

Employment Relationship With HIV AIDS Severity In Aru Islands Regency In 2020

¹Muhardin Muin, ²Ridwan, ³Andi Zulkifli, ⁴Muhammad Syafar, ⁵Aminuddin Syam

¹Master Program in the Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia, muhardinmuin84@gmail.com

²³Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia

⁴⁵Department of Epidemiology, Faculty of Public Health, University Hasanuddin, Indonesia

Abstract

HIV (Human Immunodeficiency Virus) is a virus that attacks the immune system so that it becomes weak in fighting infection, the final stage of HIV infection will develop into Acquired Immunodeficiency Syndrome (AIDS). This study aims to determine the relationship between work and the severity of HIV AIDS in PLWHA in the Aru Islands Regency in 2020. An analytic observational study with the Cross Section Study method. Interviews were conducted on 137 respondents out of a total of 165 who visited and carried out HIV tests at the Mutiara Dobo VCT clinic. To see the relationship between work and the severity of HIV AIDS. Data analysis using chi-square, univariate analysis, bivariate and multivariate analysis. The results showed that the factors related to the effect of work on the severity of HIV AIDS were employment (p value 0.000) which was a protective variable (prevention) with LL and UL values below the value 1, length of work (p value 0.000). The results of the multivariate analysis showed that the dominant factor affecting the severity of HIV was the length of work variable with the largest odd ratio value, which was 19.873. After knowing that there is a relationship between work and the severity of HIV AIDS, it is necessary to have a program that is able to financially prosper people living with HIV AIDS so that patients are able to maintain their condition.

Keywords: Light Weight, HIV AIDS, Employment, Employment Status, Length of Work.

Introduction

Human Immunodeficiency Virus (HIV) is still a deadly virus throughout the world, including in Indonesia. Based on data from infodatin 2020, HIV cases in Indonesia continue to increase every year and reach their peak in 2019. Maluku is the 4th largest province in terms of the spread of HIV AIDS in eastern Indonesia after Papua, West Papua, and South Sulawesi seen from the positive rate. The report from Disease Prevention and Control until the end of 2019 obtained a total of 5,891 cases of HIV AIDS (25.8%) consisting of 4,665 cases of HIV (25.8%) and 1,226 cases of AIDS (6.8%). One of the districts with the highest number of HIV AIDS cases is the Aru Islands Regency with a total of 509 cases (53%).

Apart from being a health issue, HIV AIDS is also inseparable from economic issues. Various studies explain the economic impact on people living with HIV AIDS (PLWHA). One of them is a study entitled "Social, Economic, and Psychological Impact of HIV AIDS Patients in Denpasar City (2014) by Pardita. In this study it was explained that there was a change in working hours for workers after suffering from HIV. Another study was conducted by [1] which explained that there are differences in employment opportunities, income, expenses, and working hours for workers before suffering from HIV and after suffering from HIV. There is no difference in employment (formal/non-formal) Based on the two studies, it can be said that the condition of HIV affects the economy of

the sufferer. However, it can also be seen that despite suffering from HIV, the sufferer is still able to work, in fact there is no difference in the occupation experienced by the sufferer. However, [2] explained that HIV is a type of virus that which can attack and infect white blood cells and cause a decrease in human immunity. AIDS is a collection of symptoms that arise due to infection with the HIV virus. Due to decreased immunity, a person infected with HIV is very susceptible to various infectious diseases (Infection Opportunistics) which are often fatal for sufferers. Thus, the patient's work activities can affect the patient's HIV condition.

The World Health Organization (WHO) has established the Clinical Stage of HIV/AIDS for adults and children which consists of 4 stages. When viewed from the symptoms that occur, the division of clinical stages of HIV/AIDS is as follows:

HIV Stage I: Asymptomatic or occurs PGL (persistent generalized lymphadenopathy)

HIV Stage II (Mild): Weight loss of more than 10%, ulcers or fungus in the mouth, suffering from herpes zoster in the last 5 years, sinusitis, recurrence.

HIV Stage III (Continued): Weight loss of more than 10%, chronic diarrhea, with no apparent cause for more than 1 month.

HIV Stage IV: Weight loss of more than 10%, symptoms of pneumocystosis infection, tuberculosis, cryptococcosis, herpes zoster and other infections as a complication of a weakened immune system, the virus that causes it can be isolated from peripheral blood lymphocytes or from the patient's bone marrow [3].

Based on this division, in this study, HIV conditions were categorized into two, namely mild conditions and severe conditions. Mild HIV conditions are conditions that include clinical symptoms in HIV Stage I and HIV Stage II. Meanwhile, severe HIV conditions include clinical signs in HIV Stage III and HIV Stage IV. The analysis of this condition is related to the economic factors of the sufferer, especially related to work. The job variables in question are employment, job status, and length of work.

