

Factors Affecting Non-Adherence of Taking Antiretroviral Drugs to People Living with HIV/AIDS in Mimika District

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ABSTRACT

Introduction: Mimika is one of the districts in Papua with a high number of HIV / AIDS infection findings of 5,371 cases by 2017 and includes areas with a low generalized epidemic of HIV so that all people living with HIV are eligible for antiretroviral treatment. The non-adherence of PLWHA in ARV treatment is of concern as until 2017 only 34% had maintained a stay in antiretroviral treatment.

The purpose of the research: to knowing factors affecting non-adherence of taking antiretroviral drugs to people living with HIV AIDS in Mimika district.

Research Method: Analytical research using cross sectional design. The study was conducted on 18 April to 14 May 2018 in Mimika General Hospital and Mitra Masyarakat Hospital with the population being PLWHA who were on ARV treatment and the number of samples was 87 people by purposive sampling. Data obtained using questionnaires were analyzed using chi square test and logistic regression

Result of research: The factors that had insignificant influence were age (p-value 0.416), gender (p-value 0.200), tribe (p-value 0.758), duration of treatment (p-value 1,000), history of side effects (p-value 0.275), history of changing ARV (p-value 0.257), family support (p-value 0.235), health officer support (p-value 0.923), security disturbances (p-value = 0,834). Factors that have significant influence are level of education (p-value = 0,002), occupation (p-value=0,029), knowledge of ARV treatment (p-value 0,003), access to ARV treatment (p-value 0,001). The dominant factor that has more influence on non-adherence of taking antiretroviral drugs in Mimika district is access

to ARV treatment, level of education and occupation.

Key Word: Non-adherence, ARV, PLWHA, Mimika

1. INTRODUCTION

Acquired Immuno Deficiency Syndrome, hereinafter abbreviated AIDS is a collection of symptoms of diminished self-defense capability caused by the entry of HIV virus in a person's body. AIDS occurs when the immune system decreases. To combat opportunistic infections, people living with HIV should take medication after HIV infection. AIDS cannot be cured, but this infection can be controlled with Antiretroviral (ARV) drugs (Martoni et al, 2013). HIV cases worldwide by 2016 have 36.7 million people living with HIV covering 16 million women and 3.2 million children <15 years of age. The number of new HIV infections by 2015 is 2.1 million which consists of 1.9 million adults and 240,000 children under the age of 15 years. The death toll from AIDS amounts to 1.1 million consisting of 1.3 million adults and 190,000 children under the age of 15 years. 17 million people living with HIV AIDS get ARV therapy. The prevalence of antiretroviral treatment adherence in developing countries including Indonesia is below 95%, i.e. about 45% -70% (WHO, 2016).

The number of HIV patients in Indonesia I quarter of 2017 as many as 10 376 people, AIDS as many as 673 people.

Cumulatively, case findings until Quarter I 2017 were 330,152 cases, consisting of 242,699 HIV cases and AIDS as many as 87,453 cases. This number is certainly far increased the last five years in 2010, as many as 21,591 people of HIV and AIDS as many as 6,845 people (Ministry of Health RI, 2017). While HIV AIDS data in Papua Province as of September 30, 2017 ranks third HIV AIDS sufferer as much 25,349 cases, consist of HIV as many as 9,371 cases and 15,978 AIDS (Dinkes Provinsi Papua, 2017). In 2017 from the monthly report on HIV and AIDS care in Indonesia, it was recorded that the number of people living with HIV received 49,217 ARVs from 34 provinces and 300 districts / cities (Spiritia, 2017). The principle of antiretroviral therapy is to use three types of drugs that all three must be absorbed and are in therapeutic doses in the blood, known as highly active antiretroviral therapy (HAART) (Kepmenkes 87 years 2014). Papua is at a widespread epidemic level with 2.3% HIV prevalence, resulting in the development of Sustainable Comprehensive Services (LKB) involving the active role of communities with a strategy approach to ARV treatment as prevention and treatment of HIV infection (Kepmenkes 87 year 2014). Everyone who is immediately diagnosed with HIV AIDS is given antiretroviral therapy regardless of the CD4 value considering the extent of the epidemic.

According to Ministry of Health RI (2014), antiretroviral therapy for people with HIV AIDS reduces mortality and morbidity, improve the quality of life of PLWHA and increase life expectancy. Antiretroviral treatment to reduce the number of HIV virus in the PLWHA body so as not to enter the AIDS stage, whereas in people with AIDS itself requires this antiretroviral treatment to prevent the occurrence of comorbid infections and various other complications. The cumulative number of people with HIV AIDS in Mimika regency in 2017 is 5,371 people with the number of HIV AIDS case findings

in 2015 of 436 people, in 2016 as many as 438 and in 2017 as many as 350 people. Number of people with HIV AIDS who received ARV therapy in Mimika District in Mimika General Hospital, RS. Community Partners and RS. Tembagapura in 2015 as many as 718 people living with HIV received antiretroviral therapy and 219 (32.03%) PLWHA who did not adhere to taking antiretroviral drugs. In 2016, ARV therapy received 767 patients and 150 people (24.9%) patients did not adhere to taking antiretroviral drugs, while in 2017 who received ARV therapy as many as 695 people and patients not obedient to take ARV drugs as much as 159 people (22, 88%). (Mimika Health Office, 2017).

