5 couples was also more, namely 19 people (59.4%). This shows that $p\text{-value} = 0.001 < \alpha 0.05$, which means that there is a significant relationship between the number of sexual partners and the incidence of *HIV* and *AIDS* in the Harapan Health Center, and $OR = 21,211$, $95\% CI = 2,565\text{-}175,404$. In line with the research of Oktaseli et al., (2019) which stated that there was a significant relationship between risky behaviors of women of childbearing age and the incidence of *HIV* because the results of the analysis showed that $p\text{-value} = 0.000 < 0.05$, (Oktaseli et al., 2019).

History of STIs

The results of the bivariate analysis showed that 32 cases had a history of STIs, 21 people (65.6%) were more than those who did not have a history of STIs, and from 32 controls, there were also more STIs, namely 5 people (15.6%). This shows that $p\text{-value} = 0.001 < \alpha 0.05$, which means that there is a significant relationship between the history of STIs and the incidence of *HIV* and *AIDS* at the Harapan Health Center and $OR = 10.34, 266.95\% (CI) = 3.102-34.266$. In line with Sari's research, (2021) which stated that there was a significant relationship between the history of STIs and the incidence of *HIV*, with the results of the *chi-square* statistical test obtaining a $p\text{-value} = 0.00 < \alpha = 0.05$. The results of the analysis also obtained an OR value of 64.47, which can be concluded that respondents with a history of STIs are at risk of experiencing HIV events 64.47 times compared to respondents who do not experience STI symptoms, (Sari, 2021).

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, it was concluded that the number of sexual partners and STI history had a significant relationship while age, type of life, educational status, marital status, and employment status did not have a statistically significant relationship with the incidence of *HIV* and *AIDS* at the Harapan Health Center.

FURTHER STUDY

Further research is needed and other variables that can cause *HIV* and *AIDS* diseases can provide good and developed changes from this and previous research.

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