Field of work is the field of activity carried out by the patient. There are four types of work that

are categorized into two fields of work. These categories include farmers and non-farmers. The types of work included in the category of farmers are planters, both those who cultivate their own gardens and gardening on land owned by others. The types of work included in the non-farmer category are self-employed, private employees, and civil servants/Army/Police Officers.

Categories on employment status, namely permanent work and odd jobs [4]. What is meant by permanent employment is a patient who only has one type of job. Meanwhile, odd jobs are employment status where the patient has more than one type of work. In general, other types of work are carried out as fishermen [5]. This is because as an archipelago, marine products cannot be separated from the economic activities of the people of the Aru Islands Regency. As the FWI report in the Portrait of Economic Activity of Indigenous Peoples of Aru Islands Regency (2016) that most people make fishing as their main livelihood, while in terms of income generated, farmers occupy the first position as the livelihood with the largest income. This is also as a report from the Central Bureau of Statistics of the Aru Islands Regency in 2020 that more than half of the Aru Regency economy depends on agriculture. Thus, fishermen become an additional (part time) job outside the type of permanent job to earn income as previously mentioned.

The length of time worked is the duration of time allocated to work. In this study, the length of work time is categorized into standard working time and non-standard working time. Standard working time is 8 hours of work a day from morning to evening [6]. Meanwhile, non-standard working time is working time of less or more than 8 hours a day. Non-standard working hours also include working hours at night.

This study was conducted to determine the effect of work on the severity of HIV AIDS in the Aru Islands Regency. The work variable in question, as previously explained, consists of employment, employment status, and length of time worked. Each variable has two categories as assessment indicators.

Methods

This research is a cross sectional study using bivariate analysis between the dependent variable (severity/mildness of HIV AIDS condition) and the independent variable (occupation, which includes employment, employment status, and length of work). The study was conducted at the Mutiara Dobo VCT (Voluntart Counseling and Testing) clinic. The number of people with HIV AIDS in 2020 at this clinic is 165 people. However, in this study, only 137 patients were sampled. This is because the study focused on the relationship between work and the severity of the incidence of HIV AIDS in sufferers. Therefore, 28 patients with unemployed status were not included in this study.

Patients who are included as respondents are patients who have at least 1 (one) year suffering from HIV AIDS and receive intensive care at the clinic. Patient age is flexible and has good communication, reading and writing skills. Before being included as respondents in the study, patients were asked for consent.

Results and Discussion

Bivariate analysis was used to see the relationship between the independent variable and the dependent variable. The independent variable in this study is work which consists of three variables, namely employment, job status, and length of work. The dependent variable in this study, namely the severity of the condition of people with HIV AIDS. In detail, the following will describe the analysis of the relationship between each variable.

Analysis of Employment Relationship with the severity of HIV/AIDS sufferers

Statistical test using chi-square with p value <0.05 showed that there was a significant relationship between employment and the severity of the condition of people living with HIV AIDS. In detail, the following table presents the results of research on the relationship between employment and the severity of the condition of people living with HIV AIDS.

Table 1. Analysis of Employment With Light Weight of HIV / AIDS Sufferers

Jobs	HIV sufferers				X ²	p- value
	Heavy		Light			
	n	%	n	%		
Non Farmers	2	2,3	85	97,7	40,648	0,000
Farmer	23	46,0	27	54,0		
Sum	25	18,2	112	81,8		

Source: Research Results, 2021

Information. * Chi-square test

Based on table 1 above, it can be seen that in terms of employment, severe conditions are more common in patients with the farmer occupation category, which is 46% compared to the non-farmer category which is only 2.3%. This fact indicates that activities as farmers in the Aru Islands Regency can worsen the condition of people living with HIV AIDS. Based on the results of field observations, this can happen because there is localization in the plantation which results in a much higher chance of "transactions" for farmers.

It also appears that the number of categories of farmers suffering from severe conditions (46%) is almost the same as those suffering from mild conditions (54%). This is very different from the

non-farmer category where there is a very significant disparity in terms of severe conditions which is only 2.3% and mild conditions as much as 97.7%. This shows that patients with non-farmer occupations are better able to maintain conditions so that they do not deteriorate. The work environment as non-farmers (entrepreneurs, private employees, civil servants/TNI/Polri) has the opportunity to prevent sufferers from making transactions more often, so they can pay more attention to their condition.

Based on the results of the chi-square test, there is a significant relationship between employment and the severity of HIV/AIDS with a p value of 0.000 <0.05) and is a protective

variable (prevention) with LL and UL values below 1. These results indicate that employment can affect the condition of people living with HIV AIDS in the Aru Islands Regency).