The reason the researcher chose this title is that compliance is a condition where the patient must obey drug use rules on the basis of self-pity not just for obeying orders from the doctor. This is very important because with the compliance in taking antiretroviral drugs is expected to further improve the quality of life of people living with HIV. Adherence to the use of antiretroviral drugs should always be monitored and evaluated by medical personnel regularly at each meeting. Based on the above background, researchers interested in conducting research with the title "Factors Affecting Non-adherence Drinking Antiretroviral Drugs (ARVs) In People With HIV AIDS In Mimika District".

The purpose of this study is to know the factors affecting non-adherence of taking antiretroviral drugs in Mimika District, then the formulation of the problem in this study are What factors affect the non-adherence of taking antiretroviral drugs (ARV) in people with HIV AIDS in Mimika Regency"

2. MATERIALS AND METHODS

Type of research is observational analysis with cross sectional study design. The study was conducted on 18 April to 14 May 2018 at Mimika Hospital and Mitra Masyarakat Hospital with the population

being PLWHA who were on ARV treatment and the number of samples was 87 people by purposive sampling. Data were obtained using questionnaire and analyzed using chi square test and logistic regression.

3. RESEARCH RESULTS

1. Bivariate Analysis

a. The effect of age on non-adherence of taking antiretroviral drugs (ARVs)

Table 1. Effects of age on non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency Year 2018

	Age	Disobedient of taking antiretroviral drugs				n	%
		Disobedient		Obedient			
		N	%	n	%		
1	≥ 30 year	32	66,7	16	33,3	48	100
2	< 30 year	30	76,9	9	23,1	39	100
Total		62	71,3	25	28,7	87	100

p-value = 0,416; RP = 0,867; CI95% (0,666 – 1,128)

Table 1 shows that from 48 people aged > 30 years there were 32 people (66.7%) disobedient taking ARV drugs and as many as 16 people (33.3%) were obedient to taking ARV drugs. Whereas from 39 respondents aged <30 years there were 30 people (76.9%) did not adhere to taking antiretroviral drugs and as many as 9 people (23.1%) adhered to taking antiretroviral drugs. = 0,05) obtained p-value 0,416 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant effect of age on non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. The result value of RP = 0.867; CI95% (0.666 - 1.128) with a value <1, so the age was not significant against non-adherence of taking antiretroviral drugs (ARVs) in Mimika District.

b. The influence of sex on the non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table 2 shows that out of 31 men, 19 (61.3%) were disobedient to taking ARV drugs and as many as 12 people (38.7%) were taking ARV drugs. While 56 female respondents (76.8%) did not adhere to

taking ARV drugs and 13 people (23.2%) were taking ARV drugs. = 0,05) obtained p-value 0,200 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant influence between the sexes on non-adherence to taking antiretroviral drugs (ARVs) in Mimika District. The result value RP = 0.798; CI95% (0.583 - 1.093) with a value <1, so age was not significant for non-adherence taking antiretroviral drugs (ARVs) in Mimika District.

Table 2. The influence of sex on non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency Year 2018

No	Sex	Disobedient of taking antiretroviral drugs				n	%
		Disobedient		Obedient			
		n	%	n	%		
1	Male	19	61,3	12	38,7	31	100
2	Female	43	76,8	13	23,2	56	100
Total		62	71,3	25	28,7	87	100

p-value = 0,200; RP = 0,798; CI95% (0,583 – 1,093)

c. The influence of tribes on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table 3. Influence of tribes on non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency Year 2018

No	Tribe	Disobedient of taking antiretroviral drugs				n	%
		Disobedient		Obedient			
		n	%	n	%		
1	Papua	53	72,6	20	27,4	73	100
2	Non Papua	9	64,3	5	35,7	14	100
Total		62	71,3	25	28,7	87	100

p-value = 0,758; RP = 1,129; CI95% (0,746 – 1,710)

Table 3 shows that out of 73 people from the Papuan tribe there were 53 people (72.6%) disobedient to taking ARV drugs and as many as 20 people (27.4%) were obedient to taking ARV drugs. Whereas from 14 respondents from non-Papuan tribe there are 9 people (64,3%) not obedient taking ARV drug and as many as 5 people (35,7%) obedient to taking ARV drug. = 0,05) obtained p-value 0,758 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant influence between rates on non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. Results of RP value = 1,129;

CI95% (0.746 - 1.710) with the lower <1, so the tribe was not significant to the non-adherence of taking antiretroviral (ARV) drugs in Mimika Regency.

d. The influence of education on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table4. Effect of education on non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency Year 2018

No	Education	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Low	50	82	11	18	61	100
2	High	12	46,2	14	53,8	26	100
Total		62	71,3	25	28,7	87	100
<i>p-value</i> = 0,002; RP = 1,776; CI95% (1,153 – 2,734)							

Table 4 shows that of 61 respondents with low education there were 50 people (82%) disobedient taking ARV drugs and as many as 11 people (18%) were obedient to taking ARV drugs. Whereas from 26 respondents with high education there are 12 people (46,2%) disobedient taking ARV medication and as many as 14 people (53,8%) obedient taking ARV drug. = 0,05) obtained p-value 0,002 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($< \alpha$ (0,05). This means that there is a significant effect of education on the non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency. The result value RP = 1.776; CI95% (1,153 - 2,734) were interpreted that respondents with low education were less likely to take ARV drugs 1.776 times higher against non-adherence to taking antiretroviral drugs in Mimika District than those of highly educated respondents.

e. The effect of employment on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table 5 shows that out of 49 respondents who worked there were 40 people (81.6%) did not adhere to taking ARV drugs and as many as 9 people

(18.4%) were obedient to taking ARV drugs. Whereas from 38 respondents did not work there were 22 people (57,9%) did not obedient to taking ARV drug and as many as 16 people (42,1%) obedient take ARV drug. = 0,05) obtained p-value 0,029 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($< \alpha$ (0,05). This means that there is a significant effect of the work on non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. The result value of RP = 1,410; CI95% (1,043 - 1,907) were interpreted that respondents who worked were less likely to take ARV drugs 1.410 times higher for non-adherence to taking antiretroviral drugs in Mimika District than unemployed respondents.

Table5. Influence of work on non-adherence of taking antiretroviral drugs (ARVs) in Mimika Regency Year 2018

No	Occupation	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Working	40	81,6	9	18,4	49	100
2	Not working	22	57,9	16	42,1	38	100
Total		62	71,3	25	28,7	87	100
<i>p-value</i> = 0,029; RP = 1,410; CI95% (1,043 – 1,907)							

f. The effect of long-term treatment on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table6. Effect of treatment duration of non-adherence of antiretroviral drugs (ARV) in Mimika Regency Year 2018

No	treatment duration	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Long	53	71,6	21	28,4	74	100
2	New	9	69,2	4	30,8	13	100
Total		62	71,3	25	28,7	87	100
<i>p-value</i> = 1,000; RP = 1,035; CI95% (0,701 – 1,528)							

Table 6 shows that 74 out of 74 respondents who were treated were 53 people (71.6%) did not adhere to taking ARV drugs and as many as 21 people (28.4%) were obedient to taking ARV drugs. While from 13 new medications there were 9 people (69.2%) did not adhere to taking ARV drugs and as many as 4 people

(30.8%) were obedient to taking ARV drugs. = 0,05) obtained p-value 1,000 or α The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means there is no significant influence on the duration of treatment for non-adherence to taking antiretroviral drugs (ARVs) in Mimika District. The result value RP = 1.035; CI95% (0.701-1.528) with the lower <1 value being interpreted to be meaningless.

g. The influence of knowledge on the non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table 7. Influence of Knowledge of ARV Treatment to Antiretroviral Drug Absorption (ARV) in Mimika Regency 2018

No	knowledge ARV treatment	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Less	43	84,3	8	15,7	51	100
2	Good	19	52,8	17	47,2	36	100
Total		62	71,3	25	28,7	87	100
<i>p-value = 0,003; RP = 1,598; CI95% (1,147 – 2,224)</i>							

Table 7 shows that out of 51 respondents with less knowledge about ARV treatment there were 43 people (84.3%) who did not adhere to taking ARV drugs and as many as 17 people (47.2%) were obedient to taking ARV drugs. Whereas of 36 well-informed there were 19 people (52.8%) did not adhere to taking ARV drugs and as many as 17 people (47.2%) were obedient to taking ARV drugs. = 0,05) obtained p-value 0,003 or α The result of chi square statistic test at significance value 95% ($< \alpha$ (0,05). This means that there is a significant effect of knowledge on ARV treatment on non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. RP value = 1.598; CI95% (1,147 - 2,224) were interpreted that respondents who were knowledgeable were less at risk of non-adherence to taking antiretroviral drugs 1,598 times higher than those of good knowledge.

h. Influence of history of treatment side effects on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table 8. Influence of history of treatment side effects on Mimika Regency antiretroviral (ARV) non-compliance medication 2018

No	experienced side effects of drugs	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Ever	37	77,1	11	22,9	48	100
2	Never	25	64,1	14	35,9	39	100
Total		62	71,3	25	28,7	87	100
<i>p-value = 0,275; RP = 1,203; CI95% (0,908 – 1,593)</i>							