The results of the same study were also conducted by Erledis Simanjuntak on the Analysis of Risk Factors for HIV/AIDS Transmission in the city of Medan in 2010 that based on the bivariate test showed that there was

a significant relationship between type of work and HIV AIDS $P < 0.05$.

Analysis of the Relationship between Employment Status and the Weight/Lightness of HIV/AIDS Sufferers

The results of statistical tests using chi-square showed a relationship between work status and the severity of the HIV AIDS condition with $p < 0.05$. This can be seen in the following table.

Table 2. Analysis of the Relationship between Employment Status and the Light Weight of HIV / AIDS Sufferers

Employment Status	HIV sufferers				X ²	p- value
	Heavy		Light			
	n	%	n	%		
Permanent Employment	24	20,3	94	79,7	4,625	0,114
Odd Jobs	1	5,3	18	94,7		
Sum	25	18,2	112	81,8		

Source: Research Results, 2021

Information. *chi-square test*

Table 2 above shows that more severe conditions are experienced by patients with permanent employment status categories. As many as 20.3% of the 118 patients with permanent employment status had severe HIV AIDS conditions, while 79.7% experienced mild HIV AIDS conditions. Meanwhile, in the odd job category, only one severe case was found with a percentage of 18.2%, while respondents with the odd job status category were classified as having mild HIV AIDS conditions of 94.7%.

Based on the results of the chi-square test, data obtained that there is no significant relationship between work status and the severity or severity

of HIV/AIDS where the p value is 0.114, which means > 0.05 . Thus, it can be concluded that employment status does not affect the severity of the condition of people with HIV AIDS.

Analysis of the Relationship of Long Work with Heavy/Light HIV/AIDS Patients

Statistical test using chi-square with p value < 0.05 showed a significant relationship between length of work and the severity of the HIV AIDS condition in patients. The following is a table that analyzes the relationship between years of work and the severity of the condition of people living with HIV AIDS.

Table 3. Analysis of the Relationship between Long Work and the Severity of HIV / AIDS Sufferers

Length of Work	HIV sufferers				X ²	p- value
	Heavy		Light			
	n	%	n	%		
Working Time Is Not Up to Standard	24	40,7	35	59,3	34,947	0,000
Working Time According to Standards	1	1,3	77	98,7		
Sum	25	18,2	112	81,8		

Source: Research Results, 2021

Information. * chi-square test

Based on table 3 above, the results of the analysis of the length of work variable show that in the non-standard work time group the

respondents suffer from HIV/AIDS in the severe category, which is 40.7% compared to respondents with standard working time which

is only 1.3%. From these data, it appears that 98.7% of patients with standard working hours still experience mild HIV AIDS conditions, while patients with non-standard working hours who experience mild HIV AIDS conditions are only 59.33%. This shows that the severity of the condition of people with HIV AIDS is influenced by the length of work the patient has worked as the results of the chi-square test on the data with $p = 0.000$ (being < 0.05) which indicates a significant relationship between length of work and the severity or severity of HIV/AIDS. Working hours that are not up to standard can worsen the patient's condition.

The results of the bivariate analysis showed that the three variables had a significant relationship with the severity of HIV/AIDS. In the following, each of these variables will be explained in detail.

Employment (Agricultural or Non-Agricultural)

Bivariate analysis shows that there is a relationship between employment and the severity of the HIV AIDS condition. From the data obtained in table 4, most of the respondents have jobs in the field of non-farmers, amounting to 87 respondents (63.5%). While other respondents have jobs in the field of farmers, which amounted to 50 respondents (36.5%). However, respondents who suffer from HIV AIDS in the severe category are more experienced by sufferers who work in the agricultural sector, namely 46% and mild conditions by 54%. Respondents in the non-farmer field were only 2.3% with severe conditions and 97.7% in mild conditions. The results of statistical tests show a significant relationship because the upper limit and lower limit are below the value 1 so that they are protective (prevention). Based on these data, it can be said that patients who work in the field of farmers experience more severe conditions than patients who work in the field of non-farmers. The types of work included in the field of non-farmers are self-employed, private employees, civil servants/TNI/Polri, while in the field of farmers are planters. The severe HIV condition that is more experienced by sufferers who work in the agricultural sector occurs because the physical activity carried out is also more severe [7].

Geographically, the Aru Islands Regency is a group of islands with one island being the center

of residents' settlements, while several other islands are gardens. Inter-island transportation is still using canoes. Such environmental conditions cause sufferers who work in the agricultural sector to have more severe physical activities because they have to cross the island by canoe every day. Therefore, this activity can cause an increase in the severity of the patient's HIV condition.