Table 8 shows that of 48 respondents who had experienced side effects of drugs there were 37 people (77.1%) did not adhere to taking ARV drugs and as many as 11 people (22.9%) were obedient to taking ARV drugs. While 39 out of 39 respondents had no side effects there were 25 people (64.1%) did not adhere to taking ARV drugs and as many as 14 people (35.9%) were obedient to taking ARV drugs. = 0,05) obtained p-value 0,275 or α The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant effect of a history of adverse events on non-adherence to taking antiretroviral drugs (ARVs) in Mimika District. The result value RP = 1.203; CI95% (0.908-1.593) with a lower <1 value that is not significant.

i. Influence of antiretroviral drug on antiretroviral drug adherence in people with HIV AIDS (ODHA)

Table9. Influence of history of antiretroviral replacement against non-adherence of antiretroviral drugs (ARV) in Mimika Regency 2018

No	Changed ARV drugs	Disobidient of taking antiretroviral drugs				N	%
		Disobidient		Obedient			
		n	%	N	%		
1	Ever	19	82,6	4	17,4	23	100
2	Never	43	67,2	21	32,8	64	100
Total		62	71,3	25	28,7	87	100
<i>p-value = 0,257; RP = 1,230; CI95% (0,954 – 1,585)</i>							

Table 9 shows that out of 23 respondents who had changed ARV drugs there were 19 people (82.6%) who did not adhere to taking ARV drugs and as many as

4 people (17.4%) were obedient to taking ARV drugs. Whereas from 64 who never replace ARV drugs there were 43 people (67.2%) did not adhere to taking antiretroviral drugs and as many as 21 people (32.8%) were obedient to taking ARV drugs. = 0,05) obtained p-value 0,257 or $p < \alpha$. The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant influence on the history of antiretroviral replacement of non-adherence to taking antiretroviral drugs (ARVs) in Mimika District. Result value of 1,230; CI95% (0.954 - 1.585) with a lower < 1 value that is not significant.

- j. The influence of family support on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table10. Influence of family therapy support against non-adherence of antiretroviral drugs (ARVs) in Mimika Regency 2018

No	Family support	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	N	%		
1	Not support	49	75,4	16	24,6	65	100
2	Support	13	59,1	9	40,9	22	100
Total		62	71,3	25	28,7	87	100

p-value = 0,235; RP = 1,276; CI95% (0.877 - 1.855)

Table 10 shows that out of 65 respondents who did not get family support there were 49 people (75.4%) disobident taking ARV drugs and as many as 16 people (24.6%) were obedient to taking ARV drugs. Whereas from 13 who received family support there were 13 people (59.1%) did not adhere to taking antiretroviral drugs and as many as 9 people (40.9%) adhered to taking ARV drugs. = 0,05) obtained p-value 0,235 or $p < \alpha$. The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant influence of family support for non-adherence to taking antiretroviral drugs (ARVs) in Mimika District. The result value of RP = 1,276; CI95% (0.877 - 1.855) with a lower < 1 value that is not significant.

- k. Influence of health care support in health care to non-adherence to taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table11. Effects of therapist support on non-adherence of antiretroviral drugs (ARVs) in Mimika Regency 2018

No	Health staff support	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Not support	15	68,2	7	31,8	22	100
2	Support	47	72,3	18	27,7	65	100
Total		62	71,3	25	28,7	87	100

p-value = 0,923; RP = 0,943; CI95% (0,683 - 1,302)

Table 11 shows that out of 22 respondents who did not get support from health workers there were 15 people (68.2%) disobident taking ARV drugs and as many as 7 people (31.8%) were obedient to taking ARV drugs. Whereas from 65 who received support officers there were 47 people (72.3%) did not adhere to taking ARV drugs and as many as 18 people (27.7%) obedient to taking ARV drugs. = 0,05) obtained p-value 0,923 or $p < \alpha$. The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant effect of health care support on non-adherence to taking antiretroviral drugs in Mimika District. The result value RP = 0,943; CI95% (0.683 - 1,302) with a value < 1 which is not significant.

- l. Influence of access to ARV treatment services against non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table12. Influence of access to ARV treatment services against non-adherence of antiretroviral drugs (ARVs) in Mimika

No	Access health services	Disobidient of taking antiretroviral drugs				n	%
		Disobidient		Obedient			
		n	%	n	%		
1	Difficult	42	91,3	4	8,7	46	100
2	Easy	20	48,8	21	51,2	41	100
Total		62	71,3	25	28,7	87	100

p-value = 0,000; RP = 1,872; CI95% (1,351 - 2,593)

Table 12 shows that of 46 difficult respondents to access health services there were 42 people (91.3%) disobident taking ARV drugs and as many as 4 people (8.7%) were obedient to taking ARV drugs.

Whereas from 41 people who easily access health services there are 20 people (48.8%) are not obedient to taking ARV drugs and as many as 21 people (51.2%) obedient to taking ARV drugs. = 0,05) obtained p-value 0,000 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($< \alpha$ (0,05). This means that there is a significant effect of access antiretroviral treatment services against non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. The result of RP value = 1,872 which is interpreted that difficult service access tends to ODHA not to take ARV drug equal to 1,872; CI95% (1,351 - 2,593) times higher than respondents who readily access ARV treatment services.

m. The effect of security disturbances on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

Table13. Effects of therapeutic safety disorders on non-adherence of antiretroviral drugs (ARVs) in Mimika Regency 2018

No	safety disorders	Disobident of taking antiretroviral drugs				n	%
		Disobident		Obedient			
		n	%	n	%		
1	Yes	18	75	6	25	24	100
2	No	44	69,8	19	30,2	63	100
Total		62	71,3	25	28,7	87	100
<i>p-value</i> = 0,834; RP = 1,074; CI95% (0,810 - 1,424)							

Table 13 shows that out of 24 respondents who were troubled by security issues (tribal war) there were 18 people (75%) disobedient and as many as 6 people (25%) were obedient to taking ARV drugs. Whereas from 63 respondents who stated that there is no security disturbance there are 44 people (69,8%) disobedient to taking ARV drugs and as many as 19 people (30,2%) obedient to take medicine. = 0,05) obtained p-value 0,834 or $p < \alpha$ The result of chi square statistic test at significance value 95% ($> \alpha$ (0,05). This means that there is no significant effect of security disturbance on non-adherence of taking antiretroviral drugs (ARVs) in Mimika District. Results of value RP = 1074; CI95% (0.810 - 1.424) with the lower < 1 value meaning not significant.

4. DISCUSSION

4.1. Influence of Age Against Non-adherence taking ARV drugs

The result showed that there was no effect of age to the non-adherence of taking ARV drugs in Mimika Regency (p-value 0,416). The results of this study obtained the most age of > 30 years (55.2%) of the number of people living with HIV who received antiretroviral therapy. Age as one of the characteristic traits about people, which is quite important because quite a lot of diseases are found with various frequency variations caused by age (Kemenkes RI, 2011). The results of the analysis showed that respondents aged > 30 years old had 32 people (76.9%) did not adhere to taking antiretroviral drugs, while in patients aged 17-29 years or less than 30 years (76.9%) did not adhere to taking medicine ARV. This shows the same proportions, so they have the same risk of non-adherence taking ARV drugs.

The absence of influence between age and non-adherence of taking antiretroviral drugs is due to a strong factor affecting the age of PLWHA patients to adhere to taking ARV drugs. The social perspective of the age group can not help the understanding that health and health care are not merely a medical issue, but also a social issue. When social approaches and medical approaches are carried out together, the emphasis is not only on the social processes of disease and illness but also on interventions within the social and cultural structures to prevent or even treat the disease, requiring the support of the family or the nearest person in the group age of HIV / AIDS sufferers.

4.2. Sex Influence Against Non-adherence taking ARV drugs

The result showed that there was no influence of sex on non-adherence of taking ARV drugs in Mimika Regency (p-value 0,200). The result of the analysis showed that male respondents, 61.3% did not adhere to taking ARV drugs and 76.8% of women did not adhere to taking antiretroviral drugs. This indicates that the proportion of non-

adherence to taking ARV drugs is higher in women. Butt (2010) in a study in the Papuan Mountains Region revealed that women on antiretroviral treatment kept a secret about their drug regimen in a quite special way. In males less access to ARVs than females, this suggests that men are very worried about the potential loss of social status arising through disclosure of status.

The absence of influence between the sexes on non-adherence of taking ARV drugs in Mimika District, because women who suffer from HIV AIDS more access to health care in the treatment of antiretroviral drugs such as prevention programs of mother-to-child transmission and HIV AIDS programs in general such as RH programs by agencies and related institutions, so that more women are informed about HIV AIDS and treatment of antiretroviral therapy, thus affecting knowledge that has implications for non-adherence to taking ARV drugs. However, in this study the proportion between people living with HIV in men is not much different, this is because of the similarity of residence, thus affecting patients in obtaining information and services.

4.3. Influence of Tribe Against Non-compliance of taking ARV drugs

The result of this research showed that there was no influence of ethnic group toward non-adherence to take ARV drug in Mimika Regency (p-value 0,758). Non-compliance of people living with HIV in the Papuan 72.6% of the proportion is not much different from non-Papua by 64.3%. This indicates a strong influence affecting each tribe. Social and cultural aspects greatly affect the lifestyle of all humans. But in the era of globalization with various health policy changes such as health insurance and information technology, demanding that all humans behave not much different in accessing health services.

4.4 Effect of education level on non-adherence to taking ARV drugs

The results obtained that there is influence of education level to non-adherence to take ARV drugs in Mimika

Regency (p-value 0,002). The result of the analysis found that respondents with low education level as much as 82% did not adhere to taking ARV drugs, while 46,2% of respondents were not well adhered to taking ARV drugs. This indicates that respondents who are highly educated have higher levels of adherence to taking ARV drugs and from the prevalence ratio test results that low education levels are at risk of non-adherence taking ARV drugs 1.776 times higher than those with HIV / AIDS with higher education.