Employment Status

Employment status is a person's position in the job. This status is classified into several categories, namely self-employed without co-workers or the help of others, self-employed assisted by family members or temporary employees, employers with permanent workers, employees (Indonesian Central Statistics Agency, 2018). In this study, employment status with that category was included in working status. Meanwhile, those who work only half a day are categorized as part-time workers.

From the table of bivariate analysis, the results showed that work status did not affect the severity of HIV AIDS. In table 7, the analysis of employment status variables shows that in the permanent occupation group, respondents suffering from HIV/AIDS are in the severe category (20.3%) and respondents suffering from HIV/AIDS are in the mild category (79.7%). Then, in the odd job group, there is no heavy category (5.3%) and light category (94.7%). Based on the results of statistical tests, data obtained that there is no significant relationship between work status and the severity of HIV AIDS ($p\text{-value} > 0.05$) with a $p\text{-value}$ of 0.114.

The results of this study indicate that the severity of HIV is not influenced by the patient's employment status. Patients are still able to do more than one type of work even though they have HIV [8]. However, from these data it appears that most people with severe HIV are only able to do one type of work. As previously explained in the employment section, most of those who suffer from severe HIV in the Aru Islands Regency are farmers, so farming is a permanent job that most people with severe HIV do. Thus, even though they do not have a part-time job, people living with HIV in the Aru Islands Regency with permanent jobs have a greater chance of experiencing severe HIV conditions.

Length of Work

Bivariate analysis related to length of work with HIV/AIDS severity showed a significant relationship. Based on table 8, it can be seen that in the time group who worked according to the standard, the respondents suffered from HIV/AIDS in the severe category, which was 1.3% less than those who worked not according to the standard with a percentage of 40.7%. For the mild category, patients with working time according to the standard were 98.7%, while those who did not meet the standard were 59.3%. The results of statistical tests showed a significant relationship between length of work and the severity or severity of HIV/AIDS (p -value <0.05) with a p -value of 0.000. Thus, it can be concluded that patients with non-standard working hours are more likely to experience severe HIV AIDS conditions.

Standard time that is meant is work done for 8 hours a day during the day. The category of non-standard time is work done at night or with a duration of more or less than 8 hours a day. From the data obtained, patients with jobs with long working hours that do not meet the standards are more likely to experience severe HIV conditions. In connection with the high number of severe HIV sufferers among farmer workers, it can be said that farmers work hours that are not up to standard. Based on observations, farmers in the Aru Islands Regency leave for the garden in the morning and return in the afternoon. Activities with such a duration of time can worsen the condition of HIV sufferers.

Conclusion

This study concludes that there is a relationship between work and the severity of the HIV/AIDS condition of patients in the Aru Islands Regency. The severe HIV condition that is mostly experienced by farmers shows that the quality of life of PLWHA in Aru Islands Regency is difficult to improve. This is because most of the people there work in the field of farmers, so that after contracting HIV it is difficult for them to avoid their body condition from strenuous physical activity. For this reason, extra prevention efforts are needed to avoid the risk of contracting HIV.

References

- [1] Khasanah, U., Purwaningsih, P., & Wahyuni, E. D. (2016). The Correlation Between Level of Education and Experience Families with Coping Mechanisms of HIV Positive Mothers Family in Tulungagung. Ners Unair.
- [2] Limalvin, N. P., Putri, W. C. W. S., & Sari, K. A. K. (2020). Gambaran dampak psikologis, sosial dan ekonomi pada ODHA di Yayasan Spirit Paramacitta Denpasar. *Intisari Sains Medis*, 11(1), 81-91.
- [3] Noviana, N. (2016). Konsep HIV/AIDS seksualitas & kesehatan reproduksi. Jakarta : CV. Trans Info Media
- [4] Kjeldstad, R., & Nymoan, E. H. (2012). Part-time work and gender: Worker versus job explanations. *International Labour Review*, 151(1-2), 85-107.
- [5] Maunsell, E., Drolet, M., Brisson, J., Brisson, C., Mâsse, B., & Deschênes, L. (2004). Work situation after breast cancer: results from a population-based study. *Journal of the National Cancer Institute*, 96(24), 1813-1822.
- [6] Harrington, J. M. (2001). Health effects of shift work and extended hours of work. *Occupational and Environmental medicine*, 58(1), 68-72.
- [7] Russell, S., & Seeley, J. (2010). The transition to living with HIV as a chronic condition in rural Uganda: Working to create order and control when on antiretroviral therapy. *Social science & medicine*, 70(3), 375-382.
- [8] DiBonaventura, M. D., Gupta, S., Cho, M., & Mrus, J. (2012). The association of HIV/AIDS treatment side effects with health status, work productivity, and resource use. *AIDS care*, 24(6), 744-755.