The influence of education on non-adherence to medication in Mimika Regency is caused by the respondents who have low education is difficult to accept the information presented so that it influences the knowledge about ARV treatment, which is known that the majority of respondents (54,6%) education is low. It is of course worth noting in the counseling / dissemination or giving information about the ARV treatment needed simple and easy to understand communication, so that the respondents with low education can more easily understand the contents of the material presented about HIV AIDS and the treatment that must be undertaken.

4.5. Influence of Work Against Non-compliance of taking ARV drugs

The result of this research shows that there is influence of work to non-adherence to take ARV drug in Mimika Regency (p-value 0,029). The influence of the work is caused by the work activities carried out and most of them are farmers and some work as Civil Servants. ARV treatment by the government in Papua Province is provided free of charge. But because of work, so the patient has barriers to take the drug in accordance with the time specified. In addition, non-supportive families are increasing the barriers by PLHIV in maintaining antiretroviral treatment.

4.6 Influence of Treatment Against Non-adherence to take ARV drugs

The result of this research showed that there was no long-term effect of treatment on non-adherence of taking ARV

drugs in Mimika Regency (p-value 1,000). The results showed that patients who did not take the drug ARV in patients who have received treatment for more than 6 months as much as 71.6% are not compliant while 69.2% in patients with new or less than 6 months. This suggests that both old and new treatment responders co-mute noncompliantly taking antiretroviral drugs.

The absence of long-term treatment effects on non-adherence taking ARVs from observational observations in both old and new patients equally experienced side effects, but there were also patients who did not at all feel the side effects of antiretroviral therapy therapy, as patients with the HIV / AIDS stage which is newly diagnosed with new long-term treatment criteria, so the perceived side effects are stronger. In addition, the policy in Papua in the provision of antiretroviral drugs is given without adequate pre-ARV therapy and is provided directly if HIV / AIDS diagnosis can be given directly and results in a lack of knowledge of HIV / AIDS patients against non-adherence taking ARV medication. Patients who have good knowledge, although feeling the side effects and long taking medication will remain obedient to taking ARV drugs for their health. The disobedience of the old and new patients is often due to lack of confidence, since the drug is taken for life, so that the patient feels obedient and disobedient to this disease will continue to disturb him for the rest of his life, resulting in boredom or boredom and causing despair, so equally risky dutiful to take medicine.

4.7 The Influence of Knowledge Against Noncompliance with ARV Drugs

The result of the research showed that there was influence of ARV treatment to the non-adherence of taking ARV drugs in Mimika Regency (p-value 0,003). Knowledge is a very important domain for the formation of one's actions (overt behavior). Less knowledge on respondents from respondents' answers about obtaining antiretroviral drugs in government hospitals and puskesmas, did not know the frequency

of taking medication and the impact and the likelihood of not taking ARV drugs. While the good knowledge by most respondents is known to be the perceived side effects of taking antiretroviral drugs. Lack of respondents' knowledge about medication and how to drink has implications for non-adherence of taking antiretroviral drugs.

The results of the analysis found that the respondents who are knowledgeable less as much as 84.3% did not adhere to taking ARV drugs and respondents who are knowledgeable as much as 52.3% are not obedient to taking antiretroviral drugs. This indicates a low proportion of non-adherence of medication to HIV-infected patients with less knowledge and from the prevalence ratio test result that PLWHA with less risky knowledge did not adhere to taking ARV drugs 1.598 times higher than those with good knowledge of medication.

4.8. Influence History Side effects Against Non-adherence taking ARV drugs

The result showed that there was no effect of history of side effect to non-adherence to take ARV drug in Mimika Regency (p-value 0,275). The results of research conducted perceived side effects such as nausea, fever, rashes on the skin due to itching and carded, headache like a drunk person, diarrhea and others. At the beginning of taking medication most people living with HIV can not stand the side effects of drugs. The results of the analysis showed that respondents who had a history of side effects were 77.1%) did not adhere to taking ARV drugs and 64.1% in HIV / AIDS patients with no history of adverse events. The results of the prevalence ratio test indicate the presence of risk but not significant due to side effects ever felt by PLHIV does not become an obstacle for PLWHA to continue / maintain the ARV treatment provided. The absence of adverse effects on non-adherence of taking ARV drugs in Mimika District is due to many people living with HIV who can self-adjust to the side effects experienced at the start of treatment. In addition, according Martoni (2013), if someone is not able to survive

with the side effects of drugs, thus stopping his own therapy. Side effects may arise in treatments such as anemia due to zidovudin causing dizziness, nausea, vomiting and or in the long term such as lipodistropy (depreciation or accumulation of body fat in certain parts), so that in old and new patients are found not adherent to take antiretroviral drugs.

4.9. Influence of ARV Change History Against Noncompliance with ARV Drugs

The results of the study showed that there was no influence of history of antiretroviral replacement against non-adherence of taking ARV drugs in Mimika Regency (p-value 0.257). Non-compliance with medication on HIV / AIDS clients includes accuracy in time, amount, dose, and individual way of consuming the drug. Noncompliance in the implementation of therapy will decrease the effectiveness of antiretroviral drugs even increase viral resistance in the body (Djoerban, 2010). Therefore, adherence is absolutely necessary and performed by ARV recipients as a form of behavior preventing resistance and maximizing therapeutic benefits. Results of analysis obtained respondents who never change ARV as much as 82.6% did not adhere to taking ARV drugs and who never replace ARV 67.2%. The prevalence ratio test shows that HIV-positive people who have changed antiretroviral drugs are at risk of non-adherence taking ARV drugs 1,230 times higher than those never changing antiretroviral drugs. The absence of a history of change in antiretroviral drugs is due to the side effects of each drug that is not much different. In this study the presence of saturation of taking medication and not resistant to drug side effects can lead to medication non-compliance. Therefore, support from families and surrounding communities is needed so that people living with HIV do not despair in undergoing treatment.

4.10. Influence of Family Support Against Non-adherence taking ARV medication

The result of this research showed that there was no influence of family support to non-adherence to take ARV drug in Mimika Regency (p-value 0,235). The result of analysis showed that respondents who did not get family support 75,4% did not obey medication and could support family as much as 59,1% did not obey medication. This indicates a high proportion of non-adherence to taking high ARV drugs to respondents who do not have family support. The results of the prevalence ratio test indicate that respondents who did not receive family support were at risk of non-adherence taking ARV drugs 1.276 times higher than those receiving family support. The respondent's answer about the lowest family support was not to remind the purpose, the benefits and the effects of the current medication rule (49%), 33% did not provide financial aid during the treatment and 39% did not reprimand the patient if they did not obey the medication rule set. This can also happen because people living with HIV do not open themselves about the illness.

One way to help manage problems that create a stressful feeling in order not to have a negative effect on health is social support. A study by Mahardining (2010) suggests that there is a social support relationship with antiretroviral therapy adherence, in which support from family members and close friends is one of the indispensable support for the implementation of antiretroviral therapy and has a major impact on people living with HIV / AIDS. There is no influence of family support for non-adherence of taking antiretroviral drugs in people with HIV / AIDS in Mimika Regency due to saturation / bored in taking ARV drugs experienced by PLHIV in this study. This happens because PLWHA should take medication for the rest of their lives every day and should not be missed. Therefore, it needs support from family so that people living with HIV do not despair. The lack of family support will

affect the spirit of PLWHA, so that PLWHA can be more desperate for the health problems it faces. On the contrary, PLHIV who receives family support has a positive effect in living their lives so that it creates a strong desire to abide medication all his life.

4.11. Influence of health care support to non-compliance with ARV medication

The result of this research showed that there was no influence of health officer support to non-adherence to take ARV drugs in Mimika Regency (p-value 0,459). The successful management and care of people living with HIV / AIDS depends on the cooperation of health workers with patients and their families. PLWHA who have sufficient knowledge about HIV / AIDS, then further change their behavior so that will be able to control the condition of the disease so that patient can live longer. Counseling is necessary to provide knowledge to PLWHA and patient acceptance of the illness. That knowledge includes the notion of antiretroviral therapy, the importance of treatment adherence, possible side effects and length of treatment. The result of the analysis shows that respondents who do not get support from health workers, as much as 68.2% are not obedient to take ARV drugs and who get 72.3% health workers support. This indicates that respondents who get support and do not get support from health workers are equally at risk of not adhering to taking antiretroviral drugs.

The service by health workers in Kabupaten Mimika has been done maximally, but the respondents who stated that they did not get support from health workers from the highest respondent's statement were not contacted to take the medicine. This is due to the limitations of communication facilities owned by PLWHA, so this information is rarely done other than that the Working Group on AIDS in the hospital has a double duty. However, for other information about compliance has been maximally done, but there are respondents who stated that the information provided is unclear about ARV treatment.

This is related to the delivery of information or language that is not understood by the patient.

The low quality of patient and healthcare relationships is an obstacle to adherence, which has resulted in patients with non-adherence taking medication due to lack of support from health workers. This is due to the lack of available time compared to the number of patients, the lack of follow-up treatment as well as the health worker difficulty talking about compliance and side effects. The importance of the way communication is easy for the patient to understand, especially the low-educated and non-schooled patient, so that the one-way communication delivered by the health care provider is easy for the patient to understand.

4.12. The Influence of Health Service Access on Non-compliance of taking ARV drugs

The result of the research shows that there is influence of health service access to non-adherence to take ARV drugs in Mimika Regency (p-value 0,000). The result of the analysis shows that respondents with access to health services are difficult, as much as 91,3% do not adhere to taking ARV drug higher than PLHA which easy to access service as much as 48,8% of people who are not obedient to take ARV drugs. This indicates that respondents who have difficulty accessing health services have a high proportion of non-adherence to taking ARV drugs. This is evidenced from the results of the prevalence ratio test that HIV / AIDS patients who have difficulty accessing health services are at risk of non-adherence taking ARV drugs by 1,872 times higher than those who easily access the ARV treatment services. Distance of residence to service causes PLHIVs difficulty in accessing ARV treatment services coupled with the minimal cost of transportation needed to antiretroviral treatment services although ARV drugs are given free of charge. From the respondent's statement that the difficulty of access to health services

because the distance of health services far. Provision of ARVs is always available.

Provision of ARV therapy in Mimika District is centered on ARV referral hospitals and self-care ARV clinics. Therefore, the ODHA registration should be based on residence can be used as a reference to facilitate the taking of antiretroviral drugs in the nearest service.

4.13. The effect of security disturbances on non-adherence of taking antiretroviral drugs (ARVs) in people with HIV AIDS (ODHA)

The result of the research is that there is no relation of safety disturbance to non-adherence to take ARV drugs in Mimika Regency (p-value 1,834). Ganggaun kemananan experienced by PLWHA is a threat that often occurs in Mimika District, namely tribal war. The Mimika Regency is inhabited by seven tribes accommodated by the local government, Amungme, Kamoro, Dani, Damal, Nduga, Mee, and Moni. The Kamoro tribe inhabits the lowlands of the coastal Seychelles and Amungme tribes inhabiting in the mountains. These two tribes are called Mimika indigenous tribes, while the other five tribes come from the district around Mimika. Tribal warfare that occurred in 2017 disrupts security stability, but there is no security disturbance relationship with non-adherence of taking ARV drugs because ARV treatment is still open and people living with HIV will try to come to service other than that for some reason officers can provide more drug stock so as to reduce delay of PLWHA in ARV consumption. In addition, not all locations are areas or territories of tribal wars. So that some respondents who live adjacent to the ganggaun as much as 75% disobedient to take ARV drugs and 25% obedient to take ARV drugs, whereas in patients who do not experience security problems 69.8% are not obedient to taking antiretroviral drugs. This suggests that behavioral factors or interests of people living with HIV are less likely to adhere to taking ARV drugs.

4.14. Dominant Influence Against Noncompliance with ARV Drugs

The result of this research shows that the dominant factor to non-adherence to take ARV drugs in Mimika Regency is access to ARV treatment (p-value = 0,000, RP = 6,630; CI95% (1,833 - 23,990)), then education level (p-value = 0,013; RP = 5,317; CI95% (1,414 - 19,986)) and Work (p-value = 0,017; RP = 4,927; CI95% (1,333 - 18,208)). Service access is difficult due to the long distance of home and service, transportation costs, work-related factors and security disturbances make it harder for people to access services.

5. CONCLUSION

5.1. There was no significant effect of age on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.416; RP = 0.867; CI95% (0.666 - 1.128))

5.2. There was no significant effect of sex on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.200; RP = 0.798; CI95% (0.583 - 1.093)).

5.3. There was no significant influence between rates on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.758; RP = 1.129; CI95% (0.746 - 1.710)).

5.4. There is a significant effect of education on the non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.002; RP = 1.776; CI95% (1.153 - 2.734)).

5.5. There is a significant effect of the work on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.029; RP = 1,410; CI95% (1.043 - 1,907)).

5.6. There was no significant influence of duration of treatment on non-adherence of taking antiretroviral drugs in Mimika District (p-value 1,000; RP = 1.035; CI95% (0.701 - 1.528)).

5.7. There was a significant effect of knowledge on ARV treatment on non-adherence of taking antiretroviral drugs in Mimika District (p-value 0.003; RP = 1.598; CI95% (1.147 - 2.224)).

5.8. There was no significant effect of adverse drug history on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value 0.275; RP = 1.203; CI95% (0.908 - 1.593).

5.9. There was no significant effect of the history of antiretroviral replacement on non-adherence of taking antiretroviral drugs in Mimika District (p-value 0.275; RP = 1.230; CI95% (0.954 - 1.585).

5.10. There was no significant influence of family support on non-adherence of taking antiretroviral drugs in Mimika District (p-value 0.235; RP = 1.276; CI95% (0.877 - 1.855)

5.11. There was no significant influence of health care support for non-adherence of taking antiretroviral drugs in Mimika District (p-value 0.923; RP = 0.943; CI95% (0.683 - 1.302).

5.12. There was a significant effect of access to health care services on non-adherence of antiretroviral drugs (ARVs) in Mimika District (p-value 0,000; RP = 1.872; CI95% (1.351 - 2.593).

5.13. There was no significant effect of safety disturbance on non-adherence of taking antiretroviral drugs in Mimika Regency (p-value = 1,834; RP = 1074; CI95% (0.810 - 1.424).

5.14. The dominant factor which is more influential on non-adherence of taking antiretroviral drugs in Mimika Regency is access to health services with p-value = 0,000; RP = 6,630; CI95% (1,833 - 23,990), then education level p-value = 0,013; RP = 5,317; CI95% (1,414 - 19,986) and Employment p-value = 0.017; RP = 4,927; CI95% (1,333 - 18,208).

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